

File ID No.: 13-0135
Agenda Date: 1/9/13
Agenda Section: /
Attachment Key: _____

BAY AREA TECHNOLOGY SCHOOL



A PETITION FOR CHARTER RENEWAL

by

WILLOW EDUCATION

8251 Fontaine St.

Oakland, CA 94605

Phone: (510) 382-9932

Fax: (510) 382-9934

Presented to:

Oakland Unified School District Board of Education

January 8, 2013

TABLE OF CONTENTS

TAB 1	Cover Letter
TAB 2	Charter Briefing Page
TAB 3	Initial Screening & Overview of Modifications
TAB 4	Bay Area Technology School Charter
TAB 5	Appendices
	A1. Self Reflection
	B1. Technology Integrated Education
	B2. Computer Science Program
	B3. A+ (Advanced STEM) Program
	B4. Curriculum and Course Descriptions
	B5. Home Visit Program
	B6. Get Ready For Life Program
	B7. College Mentorship and Leadership Program
	C1. Articles of Incorporation
	C2. Bylaws
	C3. Biographies of WE Board of Directors
	D1. Proposed Budget and Cash Flow

TAB 1

COVER LETTER



**BAY AREA TECHNOLOGY SCHOOL
(BAYTECH)**

8251 Fontaine St.
Oakland, CA 94605
Phone: (510) 382-9932
Fax: (510) 382-9934
contact@baytechschool.org
www.baytechschool.org

January 8, 2013

Oakland Unified School District Board of Education
Superintendent Anthony Smith, Ph.D.
Charter Schools Coordinator Gail Greely
4551 Steele Street, Room 10
Oakland, CA 94619

Dear Members of the Oakland Unified School District Board of Education and Dr. Smith:

Bay Area Technology School (BayTech) is pleased to submit this application for the second renewal of its charter, and to share the progress it has made since the first renewal.

BayTech opened its doors in August of 2004 with 78 students in Oakland. The School has changed two locations over the years and is now located at a district facility acquired through Prop 39. The School currently serves 198 students. The operational capacity of the current facility is about 330 students, and full capacity enrollment is anticipated in the 2016-17 school year.

BayTech's 6th through 12th grade students are meaningfully engaged in becoming scientific thinkers, and are developing skills, abilities, and interest in science, technology, engineering, and mathematics (STEM) that will prepare them for postsecondary success in college and careers. The School targets a population that is academically low-achieving, and has developed its program to specifically benefit this group of students.

With its successful education model and through hard work, BayTech has consistently raised its Academic Performance Index (API) score over the years to 759. The School has achieved the highest API score of all similar OUSD schools with similar demographics that BayTech students would otherwise attend. Furthermore, BayTech has been able to increase the API score of socio-economically disadvantaged students significantly as compared to OUSD and similar schools in the District. The School has made AYP in 2012 by meeting all 13 AYP requirements. Please refer to the petition for more information.

There are many unique characteristics of BayTech that support the robust curriculum and student learning. Combined, they provide students with a comprehensive education program that creates multiple opportunities for them to develop into successful contributing members of society:

- STEM focus
- Family partnerships that are nurtured through home visits by teachers, online school/family communication tools, and an actively engaged and critically needed Parent/Guardian Club
- Extended hours for rigorous supplemental academic and extra-curricular support and activities
- Active engagement in STEM focused regional, national, and international competitions
- Partnerships with local universities and businesses
- "Get Ready For Life" curriculum focusing on character education and employment skills
- Technology integration in the classes



8251 Fontaine St.
Oakland, CA 94605
Phone: (510) 382-9932
Fax: (510) 382-9934
contact@baytechschool.org
www.baytechschool.org

- Extensive choices of elective offerings
- "College Mentoring and Leadership" program
- Custom-made school information system to assist the school's programs

BayTech offers a comprehensive learning experience designed to serve the needs of such students through effective site-based instruction, rich hands-on learning, and strong basics presented in ways that are relevant and inspiring for our students. Classroom instruction is supplemented by tutoring, after-school programs, and school-to-university links. BayTech has also shown diverse outreach efforts to increase parental involvement and develop partnerships to support educational initiatives.

Finally, there are many reasons for qualifying as a successful charter school that are explained in the charter renewal petition. BayTech community strives for excellence and will continue to improve student outcomes in the upcoming years.

We look forward to working with you and the office of charter schools staff to complete the renewal process and receive your unanimous approval to renew this successful charter school.

Sincerely,

Mehmet Sen, Lead Petitioner
President, Willow Education

TAB 2

CHARTER BRIEFING PAGE

CHARTER BRIEFING PAGE

Name of the Charter School:	Bay Area Technology School (BayTech)
Nonprofit Public Corporation operating the charter:	Willow Education (WE)
Grades Served:	6-12
Renewal Date:	July 1, 2013
Address:	8251 Fontaine St., Oakland, CA 94605
Lead Petitioner:	Name: Mehmet Sen Title: President, Willow Education Address: 8251 Fontaine St., Oakland, CA 94605 Phone: (510) 382-9932 Email: contact@baytechschool.org

BayTech fulfills the intent of the California Charter Schools Act:

The mission of BayTech is to serve students in grades 6 through 12 in the OUSD by enabling our students to become literate in STEM areas, encouraging our students to be self-motivated, life-long learners equipped with communication and presentation skills indispensable for the technologically-oriented global environment of the 21st century, and preparing our students to become responsible, educated citizens who have the skills and understanding to participate and work productively in a diverse, multicultural community.

BayTech provides a standards-based curriculum emphasizing STEM. BayTech's program aims to improve students' performance in reading, writing, and math, reduce dropout rates, achieve high student attendance rates, and increase the number of students who pursue careers in STEM areas. BayTech offers a comprehensive learning experience designed to serve the needs of our students through effective site-based instruction, rich hands-on learning, and strong basics presented in ways that are relevant and inspiring for our students. Classroom instruction is supplemented by tutoring, after-school programs, and school-to-university links.

BayTech creates a supportive and caring environment with small classes and strong student-parent-teacher communication and improves students' knowledge and skills in core subjects, thereby increasing their objective and critical thinking skills as well as their chances of success in higher education and beyond.

BayTech provides students with a comprehensive education program that creates multiple opportunities for them to develop into successful contributing members of society, and therefore, fulfills the intent of the California Charter Schools Act.

TAB 3

**INITIAL SCREENING &
OVERVIEW OF MODIFICATIONS**

CHARTER TEXT REVISIONS

Following are the page numbers of the required charter language outlined in the OUSD Charter Renewal Handbook.

Charter Text	Page #	Revision
<u>Governance</u>	76	"[CHARTER SCHOOL] will comply with the District policy ... policy change."
<u>Student Admissions Policies and Procedures</u>	95	"[CHARTER SCHOOL] will be nonsectarian in its programs, ... characteristics)." "As part of the Fall Information Update, ... approved charter."
<u>Public Records</u>	69	"[CHARTER SCHOOL] acknowledges that pursuant to Article XVI ... upon request."
<u>Reporting and Accountability</u>	69	"If [CHARTER SCHOOL] does not test (i.e., STAR) ... September 1 of each year."
<u>External Reporting</u>	69	"[CHARTER SCHOOL] will maintain sufficient ... agencies."
<u>Governance Structure of the School</u>	76	"[CHARTER SCHOOL], in accordance with Education Code Section 47604.3, ... by law or charter provisions."
<u>Governance Structure</u>	76	"Members of [CHARTER SCHOOL]'s Governing Board, ... applicable to charter schools." "[CHARTER SCHOOL] and/or its non-profit corporation will be solely responsible for the debts and obligations of the charter school."
<u>Addressing Parent Complaints</u>	74	"[CHARTER SCHOOL] will establish complaint procedures... not to discriminate in such a manner."
<u>Dispute Resolutions Procedures</u>	113-114	"The staff and Governing Board members ... available by law."
<u>Suspension and Expulsion</u>	106	"[CHARTER SCHOOL] shall notify, ... Section 47605(d)(3)."
<u>Suspension and Expulsion: Due Process for Students with Disabilities</u>	106-107	"In the case of a special education student, ..."
<u>Independent Fiscal Audits</u>	98	"To the extent that [CHARTER SCHOOL] is a recipient of federal funds, ... compliance issues."
<u>Facilities</u>	88	"If [CHARTER SCHOOL] fails to submit ... Dispute Resolution Process."
<u>District Fee for Oversight</u>	118	"The District may charge for ... time to time."
<u>Miscellaneous Charter-Related Issues</u>	120	"[CHARTER SCHOOL] must submit its renewal ... by the Office of Charter Schools."

Charter Text	Page #	Revision
<u>Miscellaneous Charter-Related Issues</u>	116	"The District may revoke the charter ... revocation of charters."
<u>Impact on Charter Authorizer</u>	98	"In order to ensure the necessary oversight ... Subsequent Year."
<u>Impact on Charter Authorizer</u>	118-199	"[CHARTER SCHOOL] agrees to observe and abide ... by law or charter provisions."

OVERVIEW OF MODIFICATIONS

Following is a list of changes made to the petition.

Modification	Page #	Notes
Assurances updated	5-6	Assurances are updated according to the sample assurances page in the OUSD Charter Renewal Handbook. Lead petitioner is updated to the current Board President.
School Information updated	7	Updated to reflect the current school information
BayTech's Track Record updated	10-14	Updated to include API growth, Similar Schools comparison, socio-economically disadvantaged students' API and accomplishments of BayTech
Student Enrollment added	15	Table is added for projected grade-level enrollments for the following five years.
School Year and Day updated	19-20	School calendar and bell schedules are included.
Accord Model updated	21	Accord's new instructional model is described. STEM focus for creativity and innovation is highlighted.
CMLP program added	29-30	BayTech's new College Mentorship and Leadership program is described
A+ (Advanced STEM) program added	31-32	BayTech's new A+ (Advanced STEM) program is described
Curriculum explained	33	Curriculum description is expanded.
Middle/High School Curriculum revised	34-35	The requirements are re-formatted to reflect better alignment with the "a-g" requirements.
Courses Explained section is added	35	This section clarifies the course requirements.
Computer Science Curriculum added	38	Computer science curriculum is added as a separate section to reflect the latest curriculum to be used.
Math/ELA Enrichment/Intervention Classes described	39	This section is added to further clarify intervention programs at BayTech.
Get Ready For Life (GRFL) Curriculum updated	39-40	GRFL curriculum is updated with topics. Appendix B6 is added to describe course content.

Modification	Page #	Notes
Sustained Silent Reading (SSR) section updated	40-41	Updated to include Accelerated Reader program and goals
Community Service added	41	Community service requirement is described.
Professional Development added	42-46	This section is added to describe ongoing professional development activities at BayTech.
English Learners section updated	49-53	English Learners Plan is updated with BayTech's most recent EL Plan.
Students with Special Needs updated	54-57	Section is reorganized.
Grade Promotion updated	57-58	New promotion policy is included.
Measurable Pupil Outcomes updated	58	Goals are reorganized.
Grading, Promotion, and Graduation updated	58-59	High school grade promotion is clarified.
Graduation requirements updated	59-62	Graduation requirements are clarified and formatted to reflect alignment with the "a-g" requirements. Diploma types are introduced.
Measurable Student Outcome Goals updated	66-67	Goals are updated and reorganized.
Grievance Procedure added	74	This section is added to include required charter text.
Organization Chart added	75	Organizational Chart of BayTech is added.
Required Charter Text added	76	This section is added to include required charter text.
Recruiting Qualified Teachers section added	77-78	Section is added to clarify credentialing requirements.
Staff selection updated	78	Hiring process is clarified.
Deans' Responsibilities and Duties updated	80-81	Updated to separate and expand responsibilities and duties of dean of academics and dean of students
Teacher s section updated	82-83	Teacher responsibilities and duties are expanded.
Special Education Teacher section updated	83-85	Section updated to describe skills, qualifications, responsibilities and duties of a special education teacher
Special Education Aide section added	85-86	Section added to describe skills, qualifications, responsibilities and duties of a special education aide
Other Certificated, Classified and Other Personnel section added	86	Section added to describe selection and duties
Evaluation of the School Personnel section added	86-87	Section added to describe evaluations

Modification	Page #	Notes
Health and Safety section updated	88-93	Section is updated to provide comprehensive procedures to ensure health and safety of pupils and staff.
Admission Requirements section updated	95-96	Section is reorganized to further clarify the admissions process.
Accountability section added	98	This section is added to include required charter text.
Suspension and Expulsion section updated	99-108	Section is updated to further clarify the suspension and expulsion process.
Retirement Programs and Employment Matters updated	109-110	Section is updated to clarify retirement benefits and include the process for resolving complaints/grievances.
Dispute Resolution section updated	113-114	Section is updated to include required charter text.
School Closure section updated	116-117	Section is updated to include required charter text.
District Oversight updated	118-119	Section is updated to include required charter text.
Term of Charter updated	120	Updated for the new term; five years beginning on July 1, 2013
Communications Clause updated	120	Updated with new school address

Modification	Page #	Notes
Tabs added to the petition	TABS	Separate tabs are added to the petition for:
	TAB 0	Title Page & Table of Contents
	TAB 1	Cover Letter
	TAB 2	Charter Briefing Page
	TAB 3	Initial Screening & Overview of Modifications
	TAB 4	Bay Area Technology School Charter
	TAB 5	Appendices
Appendices updated	APPENDICES	Appendices are updated to include:
	APPENDIX A1	Self Reflection that includes BayTech Renewal Performance Report, BayTech 2012 Performance Analysis, BayTech 2011 and 2012 STAR Test Reports and Cluster Analysis
	APPENDIX B1	Updated Technology Integrated Education program
	APPENDIX B2	Updated Computer Science program
	APPENDIX B3	Updated A+ (Advanced STEM) program
	APPENDIX B4	Updated Curriculum and Course Descriptions to reflect alignment between core and elective courses with graduation requirements.
	APPENDIX B6	GRFL program description added
	APPENDIX B7	New College Mentorship and Leadership Program described
	APPENDIX D1	Proposed Budget and Cash Flow are included.

TAB 4

**BAY AREA TECHNOLOGY SCHOOL
CHARTER**

BAY AREA TECHNOLOGY SCHOOL



A PETITION FOR CHARTER RENEWAL

by

WILLOW EDUCATION

8251 Fontaine St.

Oakland, CA 94605

Phone: (510) 382-9932

Fax: (510) 382-9934

Presented to:

Oakland Unified School District Board of Education

January 8, 2013

TABLE OF CONTENTS

BAY AREA TECHNOLOGY SCHOOL	1
AFFIRMATIONS/ASSURANCES	5
INTRODUCTION	7
VISION	8
MISSION	8
CORE VALUES	8
PROGRAM OVERVIEW	8
PREFERENCE FOR THIS PETITION	10
BAYTECH'S TRACK RECORD	11
STUDENT ENROLLMENT	15
ELEMENT 1: EDUCATIONAL PROGRAM	16
1.1 TARGET STUDENT POPULATIONS	16
1.2 EDUCATIONAL PHILOSOPHY	17
1.3 SCHOOL YEAR AND DAY	19
1.4 INSTRUCTIONAL DESIGN	21
1.5 CURRICULUM	33
1.6 COMMUNICATION TO PARENTS AND STUDENTS REGARDING THE TRANSFERABILITY OF COURSES	41
1.7 PROFESSIONAL DEVELOPMENT	42
1.8 LOW ACHIEVING STUDENTS	47
1.9 HIGH ACHIEVING STUDENTS	48
1.10 ENGLISH LEARNERS	49
1.11 STUDENTS WITH SPECIAL NEEDS	54
ELEMENT 2: MEASURABLE STUDENT OUTCOMES	58
2.1 GRADING, PROMOTION, AND GRADUATION	58
2.2 GRADUATION REQUIREMENTS	59
2.3 ACADEMIC PERFORMANCE INDEX	63
2.4 SCHOOLWIDE GOALS	63
ELEMENT 3: METHODS TO ASSESS STUDENT PROGRESS	68
3.1 ACADEMIC AREAS	68
3.2 STANDARDIZED TESTS	68
3.3 COMPUTER ADAPTED TESTS	68
3.4 USE AND REPORTING OF DATA	69
3.5 COOL SIS: BAYTECH' SCHOOL INFORMATION SYSTEM	69
ELEMENT 4: GOVERNANCE STRUCTURE	71
4.1 NONPROFIT PUBLIC BENEFIT CORPORATION	71
4.2 BOARD OF DIRECTORS	71
4.3 PRINCIPAL	72
4.4 WILLOW EDUCATION (WE) ADVISORY COMMITTEE	73
4.5 SCHOOL SITE COUNCIL (SSC)	73
4.6 ENGLISH LEARNER ADVISORY COMMITTEE (ELAC)	73
4.7 PARENTAL INVOLVEMENT	73
4.8 GRIEVANCE PROCEDURE FOR PARENTS AND STUDENTS	74
4.9 ORGANIZATIONAL CHART	745
4.10 REQUIRED CHARTER TEXT	746
ELEMENT 5: EMPLOYEE QUALIFICATIONS	77
5.1 BACKGROUND CHECKS	77
5.2 RECRUITING QUALIFIED TEACHERS	77

5.3 STAFF SELECTION AND QUALIFICATIONS OF THE SCHOOL PERSONNEL	78
5.4 EVALUATION OF THE SCHOOL PERSONNEL	86
5.5 PERFORMANCE AND ACKNOWLEDGEMENT	87

ELEMENT 6: HEALTH AND SAFETY **88**

6.1 FACILITIES	88
6.2 AUXILIARY SERVICES	88
6.3 IMMUNIZATIONS AND TUBERCULOSIS TESTING	88
6.4 PRESCRIPTION MEDICATIONS	88
6.5 VISION, HEARING, AND SCOLIOSIS SCREENING	89
6.6 DIABETES	89
6.7 BLOOD BORNE PATHOGENS	89
6.8 EMERGENCY SITUATIONS	89
6.9 DRUG FREE/ALCOHOL FREE/SMOKE FREE ENVIRONMENT	92
6.10 CRIMINAL BACKGROUND CHECKS	92
6.11 COMPREHENSIVE SEXUAL HARASSMENT POLICIES AND PROCEDURES	92
6.12 CHILD ABUSE REPORTING	92
6.13 WORKPLACE SAFETY	93
6.14 INSURANCE	93

ELEMENT 7: RACIAL AND ETHNIC BALANCE **94**

ELEMENT 8: ADMISSION REQUIREMENTS **95**

8.1 INFORMING PARENTS ABOUT THE ENROLLMENT LOTTERY	95
8.2 LOTTERY PROCEDURE	96
8.3 NOTIFICATIONS OF ADMISSION STATUS	96

ELEMENT 9: ANNUAL FINANCIAL AUDITS **97**

9.1 BUDGETS	97
9.2 FINANCIAL REPORTS	97
9.3 ACCOUNTABILITY	98

ELEMENT 10: SUSPENSION AND EXPULSION **99**

10.1 PROGRESSIVE POSITIVE DISCIPLINE	99
10.2 GROUNDS FOR SUSPENSION AND EXPULSION OF STUDENTS	99
10.3 ENUMERATED OFFENSES	100
10.4 SUSPENSION PROCEDURE	101
10.5 AUTHORITY TO EXPEL	102
10.6 EXPULSION PROCEDURES	102
10.7 SPECIAL PROCEDURES FOR EXPULSION HEARINGS INVOLVING SEXUAL ASSAULT OR BATTERY OFFENSES	103
10.8 RECORD OF HEARING	104
10.9 PRESENTATION OF EVIDENCE	104
10.10 WRITTEN NOTICE TO EXPEL	105
10.11 DISCIPLINARY RECORDS	105
10.12 NO RIGHT TO APPEAL	105
10.13 EXPELLED STUDENTS/ALTERNATIVE EDUCATION	105
10.14 REHABILITATION PLANS	106
10.15 READMISSION	106
10.16 SPECIAL PROCEDURES FOR THE CONSIDERATION OF SUSPENSION AND EXPULSION OF STUDENTS WITH DISABILITIES	106
10.17 OUTCOME DATA	108

ELEMENT 11: RETIREMENT PROGRAMS AND EMPLOYMENT MATTERS **109**

11.1 RETIREMENT	109
11.2 MANDATORY BENEFITS	109
11.3 HEALTH BENEFITS	109
11.4 WORK SCHEDULE	109
11.5 PROCESS FOR RESOLVING COMPLAINTS/GRIEVANCES	109

ELEMENT 12: PUBLIC SCHOOL ATTENDANCE ALTERNATIVES **111**

ELEMENT 13: EMPLOYEE RIGHTS AND RESPONSIBILITIES	112
ELEMENT 14: DISPUTE RESOLUTION	113
14.1 DISPUTES BETWEEN BAYTECH AND OUSD	113
14.2 INTERNAL DISPUTES	114
ELEMENT 15: EXCLUSIVE PUBLIC SCHOOL EMPLOYER	115
ELEMENT 16: SCHOOL CLOSURE	116
16.1 REVOCATION	116
16.2 CLOSURE ACTION	116
16.3 CLOSURE PROCEDURES	116
ADDITIONAL REQUIREMENTS: IMPACT ON AUTHORIZER	118
INTENT	118
LEGAL STATUS OF SCHOOL	118
ATTENDANCE ACCOUNTING	118
FACILITIES	118
DISTRICT OVERSIGHT	118
ADMINISTRATIVE SERVICES	119
POTENTIAL CIVIL LIABILITY EFFECTS	119
TERM OF CHARTER	120
AMENDMENTS	120
BUDGET DEVELOPMENT/FISCAL REPORTS/AUDIT	120
COMMUNICATIONS CLAUSE	120
SEVERABILITY	120
APPENDICES	
APPENDIX A1 - SELF REFLECTION	
APPENDIX B1 - TECHNOLOGY INTEGRATED EDUCATION	
APPENDIX B2 - COMPUTER SCIENCE PROGRAM	
APPENDIX B3 - A+ (ADVANCED STEM) PROGRAM	
APPENDIX B4 - CURRICULUM AND COURSE DESCRIPTIONS	
APPENDIX B5 - HOME VISIT PROGRAM	
APPENDIX B6 - GET READY FOR LIFE PROGRAM	
APPENDIX B7 - COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM	
APPENDIX C1 - ARTICLES OF INCORPORATION	
APPENDIX C2 - BYLAWS	
APPENDIX C3 - BIOGRAPHIES OF WE BOARD OF DIRECTORS	
APPENDIX D1 - PROPOSED BUDGET AND CASH FLOW	

AFFIRMATIONS/ASSURANCES

Bay Area Technology School:

- Shall meet all statewide standards and conduct the student assessments required, pursuant to Education Code Section 60605 and 60851, and any other statewide standards authorized in statute, or student assessments applicable to students in non-charter public schools. [Ref. Education Code Section 47605(c)(1)]
- Shall be deemed the exclusive public school employer of the employees of the Bay Area Technology School for purposes of the Educational Employment Relations Act. [Ref. Education Code Section 47605 (b)(5)(O)]
- Shall be non-sectarian in its programs, admissions policies, employment practices, and all other operations. [Ref. Education Code Section 47605(d)(1)]
- Shall not charge tuition. [Ref. Education Code Section 47605(d)(1)]
- Shall admit all students who wish to attend the Bay Area Technology School, and who submit a timely application, unless the Charter School receives a greater number of applications than there are spaces for students, in which case each application will be given equal chance of admission through a public random lottery process. Admission to the Charter School shall not be determined according to the place of residence of the student or his or her parents within the State. [Ref. Education Code Section 47605(d)(2)(A)-(B)]
- Shall not discriminate on the basis of the characteristics listed in Section 220 (actual or perceived disability, gender, nationality, race or ethnicity, religion, sexual orientation, or any other characteristic that is contained in the definition of hate crimes set forth in Section 422.55 of the Penal Code or association with an individual who has any of the aforementioned characteristics). [Ref. Education Code Section 47605(d)(1)]
- Shall adhere to all provisions of federal law related to students with disabilities including, but not limited to, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990 and the Individuals with Disabilities in Education Improvement Act of 2004.
- Shall meet all requirements for employment set forth in applicable provisions of law, including, but not limited to credentials, as necessary. [Ref. Title 5 California Code of Regulations Section 11967.5.1(f)(5)(C)]
- Shall ensure that teachers in the Charter School hold a Commission on Teacher Credentialing certificate, permit, or other document equivalent to that which a teacher in other public schools are required to hold. As allowed by statute, flexibility will be given to non-core, non-college preparatory teachers. [Ref. California Education Code Section 47605(l)]
- Shall at all times maintain all necessary and appropriate insurance coverage.
- Shall, for each fiscal year, offer at a minimum, the number of minutes of instruction per grade level as required by Education Code Section 47612.5(a)(1)(A)-(D)
- If a pupil is expelled or leaves the charter school without graduating or completing the school year for any reason, the charter school shall notify the superintendent of the school district of the pupil's last known address within 30 days, and shall, upon request, provide that school district with a copy of the cumulative record of the pupil, including a transcript of grades or report card and health information. [Ref. California Education Code Section 47605(d)(3)]

- Shall submit an annual report and annual independent audits to the OUSD Office of Charter Schools by all required deadlines.
- Shall submit required enrollment data each March to the OUSD Office of Charter Schools by the required deadline.
- Shall operate in compliance with generally accepted government accounting principles.
- Shall maintain separate accountings of all funds received and disbursed by the school.
- Shall participate in the California State Teachers' Retirement System as applicable.
- Shall obtain and keep current all necessary permits, licenses, and certifications related to fire, health and safety within the building(s) and on school property.
- Shall submit to the OUSD Office of Charter Schools the names, mailing addresses, and employment and educational histories of proposed new members of the Board of Trustees prior to their service.
- Shall, in the event the Board of Trustees intends to procure substantially all educational services for the charter school through a contract with another person or entity, provide for approval of such contract by the Board of Education in advance of the beginning of the contract period.
- Shall provide to the Office of Charter Schools a school code of conduct, Board of Trustee bylaws, an enrollment policy, and an approved certificate of building occupancy for each facility in use by the school, according to the schedule set by the Office of Charter Schools but in any event prior to the opening of the school.
- Will follow any and all other federal, state, and local laws and regulations that apply to the Bay Area Technology School including but not limited to:
 - Bay Area Technology School shall maintain accurate and contemporaneous written records that document all pupil attendance and make these records available for audit and inspection.
 - Bay Area Technology School shall comply with any jurisdictional limitations to locations of its facilities.
 - Bay Area Technology School shall comply with all laws establishing the minimum and maximum age for public school enrollment.
 - Bay Area Technology School shall comply with all applicable portions of the No Child Left Behind Act.
 - Bay Area Technology School shall comply with the Public Records Act.
 - Bay Area Technology School shall comply with the Family Educational Rights and Privacy Act.
 - Bay Area Technology School shall comply with the Ralph M. Brown Act.
 - Bay Area Technology School shall meet or exceed the legally required minimum of school days.



Mehmet Sen, Lead Petitioner
President, Willow Education

1/8/13

Date

INTRODUCTION

Willow Education (WE)¹ is a 501(c)(3) non-profit public charter school management organization dedicated to establishing and managing high-quality public charter schools in Northern California. WE's educational approach is based on the conviction that science, technology, engineering, and math (STEM) education is essential in improving our modern society's knowledge base and adaptability to the fast pace of ever-changing technological advancements.

WE opened Bay Area Technology School (BayTech) in the fall of 2004 with a \$450,000 start-up grant from the State of California's Public Charter School Grant Program (PCSGP). BayTech is a charter school for grades 6–12 with a curriculum that emphasizes STEM. The school operates as a site-based school and is primarily designed to meet the needs of the students in the Oakland Unified School District (OUSD or District)². In its nine years of operation, BayTech³ has achieved an increasing trend of academic success and demonstrated organizational and financial stability. To continue its success, BayTech respectfully submits this petition for the renewal of its charter.

BayTech opened its doors in August of 2004 with 78 students in Oakland. The School has changed two locations over the years and is now located at a district facility acquired through Prop 39. The School currently serves 198 students. The operational capacity of the current facility is about 330 students, and the School anticipates reaching full-capacity in the 2016-17 school year. Please see Table 1 for BayTech school information.

Table 1 – BayTech School Information

School Information	
Bay Area Technology School	
Address:	8251 Fontaine St., Oakland, CA 94605
Phone number:	(510) 382-9932
Contact person:	Principal Hayri Hatipoglu
Renewal date:	July 1, 2013
Term of charter:	July 1, 2013-June 30, 2018
Grade configuration:	6-12
Number of students:	2012-13: 198; See section "Student Enrollment" for anticipated 5-year grade-level enrollment.
Operational capacity:	About 330 students
Instructional calendar:	See section 1.3
Bell schedule:	See section 1.3
Admission requirements:	See Element 8.

¹ Source: <http://www.willoweducation.org>

² According to Charter School Law, students from any district in California are permitted to attend the school.

³ Source: <http://www.baytechschool.org>

VISION

WE strives to shape our future by:

- Preparing students for academic success.
- Enabling students to have a broad spectrum of options for their future endeavors.
- Preparing students to be responsible and productive citizens.

MISSION

WE's mission is to enhance educational opportunities for children and families in Northern California, and to improve the quality of teaching and learning at the elementary and secondary levels.

The mission of BayTech is to serve students in grades 6 through 12 in the OUSD by:

- Enabling our students to become literate in STEM areas.
- Encouraging our students to be self-motivated, life-long learners equipped with communication and presentation skills indispensable for the technologically-oriented global environment of the 21st century.
- Preparing our students to become responsible, educated citizens who have the skills and understanding to participate and work productively in a diverse, multicultural community.
- Providing a standards-based curriculum emphasizing STEM, supported by science and computer labs.
- Providing academic and recreational after-school activities for all students including academically high and low achieving students.
- Providing opportunities for parental involvement in our students' education.

CORE VALUES

WE's actions are driven by the following values:

- **COMMITMENT:** WE values commitment in three different forms: commitment by the staff to enhance educational opportunities for all the students; commitment by the students to learn; and commitment by parents to be an integral part of their children's education.
- **COMMUNICATION:** Our society continues to become more and more diverse and multicultural. WE values the dialog between people from different cultures and backgrounds.
- **TEAM SPIRIT:** WE values the collaboration between staff, students, and parents with a single goal in mind: to secure a positive future for our children.
- **EXCELLENCE:** WE believes every child has the potential to excel in life. Our duty is to provide the opportunities for them to fulfill their dreams. WE's staff is expected to excel in their jobs by utilizing continuing professional development opportunities.

PROGRAM OVERVIEW

The BayTech program aims to improve students' performance in reading, writing, and math, reduce dropout rates, achieve high student attendance rates, and increase the number of students who pursue careers in STEM areas.

Historically, the number of African American and Latino students pursuing careers in STEM areas has been very low. Recent research suggests that a significant cause of these low numbers is that the students from these ethnic backgrounds

have inadequate exposure to intensive STEM curricula¹.

Goals

BayTech is an indispensable addition to the community because its education program aims to²:

- Increase students' interest in STEM areas and reading by offering an innovative and engaging standards-based curriculum.
- Provide a challenging curriculum designed to increase students' interest in pursuing careers STEM areas.
- Provide a quality core curriculum including humanities and social science.
- Sharpen students' thinking skills by providing hands-on, inquiry-based activities.
- Reduce dropout rates by providing academic and social support in a small school environment.
- Improve students' organizational and study skills by offering a life-skills course.

Improve students' academic skills, especially of those who are performing below grade level, by providing a comprehensive tutoring program. As our economy's base has shifted from industry to technology, the digital exchange of information has become the cornerstone of success both in scholastic and subsequent undertakings³. Problems facing our society at all levels are increasingly scientific and technological in nature. It has become apparent that our nation's economic future will require a technologically competent and highly adaptable workforce. To address these concerns effectively, young Americans need to be science and technology literate. BayTech bases its educational program on the understanding that our nation's economic future will require a highly trained workforce in STEM⁴. The comprehensive science education provided by BayTech helps students acquire a whole set of necessary intellectual habits and attitudes that might well be called "scientific habits of thinking," an important component of critical thinking.

The curriculum at BayTech emphasizes collaborative learning, a key factor in fostering a cooperative work ethic. Recent estimates by the US Census Bureau indicate that over the next 50 years the population of the United States will reach approximately 420 million⁵. Minorities will account for about 50% of the total population by 2050. These estimates also indicate that 85% of this increase in population will be the result of immigration from three areas of the world—Asia, Africa, and Mexico/Latin America. Over the next 50 years, it will be essential for people to work cooperatively in a multicultural environment while maintaining core cultural knowledge and values that allow for the development of social capital.

Recognizing that educational success is realized only when the essential underlying triad of student-teacher-parent/guardian is in harmony, BayTech also works with staff, families, and the community to provide our youth with the support necessary to reach their highest potential, intellectually, socially, emotionally, and physically.

In a school setting, teachers are the most critical role models for their students. BayTech emphasizes to its teaching staff the importance of tolerance, intellectual curiosity, persistent innovation, and continuous professional development so that these values and attitudes are conveyed to our students.

The Accord Institute of Education Research

¹ Z. Zacharia and A. C. Barton, "Urban middle-school students' attitudes toward a defined science," *Science Education*, vol. 88, no. 2, pp. 197-222, Mar. 2004.

² See Education Code Section 47601(a-c), (e)

³ F. Fukuyama, *The End of History and the Last Man*, New York, NY: Avon Books, 1992.

⁴ National Science Board's Report, *Science and Engineering Indicators*, 2004 Source:

<http://www.nsf.gov/statistics/seindo4/>

⁵ Source: <http://www.census.gov/population/www/projections/popproj.html>

BayTech implements an education model designed by the Accord Institute of Education Research (Accord). Accord is a “501 (c)(3)” non-profit organization with a clear mission to improve K-12 education through research, teaching and learning excellence, continuous school improvement, and school leadership coaching for sustainable and academically thriving schools. Based in Orange County, CA, Accord now serves over 30 public charter schools and 3 charter management organizations. Innovative ideas, best practices, and research on K-12 education are offered to schools in the form of curriculum, professional development training and training, and school improvement initiatives. Since its inception, Accord has focused on the important work of education quality and ongoing education improvement. Accord believes that charter schools play a critical role in pioneering educational innovations and ensuring that children receive the levels of quality instruction, attention, and resources that they deserve. Accord’s work supports individual charter school success through sustainable, replicable, and applicable educational improvement strategies and by positively influencing larger educational reform efforts in the United States.

Specifically, Accord will provide comprehensive support to BayTech in the following major categories:

- Program accountability and evaluation reports
- Annual STEM focused conference and semiannual full day in-service programs
- Accord curriculum development and recommendations for selection of non-Accord curricula
- College readiness programs and training
- Supplemental program development, implementation, and monitoring, including home visits, competitions, and after school programs
- Renewal charter petition support
- Financial services including budget development, accounting support, audit preparation, and revenue enhancement strategies
- Operations support including facilities acquisition, human resources, and business operations
- Public relations, networking, and other marketing activities

BayTech will implement Accord’s education model to support its curriculum that is based on the California standards, frameworks and benchmarks for assessment in each of the content subject areas. Section 1.4, titled “Instructional Design,” explains the Accord Education Model and how BayTech designs its educational program around this model.

PREFERENCE FOR THIS PETITION

BayTech’s target student population can be characterized as academically low-achieving. Section 47605 of the Charter Schools Act of 1992 provides that, in reviewing petitions for the establishment of charter schools within the District, the District’s governing board shall give preference to petitions that demonstrate the capability to provide comprehensive learning experiences to students identified by the petitioners as academically low-achieving pursuant to the standards established by the State Department of Education under Education Code Section 54032.

BayTech offers a comprehensive learning experience designed to serve the needs of such students through effective site-based instruction, rich hands-on learning, and strong basics presented in ways that are relevant and inspiring for our students. Classroom instruction is supplemented by tutoring, after-school programs, and school-to-university links. Accordingly, this petition is entitled to preference in the review and approval process.

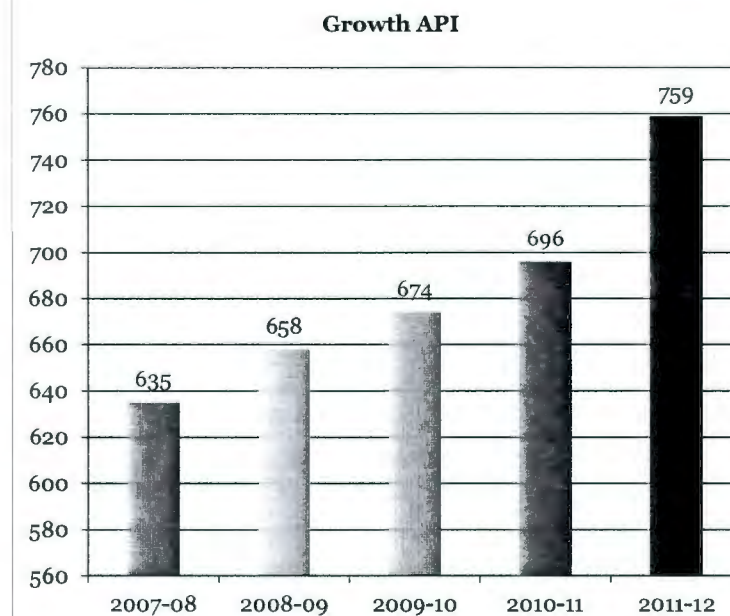
BAYTECH'S TRACK RECORD

BayTech has successfully been one of the highest performing schools in the Oakland Unified School District, and the highest performing school in its comparison group of similar schools. BayTech has achieved this success while serving a socio-economically disadvantaged student population. For the 2012-13 school year, 95% of BayTech students qualify for free or reduced lunch. At the same time, BayTech has achieved an annual average attendance rate of at least 95%.

BayTech has shown diverse outreach efforts to increase parental involvement and develop partnerships to support educational initiatives. BayTech's teachers are NCLB highly qualified in their subject areas. Students have access to excellent core academic programs which are complemented by strong curricular and extra-curricular activities, including after-school programs, home visits, motivational guest speakers, parent meetings, university and college visits, and field trips that shape the educational vision of the student and the family.

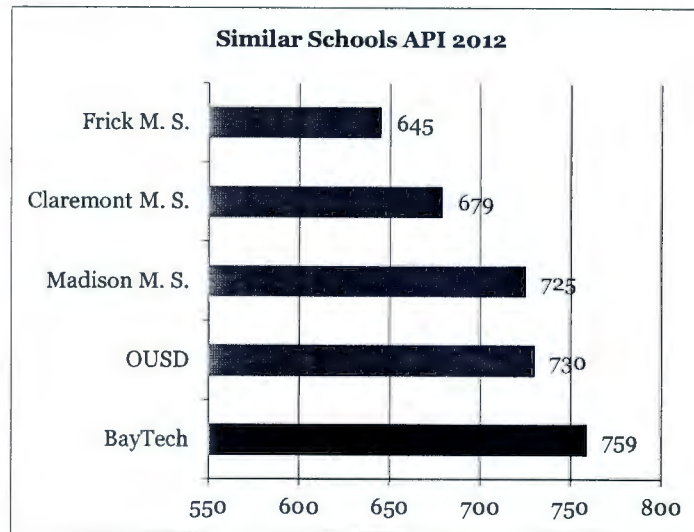
BayTech targets a student population that is academically low-achieving, and has developed its program to specifically benefit this group of students. With its successful education model and through hard work, BayTech has consistently raised its Academic Performance Index (API) score over the years as shown in Fig. 1.

Figure 1 – BayTech's API Growth over the Years



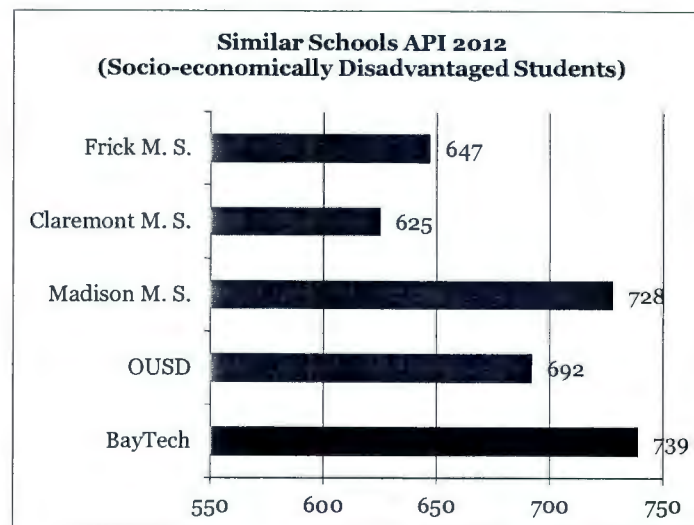
BayTech has achieved the highest API score of all similar OUSD schools with similar demographics that BayTech students would otherwise attend. Fig. 2 shows the API score of BayTech as compared to the API growth of the similar schools in Oakland Unified School District in 2012.

Figure 2 – BayTech's API Score Compared to Schools with Similar Demographics in OUSD



BayTech community strives for excellence and will continue to improve our API growth rate in the upcoming years. Furthermore, BayTech has been able to increase the API score of socio-economically disadvantaged students significantly as compared to OUSD and similar schools in the District (Fig. 3).

Figure 3 – BayTech's API Score Comparison Among Socio-economically Disadvantaged Students



The followings are some of the other many accomplishments of BayTech:

- BayTech has been fully accredited by the Western Association of Schools and Colleges (WASC)¹.
- BayTech has improved its API score steadily over the years, from 635 to 759, gaining 124 points since 2008.
- BayTech has increased its API score for socio-economically disadvantaged students from 631 in 2008 to 739 in 2012, gaining 108 points over the last five years
- BayTech has attained the highest API score compared to the schools with similar demographics in Oakland Unified School District.
- BayTech has made AYP in 2012 by meeting all 13 AYP requirements.
- BayTech has achieved an attendance rate of at least 95% each year.
- BayTech's graduation rate calculated for the cohort outcome data for the class of 2010-11 is 71.4%. OUSD's graduation rate for the same cohort is 59.1%. About 60% of BayTech graduates have secured admission to a 4-year institution.
- The number of suspensions have dropped over the years at BayTech:
 - 2007-08: 11, 2008-09: 9, 2009-10: 9, 2010-11: 6
- Our students annually visit UC Berkeley and participate in scientific research.
- In addition to its rigorous math and science courses, BayTech offers electives and clubs to give students access to STEM programs early on. For the 2012-13 academic year, these programs include Computer Literacy 1&2, A+ (Advanced STEM), AP Computer Science, Computer Programming, and Digital Art courses, and MathCounts, First Lego League, Future City, and Science Fair clubs.
- BayTech has consistently offered an after-school program with a wide variety of programs that support student learning. All students have access to free tutoring in core subjects. Students performing below proficiency in math or English also benefit from the Supplemental Education Services (SES) offered at BayTech.
- BayTech brings the joy and prestige of participating in national and international competitions and science fairs back to public schools in OUSD. In collaboration with Accord Institute, BayTech organizes math and computer programming competitions for elementary and middle school students. Competition days become a special day that elementary and secondary school teachers use to arouse interest in sciences among their students. The following are examples of such competitions and activities BayTech has participated in and/or organized, and the achievements it has received in the recent years:
 - BayTech students have won more than 50 awards in local and nationwide competitions, such as Math Counts, SimCity Future City Design Contest, Robot Design Contest, Science Competitions, Science Fairs and other STEM-related competitions.
 - 2012 – BayTech students won silver medal in Alameda County science fair, silver medal in International Sustainable World Energy Engineering Environment (I-SWEEEP), and bronze medal in International Environmental Project Olympiad (INEPO)
 - 2011 – BayTech students won silver medal in San Francisco County science fair and silver medal in I-SWEEEP.
 - 2007 – BayTech was the third place winner of the FIRST Lego Robot Design Competition in the

¹ Source: http://www.acswasc.org/directory_search.cfm, search by School Name = Bay Area Technology School

Northern California Regional Finals.

- 2007 – BayTech high school students received third place in Oakland city-wide Recycle Art Design Contest.
- 2006 – BayTech Future City Design team ranked the third place in SimCity Future City Design Competition in the Northern California Regional Finals.
- Annual – Organizing MathMatters © math contest to stimulate interest in mathematics among 4th and 5th grade students in Bay Area, and to provide recognition of outstanding young mathematicians. Students compete to solve challenging math problems and enjoy math games and educational activities at this event.
- Annual – Participation in Gauss League; math competition among students taking A+ (Advanced math) classes in middle school.
- Annual – Participation in ACCompete; computer science competition among students taking A+ (Advanced computer) classes.
- Annual – Participation in CStory Contest; this contest requires extensive use of technology skills that are provided within Accord Institute's Computer Science Curriculum. This year's contest for middle school students include three categories; animation, programming, and storybook / comic book.
- Annual – Participation in Magnolia Public Schools competitions including Science Fair, Lego Robotics, and Math Tournament.
- Annual – Organizing school-wide science fairs in which at least 85% of our students participate.

STUDENT ENROLLMENT

The student enrollment at BayTech has increased from 78 in 2004 to 198 in 2012. The School has changed two locations over the years and is now located at 8251 Fontaine St., Oakland, in a district facility acquired through Prop 39. The relocations have prevented the School from reaching enrollment targets. The successful education model of the School presents a great choice to the students and parents of BayTech. We are confident that our diverse outreach efforts, supported by our success, will contribute to an increase in enrollment. The operational capacity of the current facility is about 330 students, and the School anticipates reaching full-capacity in the 2016-17 school year. Please see the following table for projected grade level enrollment at BayTech for the following five years.

Table 2 - The projected grade-level enrollment of BayTech for the following five years

Projected Grade-level Enrollment at BayTech					
Grade	2013-14	2014-15	2015-16	2016-17	2017-18
6	60	60	60	60	30
7	60	60	60	60	60
8	30	60	60	60	60
9	30	30	50	50	50
10	25	30	30	50	50
11	25	25	30	25	50
12	25	25	25	25	30
Total	255	290	315	330	330

ELEMENT 1: EDUCATIONAL PROGRAM

Governing Law: A description of the educational program of the school, designed, among other things, to identify pupils whom the school is attempting to educate, what it means to be an "educated person" in the 21st century, and how learning best occurs. The goals identified in that program shall include the objective of enabling pupils to become self-motivated, competent, and lifelong learners. Education Code Section 47605(b)(5)(A)(i).

If the proposed school will serve high school pupils, a description of the manner in which the charter school will inform parents about the transferability of courses to other public high schools and the eligibility of courses to meet college entrance requirements. Courses offered by the charter school that are accredited by the Western Association of Schools and Colleges may be considered transferable and courses approved by the University of California or the California State University as creditable under the "A" to "G" admissions criteria may be considered to meet college entrance requirements. Education Code Section 47605(b)(5)(A)(ii).

1.1 TARGET STUDENT POPULATIONS

Oakland is the eighth largest city in California. Its population of 390,724 is among the most diverse in the nation - 28.0% African-American, 25.9% white and non-Hispanic, 25.4% Hispanic, and 16.8% Asian. Over eighty different languages and dialects are spoken. The poverty level in Oakland is 18.7%.¹

Approximately 46,000 students are enrolled in the Oakland Unified School District. The student demographics for OUSD are as follows: 41.0% Latino, 30.6% African American, 13.4% Asian, 8.8% White, and 6.2% Others. 64.4% of the students are socioeconomically disadvantaged and about 40.7% of them have Limited English Proficiency (LEP).²

BayTech's student population reflects the demographics of the OUSD, though with a higher percentage of socio-economically disadvantaged students from diverse backgrounds. A large percentage of BayTech's students come from OUSD schools in Program Improvement. About 83% of BayTech's students are students of color who represent the student demographics in the targeted schools in OUSD/neighborhood. About 95% of our students come from low-income families, qualifying them for a free or reduced fee lunch. As a result, BayTech's target student population can be identified as academically low achieving (Education Code Section 47601(b)).

¹ Source: <http://quickfacts.census.gov/qfd/states/06/0653000.html>

² Source: CDE Dataquest

1.2 EDUCATIONAL PHILOSOPHY

1.2.1 An Educated Person in the 21st Century

The founders of BayTech believe that educated citizens of the 21st century must have a solid background in math, science, and technology, as well as history and literature. With such knowledge, not only will they be able to keep up with the rapid growth of science and technology, but they will also be able to contextualize it and understand what it means. Such citizens must also have a love of learning that will enable them to be self-motivated, competent, lifelong learners who can quickly adapt to changes in the means and methods at their future workplaces. In addition, these educated citizens must be effective language users, adept at writing and speaking, and committed to the intellectual virtues of objectivity, honesty, critical thinking, and social and moral awareness. Finally, they must be able to work productively and cooperatively in multicultural environments.

Goals

Following is a summary of BayTech's academic goals. These goals, as well as measurable pupil outcomes and how BayTech measures these outcomes, are described in detail in Elements 2 and 3 (Measurable Student Outcomes and Methods to Assess Student Progress).

BayTech will:

- Increase students' interest in reading, writing, science, and math by innovative, engaging standards-based curriculum.
- Encourage students to become self-motivated and competent lifelong learners.
- Prepare students to respect truth and to be socially responsible and productive citizens.
- Provide challenging and engaging curricula with carefully selected standards-based teaching materials and state-of-the-art equipment implemented by highly qualified teachers.
- Improve students' knowledge and skills in core subjects, thereby increasing their objective and critical thinking skills as well as their chances of success in higher education and beyond.
- Establish intensive enrichment programs for both low and high achieving students.
- Create a supportive and caring environment with small classes and strong student-parent-teacher communication.

1.2.2 How Learning Best Occurs

Learning best occurs when students are actively involved in the learning process, have direct experiences with the physical world, and relate those experiences to what they are learning in school.¹ ²Our rigorous standards-based educational program uses inquiry-based activities to help students acquire core academic knowledge, critical thinking abilities, and problem-solving skills. Students are also given the opportunity to develop communication, interpersonal, and other general social skills through writing and presenting both collaborative and individual work projects. Furthermore, BayTech offers courses designed to help students attain organizational and study skills, which are crucial to becoming competent, lifelong learners.

Students must be given opportunities to construct their knowledge, sometimes through multiple encounters with a new

¹ D. Fortus et al, "Design-based science and student learning," *Journal of Research in Science Teaching*, v. 41, no. 10, pp. 1081-1110, 2004.

² S. B. Mertens and N. Flowers, "Middle school practices improve student achievement in high poverty schools," *Middle School Journal*, pp. 33-43, Sep 2003.

concept. To develop conceptual understanding in constructivist settings, teachers assume the role of facilitators of meaningful learning experiences. Students build on existing knowledge as facilitated experiences help them discover the underlying concepts for themselves. This process deepens students' knowledge and stimulates their curiosity and passion for learning. Students will learn how to learn, thereby developing the skills to become self-empowered learners.

Harvard University research studies show that smaller classes produce substantial improvements in learning: the effect of small class size on the achievement of minority children was approximately double that observed for majority children in the first four years of an experimental program in Tennessee.¹ BayTech is a small school with a total enrollment of 198 students in grades 6-12 for the 2012-13 school year. The low student/teacher ratio helps teachers attend to each student, thereby allowing students to learn at their own pace and receive individualized attention that is crucial for student achievement.

The balance between academic and enrichment programs at BayTech promotes a love of learning and an overall positive feeling about the school experience. BayTech offers a rigorous, standards-based curriculum from which students gain core knowledge and lifelong learning skills. Experiential methods engage each student and facilitate understanding of core concepts. BayTech's after school programs offer academic assistance to students who need it and provide a safe place for academic and non-academic enrichment outside the regular school day. Please refer to Distinctive Features of BayTech section of this document for further information about the after school programs.

Parent participation is also an important element in BayTech's educational philosophy. Students whose parents are involved in their education generally have better attendance, higher homework submission rates, higher grades, higher graduation rates and a greater chance of furthering their education. This positive result is especially true for predominantly minority and/or low income communities.²

In order to be responsible members of society, students need to provide service to the community. Engaging in "real life" projects that are related to the curriculum will help students move from adolescence and school to adulthood and society. Therefore, BayTech students are actively involved in various community service projects.

¹ F. Mosteller, "The Tennessee study of class size in the early school grades," *Future Child*. Summer-Fall;5(2):113-27, 1995.

² Cotton, K., and Wiklund, K. R. *Parent Involvement in Education*. Close-Up #6. Portland, OR: Northwest Regional Educational Laboratory, 1989 (ED 312 030).

1.3 SCHOOL YEAR AND DAY

The school will offer, at a minimum, the number of instructional minutes set forth in Education Code 47612.5 for the grade levels provided by the charter school. The school calendar will have at least 175 days of instruction. The school will announce its annual calendar before the beginning of each instructional year. Following are the instructional calendar and bell schedules of BayTech for the 2012-13 school year. The school offers 176 days and 64,876 instructional minutes for 2012-13.

1.3.1 Bell Schedule

Table 1 – Regular and Shortened Day Bell Schedules of BayTech in 2012-13

Regular Day			Shortened Day		
Prep	8:10 AM	8:20 AM	Prep	8:10 AM	8:20 AM
1st Period	8:20 AM	9:15 AM	1st Period	8:20 AM	9:05 AM
2nd Period	9:17 AM	10:12 AM	2nd Period	9:07 AM	9:52 AM
Recess	10:12 AM	10:20 AM			
3rd Period	10:20 AM	11:15 AM	3rd Period	9:54 AM	10:39 AM
4th Period	11:17 AM	12:12 AM	4th Period	10:41 AM	11:26 AM
Lunch / SSR	12:14 AM	12:42 PM	5th Period	11:28 PM	12:13 PM
Recess	12:42 PM	12:50 PM			
SSR / Lunch	12:50 PM	1:18 PM	Lunch / SSR	12:15 PM	12:45 PM
5th Period	1:20 PM	2:17 PM	SSR / Lunch	12:45 PM	1:13 PM
6th Period	2:19 PM	3:16 PM	6th Period	1:15 PM	2:00 PM
Dismissal	3:15 PM		Dismissal	2:00 PM	
After School	3:20 PM	4:30 PM	Staff Meeting	2:10 PM	4:00 PM

1.3.2 Instructional Calendar



BAY AREA TECHNOLOGY SCHOOL

Quality is everyone's responsibility



Academic Calendar 2012-2013

July '12						
Su	M	Tu	W	Th	F	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August '12						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September '12						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October '12						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November '12						
Su	M	Tu	W	Th	F	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

December '12						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

January '13						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February '13						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

March '13						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April '13						
Su	M	Tu	W	Th	F	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May '13						
Su	M	Tu	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June '13						
Su	M	Tu	W	Th	F	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Purple: No School Days

Important Days

Important Days

From	To	August '12
6-Aug		Accord Workshop for Teachers
20-Aug	24-Aug	Teacher In Service
23-Aug		Parent/Student Orientation (Returning)
24-Aug		Parent/Student Orientation (New)
25-Aug		Parent/Student Orientation (Returning & New)
27-Aug		First Day of School for Students
		September '12
3-Sep		Labor Day (No School)
4-Sep	10-Sep	MAP TEST I
10-Sep		Picture Day
14-Sep		Professional Development Day (No School)
20-Sep		Back to School Night
27-Sep	28-Sep	Accord Conference (No School)
		October '12
15-Oct		Picture Retake Day
17-Oct		PSAT
31-Oct		Progress Report I
		November '12
6-Nov	7-Nov	CAHSEE ELA 11-12 Grades
8-Nov		Parent-Teacher Conference
12-Nov		Veterans Day (No School)
19-Nov	23-Nov	Thanksgiving Break (No School)
		December '12
20-Dec	4-Jan	Winter Break (No School)
		January '13
7-Jan	11-Jan	MAP TEST II
18-Jan	17-Jan	Fall Finals
17-Jan		End of Fall Semester (Report Card I)
18-Jan		Professional Development Day (No School)
21-Jan		ML King Day (No School)
22-Jan		First Day of Spring Semester
		February '13
5-Feb	6-Feb	CAHSEE for 10th Grades
18-Feb		Presidents' Day (No School)
		March '13
5-Mar		7th Grade Writing Test
22-Mar		Progress Report II
25-Mar	29-Mar	Spring Break (No School)
		April '13
1-Apr		Cesar Chavez Day (No School)
4-Apr		Parent-Teacher Conference
15-Apr	19-Apr	MAP TEST III
		May '13
2-May	7-May	STAR TEST
8-May	9-May	STAR TEST Make-Up
14-May	15-May	CAHSEE for 12th Grades
24-May		Lincoln's Day (No School)
27-May		Memorial Day (No School)
		June '13
10-Jun	11-Jun	Spring Finals
13-Jun		8th Grade Promotion
13-Jun		Last Day of School For Students
14-Jun		High School Graduation Ceremony
14-Jun		Wrap-up Meeting

1.4 INSTRUCTIONAL DESIGN

BayTech implements Accord Institute's education program. (See the "Introduction" section for Accord Institute, a non-profit research institution based in Orange County, CA, aiming to improve the common educational practices by conducting scientific research and forming a replicable educational model.) This research-based, proven educational program has been shaped by highly successful STEM focused charter schools that are clients of the Accord Institute. BayTech will receive services related to the educational program, teacher professional development and evaluation from the Accord Institute. The program has four major components, which are summarized below: Data-Driven Design, STEM Focus for Creativity and Innovation, Life-Long Learning, and Accelerated Academic Achievement.

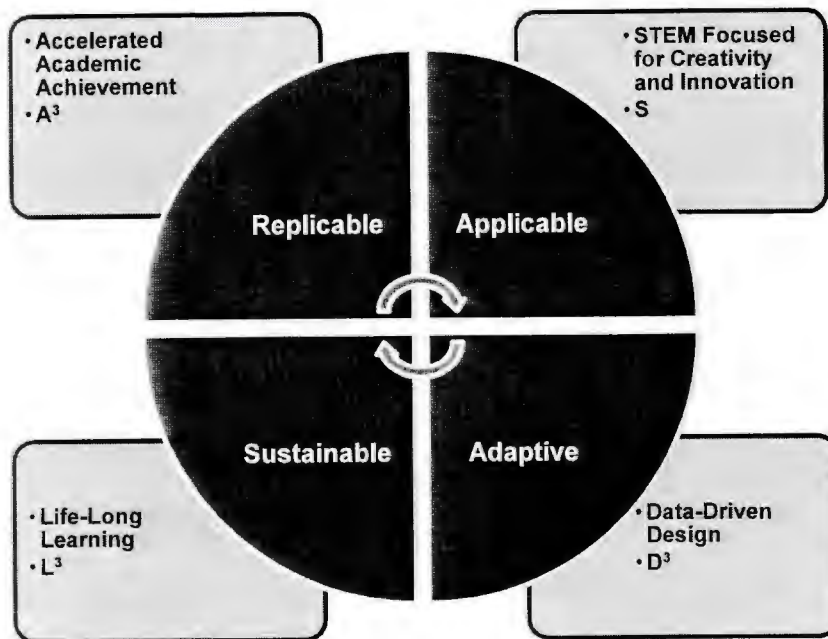


Figure 1 – Accord Education Program

1.4.1 Data Driven Design

California's high stakes standardized testing program provides results too late for meaningful academic adjustments. Therefore, BayTech students will be tested in the beginning of the school year and several times during the year with a standards-based and large-scaled tests, and necessary adjustments to the instruction are made based upon the data. BayTech will implement an effective method to help its low-achieving students as explained below:

A. Identifying Low-Achieving Students Through Computer Adapted Tests

BayTech uses Northwest Evaluation Association (NWEA)'s computer-adapted tests, called Measures of Academic Progress ("MAP"), to evaluate student learning and to differentiate instruction to meet student needs.

These campus-wide tests are used to measure individual levels of student performance reflected in state adopted content

standards. They also measure various skills, such as analytic ability, critical thinking, and synthesis. While the MAP testing is not used as a basis for student promotion, it does provide a valuable resource to identify students in need of remediation and intervention.

MAP is administered three times every academic year. With a large norm reference group (more than 2 million), MAP reports provide highly accurate feedback as how BayTech students are performing. The assessments adapt to the student's ability, accurately measuring what a child knows and needs to learn. MAP measures academic growth over time, independent of grade level or age.

The first MAP test of the year is implemented in the first two weeks of the school year. NWEA provides test results within 24 hours of the test allowing the school administration and the teachers to plan necessary interventions for low achieving students. MAP test results are also used to identify the skills and concepts individual students have learned, diagnose instructional needs, monitor academic growth over time, make data-driven decisions, and place new students into appropriate courses.

Students are tested in four main subject areas: Reading, Language Usage, Mathematics, and Science. MAP produces reports in subject areas and subcategories and within each subject area student performance can be identified as:

- Proficient and growing
- Proficient and not growing
- Growing but not proficient
- Not growing and not proficient

B. Differentiated Instruction

BayTech is well-equipped to meet the needs of a diverse student body with multiple learning styles. Students are assigned class activities based on their identified levels that are determined by MAP and other placement test results. Teachers differentiate instruction per their students' cognitive and social needs. In-class assessments are also used to determine the level of understanding students and design individualized instruction. Teachers utilize strategies that include tiered assignments, interest centers/groups, independent projects, flexible grouping, and varying questions.

Students who are achieving substantially below grade level are identified through multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education's website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests. For students achieving substantially below grade level, educational materials that provide review and re-teaching are used. McGraw Hill's Acuity program software, Holt McDougal Publisher's resources, and the Accelerated Math program allow teachers to monitor the progress of students who are achieving below grade level and provide software generated tests and instructional materials based on California content standards/framework which have not been achieved.

For details of how differentiated instruction is implemented for English Language Learners, please see section 1.10 "English Learners."

C. Department and Grade-Level Meetings

Biweekly staff meetings at BayTech are organized by subject and grade level during which teachers discuss student progress, reviewing and adjusting strategies as indicated. With the approval of the school administration, these changes

are made.

Staff share best practices and discuss issues such as academic and behavior support for students including peer tutoring, mentorships, RTI, tutoring, IEP, 504, homework load, differentiation, grading uniformity, long-term projects, horizontal and vertical curriculum alignment, and other departmental or grade level issues, etc.

D. Early Intervention

BayTech identifies the socio-economically disadvantaged and low-achieving students in the first weeks of the academic year, and implements early intervention where indicated. Continuous free tutoring, individual teacher mentoring and support, after school programs,; home visits, motivational guest speakers, parent meetings, university and college visits, and field trips shape the educational vision of the student and the family.

Parents are invited to meet their child's teachers and are encouraged to participate in their child's education and are provided tips and training for doing so.

Targeted English & Math intervention classes are offered during elective periods to students who are not achieving at grade level. Individual and small group tutoring as well as homework clubs are also available. Low achieving students' progress is quantitatively measured through MAP, Acuity, Accelerated Reader, and Accelerated Math tests with the goal of attaining at least one year's academic progress within the school year.

BayTech has a small class size. This certainly enhances each teacher's ability to give individual attention to students. This is critical for socio-economically disadvantaged and low-achieving students. Teachers can very effectively monitor the progress of the students in a small-size class.

E. After-School Tutoring

BayTech builds an educational environment that includes after-class individual attention through the after-school tutoring program. Students receive tutoring from the faculty and also from volunteers from area universities. It is structured to fit individual student needs to maximize each student's potential. Thus, some students may require tutoring one afternoon a week, whereas others may require daily tutoring. The tutoring program also benefits students who are not classified as low achievers. Tutors are available to students performing at or above grade level upon request. These tutoring sessions generally occur after school, but some may be scheduled on weekend days, depending on student and parent need.

McGraw Hill's Acuity program, Holt McDougal Publisher's resources, Kuta software, Khan Academy, and Accelerated Math programs are also utilized in order to provide students with personalized worksheets adjusted according to the student's needs.

1.4.2 STEM Focus for Creativity and Innovation

1.4.2.1 STEM Emphasis in Instruction

In agreement with the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO), BayTech believes that an educated citizen in the 21st century must have the skills and understanding to participate and work productively in a technologically oriented and global environment. A significant step toward helping students achieve their maximum potential involves providing a rigorous, relevant and college preparatory curriculum. BayTech's educational program specifically emphasizes science, technology, engineering and

math (STEM) education. While the curriculum concentrates on STEM, it also provides a solid instruction in humanities and social sciences to educate the whole child.

Math courses provide a comprehensive scope and sequence in an effort to address the diverse skills, interests and backgrounds of all learners. Students are assessed for their current knowledge and skill level and placed in the most appropriate class. Those with little math background are supported with remediation and intervention. Students with a strong background are provided with enrichment opportunities. These students also have the opportunity to participate in the A+ (Advanced STEM) program, which is offered as an elective course and as an after school program. A+ challenges students by preparing them for various regional, state, and international competitions in math, science, and computers. Students can further reinforce the material they learned in math through Technology Integrated Education (TIE) courses.

Science courses immerse students in the scientific method and encourage them to use the applicable technology to plan and organize projects, hypothesize, analyze data, and draw conclusions from tests they create. Students who have experience applying scientific inquiry and reasoning to real-world problems in the classroom will have a clear advantage when they are exposed to the types of questions that require similar thought and reasoning process as adults.

In keeping with the STEM emphasis, advanced courses are offered to spur interest and prepare students for STEM related careers. Science classes employ technology in laboratory explorations and experimentation. Computer simulations assist in expanding the number of lab opportunities in all grade levels. Teachers effectively use the inquiry-based approach to engage students in the learning process while encouraging high levels of interest. Students' observations and reflections are the key factors for maximum learning results through hands-on instruction.

BayTech implements peer tutoring to challenge both high and low achieving students. To enhance critical-thinking skills, students work on inquiry-based activities and projects outside of the classroom throughout the school year. Each year BayTech organizes a school-wide science fair and history fair, in which all students participate. BayTech students then move on to participate in the regional and statewide science fairs.

Teachers use instructional aides such as LEGO Mindstorms Lab to spur interest and enhance teaching and learning practices in math, science and technology, as well as basic engineering skills. Skills in programming, physical coordination, and sequencing are developed using these tools.

In collaboration with Accord, BayTech organizes and participates in math and computer programming competitions for elementary and middle school students. Through various activities, competition days become a targeted event to arouse student interest. Please see the Section titled "BayTech's Track Record" under "Introduction" for such competitions and activities, and a partial list of achievements BayTech students have received.

BayTech will offer a variety of after school clubs to students to stimulate their interest in and extend their knowledge of various subjects covered in the classroom. Students who are high achieving in math and science are invited to participate in the A+ program, an advanced math & computer program provided by Accord that is designed to motivate and encourage students in grades 6-12. A+'s condensed program helps students develop their critical and analytical thinking skills while providing a challenging academic environment. For the 2012-13 school year, BayTech offers the following clubs in STEM areas: First Lego League, Future City, A+ (Advanced Math), A+ (Advanced Computer), and Science Fair.

1.4.2.2 Technology Integrated Education (TIE) ©

Technology Integrated Education (TIE) is a distinguishing program of BayTech, integrating Math, Science, Social Science and Language Arts classes with technology education in a fun and comprehensive way.

This unique program includes:

- a. Accord's technology curriculum that provides crucial technology tools and develops critical skills that help students gain acceptance to and graduation from a 4-year university with an S&E major.
- b. Core class integration projects that align with the California Content Standards and require higher order learning and improving critical thinking skills.

TIE consists of:

1. Comprehensive and detailed technology curriculum
2. Teaching materials and assessment tools
3. Professional training for computer and core class teachers

The TIE curriculum is based on the National Educational Technology Standards for Students (NETSS) and International/European Computer Driving License (ICDL/ECDL). The ICDL is the world's leading credential to obtain a job, improve job performance and promotion opportunity.

TIE is designed and developed with a constructivist approach that accommodates different learning theories and practices such as project-based learning, student-centered learning, and differentiated instruction.

An effective professional training component is a must for any successful educational program. Accord provides an in-depth professional training program to teachers who will implement it.

Differences of TIE from traditional practices

In our contemporary era of technology, every school has computers and claims to use computers in education. However, the important question is how effectively are they used. Research indicates the use of technology in education will result in "good" learning only through successful implementation¹.

All students complete a multi-year, comprehensive, and detailed technology curriculum based on the International Computer Driving License in TIE whereas in the traditional public school setting, only some students in vocational programs pursue a multi-year comprehensive technology curriculum.

Traditionally, technology is used as *conveyors of information, communicators of knowledge, or tutors of students*. In this method, students are supposed to receive the conveyed information and recall it later when asked and provide the expected response. Students use pre-designed and ready-made technology products such as tutoring software, online flash applets and games and online courses. Other than the classes of a few exceptional teachers, integration projects are confined to "writing a report" and "making a presentation", that are usually random and do not require any advanced technological standards in terms of variety, quality or quantity. Unfortunately, the Majority of research on the effectiveness of the traditional way of using technology in education, or as we call it here "technology assisted education", have produced "no significant differences" in learning as a result of these interventions².

Technology Integrated Education (TIE) is a significant departure from the traditional way technology in education is used. Technology is employed as cognitive tools in TIE as described by Dr. David H. Jonassen³. Cognitive tools refer to

¹ Papert, S. & Turkle, S. (1993). Styles and voices. *For the Learning of Learning of Mathematics*, 13, 49 - 52.

² Jonassen, D. H. (n.d.). *Technology as Cognitive Tools: Learners as Designers*. Retrieved from <http://itech1.coe.uga.edu/itforum/paper1/paper1.html>

³ Source: <http://itech1.coe.uga.edu/itforum/paper1/paper1.html>

the technologies that enhance the cognitive powers of human beings during thinking, problem solving, and learning. Accord is one of the few institutions worldwide working extensively on developing tools for implementation and professional training.

Benefits of TIE

a- Critical Thinking and Higher Order Learning

Technology Integrated Education facilitates critical thinking and higher order learning through assignments and projects in spreadsheets, databases, multimedia/hypermedia construction, and computer programming. Students build knowledge bases, analyze their findings using analytical tools, represent what they understand using mental models, and present them with advanced presentation techniques.

b- Generative Processing Of Information

TIE engages generative processing of information¹ through online research projects that involve creation of students' own media to present the information processed. While working on these projects, students learn the research topic at a higher order by developing appropriate mental models, using them to interpret new information, *assimilating new information back into those models, updating the models according to the new information, and finally using those updated models to explain, interpret, or infer new knowledge*². When Internet is used as a cognitive tool, online research results in knowledge acquisition and integration as a constructive process that engage learners in knowledge construction rather than knowledge reproduction.

c- Student-centered

TIE actively engages learners in creation of knowledge that reflects their comprehension and conception of the information rather than focusing on the presentation of objective knowledge. It is learner controlled, not teacher or technology-driven³.

d- Project-based, hands-on learning

In project-based learning, students use technology and inquiry to engage with issues and questions that are relevant to them, which is intended to bring deeper learning. TIE naturally provides students with hands-on learning opportunities through its technology integration projects.

e- Differentiated learning

Differentiated learning promotes an environment where all students can learn effectively regardless of differences in ability⁴. TIE makes use of the fact that classrooms that utilize technology provide the possibility of assigning differentiated tasks to students based on their individual needs.

f- Autonomous, life-long learning

¹ Wittrock, M.C. (1974). Learning as a generative activity. *Educational Psychologist*, 11, 87-95.

² Rumelhart, D.E., & Norman, D.A. (1978). Accretion, tuning, and restructuring: Three modes of learning. In J.W. Cotton & R.L. Klatsky (Eds.), *Semantic factors in cognition*. Hillsdale, NJ: Lawrence Erlbaum.

³ Source: <http://itech1.coe.uga.edu/itforum/paper1/paper1.html>

⁴ Tomlinson, Carol (2001). *How to Differentiate Instruction in Mixed-Ability Classrooms* (2 ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Students must be self-motivated, autonomous, life-long learners to keep up with the rapidly advancing technology. TIE activities transform students into autonomous learners with its tutorial-based structure while teachers act as facilitators and provide students with individual assistance.

g- Higher student motivation

TIE activities have a fun side attracting students into the integrated content, which helps place students back on track, who may otherwise have been lost in core classes.

Please see section 1.5.4, "Courses Explained," and Appendix B1, "Technology Integrated Education Program," for BayTech's TIE Curriculum.

1.4.2.3 Computer Science Program

In conjunction with the Technology Integrated Education (TIE) instruction, BayTech implements Accord's Computer Science Program. The middle school component of this curriculum aims to provide strong skills in computer literacy and fundamentals of computational thinking in 6th and 7th grades and transitions into conceptual understanding of high school electives in 8th grade. The high school component of the curriculum is composed of computer elective courses and the Advanced Placement Computer Science course.

Please see section 1.5.4, "Courses Explained," and Appendix B2, "Computer Science Program," for BayTech's Computer Science Curriculum.

1.4.3 Life-long Learning

The scale of current economic and social change and the rapid transition to a knowledge-based society are all challenges which demand a new approach to education and training, within the framework of lifelong learning. Lifelong learning is defined as 'all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective.'¹

Every student has the potential to learn and excel. However, not all students have the vision to excel, or the means to do so. Many students are prone to fail because of lack of vision, or because they do not have necessary assistance and guidance required of their families. The instructional design at BayTech is prepared so that students have role models around them to provide vision and guidance. Students are motivated to focus on learning, and gain self-confidence with the discovery of their potential.

BayTech has a guidance program aligned with American School Counselors Association (ASCA)'s National Model for School Counseling Programs. This program includes following effective means of counseling students in addition to responsive services and individual student planning.

A. High Expectations

Numerous research studies have shown that high expectations yield better results at schools. The No Child Left Behind Act of 2001 (NCLB) requires states, districts, and schools to hold high expectations for all students and work to improve outcomes for low performing groups.

BayTech expects its graduates to:

¹ Source: http://www.esae.org/articles/2007_08_005.pdf

- Attend a 4-year college and pursue a career, preferably in STEM fields.
- Possess the qualities and character of educated citizens of the 21st century.

To prepare students for these goals, BayTech will require:

- A High School Planning project in 8th grade including a presentation to be made to an audience including classmates and parents on their high school planning and coursework.
- A college and career planning project again to be presented to classmates and parents in 10th grade.

B. Guidance Programs

1. Get Ready For Life (GRFL) Program

BayTech uses the “Get Ready for Life (GRFL)” program designed by Accord. This program contains topics on Life Skills, Study Skills, Test Taking Skills, Drug Prevention, Environmental Issues, College and Career Awareness and Character Education.

Recognizing the importance of character education, the United States Congress authorized the Partnerships in Character Education Program in 1994. NCLB renewed and expanded the emphasis on character development. The family is the most important place for character and moral education, but public schools are partners with the family.

GRFL is an enrichment course that provides students with valuable skills to support academic excellence and social skill development. Students participate in activities/projects to demonstrate their understanding of the values/lessons. Guest speakers and various forms of technology also engage students in the course content.

GRFL themes are integrated into broader school-wide activities including assemblies, field trips, displays, announcements, and into the general curriculum. Parents are regularly informed about the GRFL topic of the week to support BayTech’s effort to inspire positive principles of conduct in future leaders.

Please see section 1.5.4, “Courses Explained,” for more information about BayTech’s GRFL program.

2. College Prep And Counseling

2.1 College Readiness

BayTech’s educational program focuses on strengthening basic academic skills in middle school in order to build a solid foundation for the college preparatory program offered in its high school program. BayTech will offer:

- Courses that meet the University of California’s “a-g” admission requirements
- CollegeEd® - a college planning and career exploration program for middle and high school students
- Advanced Placement (AP) Courses
- Special programs to prepare students for the SAT and ACT tests, such as SAT classes and SAT boot camps
- Special interest classes and clubs, such as web authoring, programming, robotics, debate, journalism, and photography. BayTech will offer electives and clubs for students interested in pursuing particular disciplines in STEM areas.
- Comprehensive college counseling

- Continuous career counseling, career days, college fairs, and guest speakers
- Use of an online tool to create a multi-year academic plan to track graduation requirements with an opportunity to explore careers and colleges.
- 4-year academic plan, outlining the classes a student will take during their four years of high school.
- Individualized one-on-one tutoring sessions

Students are encouraged to begin thinking about professional opportunities through career counseling and exposure to possible careers. In addition, individual tutoring helps identify and nurture the special interests and talents of each student. When students are able to identify career areas early and when the school can provide a focused curriculum that enables them to pursue their interests, their motivation grows.

Every student is provided access to grade level and college preparatory courses. Students are encouraged to take Advanced Placement courses. In addition, BayTech will provide academic intervention programs to support students who are struggling academically. The academic intervention programs include: structured after-school academic tutoring, CAHSEE preparation course for all 10th grade students, use of small group instruction during intervention classes for students who continue to struggle academically, and learning contracts for students.

BayTech will offer electives for students interested in pursuing particular disciplines in STEM areas. For example, students who plan to pursue a career in engineering have the chance of taking high-level math classes.

BayTech will prepare students for college admission tests such as SAT I and SAT II Subject tests. This includes special after-school classes and tutoring.

BayTech will help high school students that continue to struggle academically by creating a plan that articulates the student's academic standing, course credits, academic path to college, and development of an individualized learning plan, academic intervention plan with benchmarks developed by the student, parent and teacher towards academic progress and proficiency.

Academic interventions at BayTech are targeted and the staff use data to closely monitor our students' academic progress. Discussion of each student's progress or lack thereof takes place during department and grade level team meetings, including during SST. The GRFL course curriculum incorporates at least two months towards college and career planning, and the schools provide a college-going culture through field trips to colleges/universities, after-school social enrichment programs, culture of high expectations, AP courses, advanced math courses and through our Technology Integrated Education (TIE) and computer courses.

2.2 College Mentorship and Leadership Program (CMLP)

BayTech uses the "College Mentorship and Leadership Program (CMLP)" designed by Accord. This is a voluntary mentorship program designed to help qualified students to improve their skills in the following areas:

- Academics
- Athletics
- Character Education/Leadership
- Voluntary Public Service

BayTech believes that students, within a collaborative and cooperative environment, will excel at academics while

reaching their full intellectual, mental, physical and emotional potential. CMLP is based on a committed long-term mentor-mentee relationship that encourages and equips students for life-long learning and prepares for admission into top US and World colleges.

Students in the CMLP program sign commitment to the program goals and requirements that include weekly, monthly, and annual benchmarks. Parents will be involved and community resources will be used to implement a successful program. Through this program, students will also be eligible to receive a bronze, silver, or gold Congressional Award. Please see Appendix B7 for the CMLP handbook.

C. Home Visits

Research has shown that one of the keys to successful teaching and schooling is creating personal connections with students inside and outside of school.¹ Knowing the students' outside interests, families, and home routines, and then using this information to connect in meaningful, individualized ways can have huge rewards in helping to create happier, healthier, and smarter kids. Recognizing these facts, BayTech uses home visits as one of the important features of its education program to not only improve student and school performance, but also to identify and intervene early with low-achieving students.

BayTech teachers visit students at their homes to enhance student learning and involvement. Family visits offer invaluable insights about students. They can provide new understanding about students' learning styles. Visits might also reveal the emotional and social needs and behaviors of students. It is helpful to know if they react to problems with tears, anger, or withdrawal, and how they socialize with peers. Through family visits, teachers can identify students' latest interests or concerns, such as a new hobby, an upcoming trip, or a change in the family. BayTech staff uses an "Activity Module" in its school information system, i.e., CoolSIS, to plan and record home visits.

D. Field Trips And Guest Speakers For Motivation

Field trips are intended to allow students to gain insight, information, or knowledge that cannot be adequately developed through regular classroom instruction. Field trips, therefore, will be an integral part of the curriculum and are as essential to the instructional process as textbooks, equipment, and other instructional devices and teaching/learning strategies. Since not all children learn in the same way, field trips will allow students the opportunity to expand their intelligence in ways different from those typically available inside the classroom.

Visiting a research laboratory, a university campus, and meeting with scientists during these field trips or through guest speakers on campus will motivate the students. Especially when some of these guest speakers or people they meet during field trips share the same culture with students, students will find new role models.

While most field trips are directly related to specific, academic curricula, they also may address the need for intra- and inter- personal growth in children, and thus may be designed to promote social and emotional development and to provide for the development of the "whole" child.

1.4.4 Accelerated Academic Achievement

The Accord Education Model envisions high academic achievement rooted in the belief that all students can learn and excel. Many students need enhanced academic challenges than what they currently receive, as well as more opportunities to develop their skills and talents. BayTech strives to provide students with means to reach their full potential.

¹ Source: http://crede.berkeley.edu/products/print/pract_briefs/pb1.shtml

A. Advanced Placement (AP) Courses

BayTech will offer Advanced Placement (AP) courses depending on student needs and interests. AP courses are college-level courses, taught with college textbooks and exams that can give students college credit in the form of advanced standing when they enter their freshman year. Students have to pass the corresponding AP test in order to get college credit.

The following is a list of sample AP courses BayTech has offered so far: AP Biology, AP Computer Science, AP Language and Composition, AP Literature, AP World History, and AP US History. The school plans to expand its offerings to include AP Calculus, AP Chemistry, AP Physics, AP American Government, AP Economics, AP Spanish Language and other AP courses in the coming years depending on student needs and interests.

B. Advanced Math Courses

BayTech students who are enrolled in a grade level math course are on the college-preparatory course path to enroll in Geometry by the 9th grade, Algebra 2 (Trigonometry) in the 10th grade, followed by Pre-Calculus and Calculus, fulfilling the UC math course (B Requirement) upon high school graduation. In addition, BayTech offers an advanced math course at each grade level for students who are ready to be enrolled in a math course above California Department of Education's expectations. For example; students who are ready will be able to enroll in Algebra 2 (Trigonometry) in the 9th grade, Pre-Calculus in the 10th grade, Calculus in the 11th grade followed by a choice of Probability or Statistics in the 12th grade.

C. A+ (Advanced STEM) Program

A+ is BayTech's program for gifted/highly gifted students. This program helps students develop critical and analytical thinking skills while providing them with a motivational and challenging environment of prestigious regional, national, and international math, science and computer competitions. Ultimately, students in this program prepare for the International Olympiads where a group of 4 or 6 students represent each country. The International Olympiads are the most prestigious and most difficult competitions in which high school students can participate.

A+ program is offered through BayTech's partnership with Accord that aims to motivate and encourage students to advance their studies and pursue careers in STEM fields. In the A+ computer class, students learn the programming language C++ and Scratch. Scratch is programming language for beginners; C++ is programming language for high school and college students. In A+ math class, students learn creative problem solving strategies.

Through A+ program, BayTech students prepare for the following competitions:

- International Mathematics Olympiad (IMO)
- International Olympiad in Informatics (IOI)
- USA Math Olympiads (USAMO)
- USA Computing Olympiads (USACO)
- American Mathematics Competitions (AMC-8, AMC-10, AMC-12, AIME)
- MathCounts
- Math League
- Math Olympiads for Elementary and Middle Schools (MOEMS)
- Gauss League (Accord Institute's Math Competition)
- ACCompete (Accord Institute's Computer Science Competition)

A+ is offered both as an elective class and after school club at BayTech. Students have the opportunity to meet after school, over the weekends and at camps throughout the year to continue their advanced studies. They get coached by Stanford University faculty and Accord's A+ program coaches. Please see Appendix B3 for more information about A+ (Advanced STEM) Program.

D. Academic Clubs

Academic clubs are an important extension and integral part of BayTech's program. In addition to its rigorous STEM courses, BayTech offers these clubs to give students access to STEM programs early on. For the 2012-13 academic year, these academic clubs include First Lego League, Future City, A+ (Advanced Math), A+ (Advanced Computer), and Science Bowl clubs. Through these clubs, students participate in regional/nationwide contests such as:

- Math: American Mathematics Competitions, International Mathematics Olympiad, MathCounts, Math League, Math Olympiads for Elementary and Middle Schools
- Science: Science Fairs, Lego® Robot Design, Intel International Science and Engineering Fair, Science Olympiad, National Science Bowl
- Computer and Technology Related: USA Computing Olympiad, Lego® Robot Design, FIRST Robotics Competition, SimCity Future City Design

1.5 CURRICULUM

The school leadership and faculty of BayTech ensure that all students are provided with a rigorous, relevant, coherent, standards-based college-preparatory STEM curriculum that supports the vision and mission, the academic standards, and goals of the school. While the curriculum concentrates on a hands-on approach to STEM areas, the school also provides a solid education in humanities and social sciences to educate the whole child.

BayTech will adopt and transition to the Common Core State Standards (CCSS) which were developed through a state-led initiative to establish consistent and clear education standards for English-language arts and mathematics that would better prepare students for success in college, career, and the competitive global economy. BayTech collaborates with Accord in reviewing and revising all curricula to ensure it is aligned to the common core standards and ready for implementation when common core standardized testing is in place.

BayTech curriculum immerses students in the scientific method and encourages them to use computers and the Internet to plan and organize projects, hypothesize, analyze data, and draw conclusions from tests they create. In the process, students become self-reliant, independent problem-solvers. In keeping with the STEM emphasis at BayTech, advanced courses are available in these subjects. Please see Section 1.4.2, titled "STEM Focus for Creativity and Innovation," for further details.

Language Arts curriculum is literature-based with fluency practice in reading and writing. Conventions of writing are emphasized in daily written homework and lab assignments. Students taking advanced foreign language will also be encouraged to study works written in that language, e.g., Spanish. The curriculum incorporates a period of sustained silent reading as part of the daily curriculum. Accelerated Reader © by Renaissance Learning is utilized to personalize reading practice to each student's current level, maximizing its effectiveness.

Social science courses use inquiry-based and topics involve real-world problems, with a focus on local current events, history and culture. In accordance with the National Council for the Social Studies¹, social studies courses aim to prepare students to identify, understand, and work to solve the challenges facing our diverse nation in an increasingly interdependent world. Education for citizenship should help students acquire and learn to use the skills, knowledge, and attitudes that will prepare them to be competent and responsible citizens throughout their lives. Competent and responsible citizens are informed and thoughtful, participate in their communities, are involved politically, and exhibit moral and civic virtues.

As part of its art curriculum, BayTech will offer courses and clubs in art, music and technology. Study of the arts will be enhanced by their integration into other subjects, such as: The Physics of Sound and Music, The Art of Fractals and Snowflakes, Design Elements in Art (analysis of Marc Chagall's work in Technology courses), Design on the Frontier (simulated quilt construction in the eighth grade American History course), Japanese Papermaking and Kite Design (World History and Cultures), and streamline and deco design, as used in automobile styling, and film robots described in science fiction literature (as part of the technology and robotics lab). Students will not be "cultural tourists," but instead will be immersed in culture and diversity through daily discussion, projects and guest speaker presentation.

Writing serves as an important vehicle for learning, and BayTech students are given writing assignments frequently to reinforce learning and enhancing understanding. We believe that every student must be able to express themselves

¹ Source: <http://www.ncss.or/positions/powerful>

clearly through writing in every subject. As the common core writing standards¹ phrase it, “For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt.”

BayTech teachers develop curriculum maps at the beginning of each school year, clearly defining the course objectives with an alignment to California content standards and the academic needs of our students based on CST and MAP test results. They develop weekly lesson plans that include clearly outline objectives, use of academic language, use of various instructional strategies, and assessments that check for understanding. The lesson plans are submitted to the School Administration for review and feedback prior to implementation.

BayTech teachers regularly meet in departments and grade levels where they share best practices, receive feedback and collaborate on horizontal and vertical alignment of the BayTech curriculum across grades and subjects. Curriculum revision and refinement processes are continuous and collaborative based on student performance assessment and data. These processes continue in the summer and at the beginning of the school year as part of comprehensive in-service programs.

To implement the BayTech curriculum most effectively, teachers design instruction for diverse learners that engages them in active learning in meaningful, real-world activities by utilizing effective instructional approaches such as differentiation, scaffolding, brain-based learning, authentic multi-level teaching and learning, workshop teaching and multiple intelligences. BayTech teachers use a wide variety of effective instructional strategies² to shape instruction. Some of those strategies can be listed as (1) Identifying similarities and differences; (2) Summarizing and note taking; (3) Reinforcing effort and providing recognition; (4) Homework and practice; (5) Nonlinguistic representations; (6) Cooperative learning; (7) Setting objectives and providing feedback; (8) Generating and testing hypotheses (9) Cues questions, and advance organizers.

1.5.1 Textbooks, Instructional Materials and Activities

BayTech utilizes California State Board of Education adopted instructional materials per related California Education Codes. Textbooks are specified in Appendix B4 “Curriculum and Course Descriptions” for BayTech. The Central Office works with teacher leaders to identify, evaluate, and select appropriate materials and to make modifications to core and additional instructional resources. Textbooks are specified in the Course Description Guide included as Appendix B4 for BayTech.

1.5.2 Middle School Curriculum

In grades 6 through 8, students are required to take core courses in Mathematics, Science, English-Language Arts and History-Social Science. In addition, the following courses are also part of the comprehensive education program and may be offered depending on student needs/demands and availability of teachers and resources: Languages Other than English, Visual and Performing Arts, Physical Education/Health, Computers and Technology, Math/ELA Enrichment, Get Ready For Life (GRFL), Sustained Silent Reading (SSR), and other elective courses that students can choose from.

Please see section 1.5.4, “Courses Explained,” and Appendix B4, “Curriculum and Course Descriptions,” for more information about the curriculum.

¹ Source: http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf

² Marzano, Robert J., Deborah Pickering, and Jane E. Pollock. *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement* Alexandria, Va.: ASCD, 2001.

1.5.3 High School Curriculum

One of the cornerstones of BayTech's academic vision is the understanding that science is a central factor in understanding the world. Science has the power to help students discover interesting and exciting facts about the world and also about themselves. As a college-preparatory school, BayTech considers the various factors that lead to post-secondary success. Two reliable predictors are high school achievement in advanced science and math courses and writing ability.

High school curriculum will offer courses in core subjects of Mathematics, Science, English, and History/Social Science. In addition to the core subjects, students are required to take two years of Physical Education, at least two years of Foreign Language courses (three years recommended), one year of Visual & Performing Arts, one year of Computer/Technology courses, and eight semesters of electives for successful graduation. All BayTech high school students will undertake a community service project. Please see Section 2.3, titled "Graduation Requirements," for a list of required high school courses for graduation.

Please see section 1.5.4, "Courses Explained," and Appendix B4, "Curriculum and Course Descriptions," for more information about the curriculum.

1.5.4 Courses Explained

BayTech's high school curriculum meets all California State Minimum Course Requirements for high school graduation and the "a-g" requirements of the University of California system.

A. History/Social Science

In grades 6 through 8, students are required to take core courses in History/Social Science. In high school, students are required to take at least three years of History/Social Science, including U.S. History, World History, American Government/Economics.

B. English

In grades 6 through 8, students are required to take core courses in English. In high school, students are required to take four years of approved courses in English.

C. Mathematics

In grades 6 through 8, students are required to take core courses in Mathematics. In high school, students are required to take at least three years of approved courses in Mathematics; four years are recommended. Students need to complete Algebra I, Geometry, and Intermediate Algebra (Algebra II) before graduation. Please see section 1.4.4 "Accelerated Academic Achievement" for "Advanced Math Courses."

D. Science

In grades 6 through 8, students are required to take core courses in Science. In high school, students are required to take at least two years of Science, two of which are laboratory courses chosen from Biology, Chemistry, and Physics; three years are recommended.

E. Languages Other Than English

In grades 6 through 8, students may be offered languages other than English as elective courses. In high school, students

are required to take at least two years of a language other than English in the same language; three years are recommended.

F. Visual and Performing Arts

In grades 6 through 8, students may be offered visual and performing arts courses as elective. In high school, students are required to take at least one year of visual and performing arts chosen from the following categories: dance, drama/theater, music, or visual art.

G. Electives

In grades 6 through 8, students may be offered a variety of elective courses depending on student needs/demands and availability of teachers and resources. In high school, students are required to take at least six semesters of electives for a standard diploma. The electives will be offered in the areas of Social Science, English, Mathematics, Science, Language Other Than English, Visual and Performing Arts, Life Skills/Health, and Computer and Technology.¹

H. Physical Education/Health

In grades 6 through 8, students may be offered Physical Education/Health courses as elective. In high school, students are required to take two years of Physical Education before graduation unless exempted pursuant to the provisions of the related Education Code.

During Physical Education courses students will be given the opportunity to engage in an array of physical activities that are fun, culturally appropriate, and challenging. In the Health portion of the curriculum, students will have the opportunity to develop the skills necessary for maintaining a healthy lifestyle.

I. Computers and Technology

In grades 6 through 8, students are offered Computers and Technology courses as elective. For the 2012-13 school year, these electives include Computer Literacy, Computer Programming, Digital Art, and Robotics. In high school, students are required to take one year of Computers and Technology courses before graduation.

I.1 TIE Curriculum

TIE Curriculum covers the technology skills that are essential for a 4-year S&E major and the basic skills that lead to various IT related careers. The curriculum not only covers the technology skills but also integrates them with Math, Science, English, and History/Social Science through hands-on activities.

The set of essential technology skills are derived from the syllabus of International Computer Driving License (ICDL). The ICDL is the world's largest end-user computer skills certification program, with more than 20,000 test centers, 7 million students and 2 million certificate holders in 146 countries including the United States. It is a globally recognized credential that certifies an individual as competent in using computers and covers all the computer skills that students need to have to be successful in college and at work. It provides a superior syllabus that is uniquely validated to ensure that it is always relevant, up-to-date, and meaningful.

¹ BayTech offers electives for students interested in pursuing particular disciplines in STEM areas. For the 2012-13 school year, these electives include Computer Literacy, Computer Programming, Digital Arts, Robotics and AP Biology courses. BayTech will also seek to partner with colleges and universities for elective courses.

Majority of students –especially from minority backgrounds- start 6th grade with almost no significant technology skills. As they progress into 8th grade and high school, they gain autonomy in choosing and advancing in the right tools for their projects.

The 8th grade curriculum briefly introduces the topics that are taught at high school level through entry-level projects.

High school TIE/Computer Science courses include Digital Arts, Web Authoring, Desktop Publishing, Introduction to Programming, AP Computer, and Advanced Office, which aims to provide students with perspective to understand the IT careers such as Computer Programmer, Graphic Designer, Web Developer, Computer Scientist, etc.

In addition, Accord's A+ (Advanced STEM) Program offers in-depth advanced algorithms and programming studies for more interested and gifted students. The A+ program inspires students to pursue graduate studies in Computer Science as well as other S&E areas since through this unique program students already master most undergraduate-level computer science topics in high school and start taking advanced level or masters courses even in the beginning of their college education.

Design

6th and 7th Grades

Students will work on TIE activities that teach essential technology skills through integration with content from Math, Science, English, and Social Science.

8th Grade

Students will work on entry-level projects that introduce the topics of high school computer courses, as well as integration projects that involve content from core classes. After completing these classes, students make informed decisions on selecting high school computer courses.

High School

High school computer courses introduce advanced topics that relate to IT careers. At high school level, integration continues at an advanced level using skills such as programming, animation, and web authoring as cognitive tools.

Integrating Computers into Core Classes

As mentioned above, integration projects address NETSS and California content standards and will lead students to higher order learning. For example;

- students create a flash animation of DNA replication
- students create an interactive flash simulation of springs in a space with gravity
- students use digital art to make a poster of complex molecules
- students use online survey tools to collect information about other students' favorite celebrities and form a database to analyze their roles in students' way of dressing
- students collect data from recent census records into a database and plot demographic and other changes on maps using colors

- students write a program that simulates spread of a disease
- students write a program that produces pattern images of multiple-slit light interference through simulation of light as particles based on parameter values given by the user

1.2 Computer Science Curriculum

In conjunction with the Technology Integrated Education (TIE) instruction, BayTech implements the Accord Institute Computer Science curriculum, which complies with Computer Science Teachers Association (CSTA)'s 'A Model Curriculum for K-12 Computer Science.' This model has four levels:

<u>Recommended Grade</u>	<u>Level</u>
▪ K-8	Level I-Foundations of Computer Science
▪ 9 or 10	Level II-Computer Science in the Modern World
▪ 10 or 11	Level III-Computer Science as Analysis and Design
▪ 11 or 12	Level IV-Topics in Computer Science

BayTech Computer Science curriculum is one step ahead of the above chart since Level I and a big portion of the Level II topics are already covered in the middle school TIE program. Level III and IV topics are covered in high school. For the gifted students who are ready for an accelerated program, BayTech offers the A+ (Advanced Computer) curriculum in middle school where topics in Level III, IV and above are covered.

The following summarizes Accord's Computer Science curriculum:

- Middle school curriculum aims to provide strong skills in computer literacy and fundamentals of computational thinking. Programming and Discrete Math topics are infused into the curriculum. Programming topics will be more intense in the 6th and 7th grades with the higher results in the assessment exam.
- 8th grade curriculum serves a transition between middle school and high school. Hence, 8th grade topics focus on the conceptual understanding of high school electives.
- High school curriculum is composed of elective courses and AP Computer Science course. Accord Institute currently provides the following elective course packages:
 - Introduction to Programming
 - Digital Arts
 - Web Authoring
 - Desktop Publishing
- Elective courses can be given in any grade; however, the recommended sequence is as provided above. 'Introduction to Programming' course, developed by the Accord Institute, corresponds to the 'Computer Science: Principles' course, which is currently a pilot course being developed by the College Board as an AP course. This introductory course will be a prerequisite for the 'AP Computer Science' course.

Please see Appendix B2 for more information about BayTech's "Computer Science Program."

J. A+ (Advanced STEM) Program

As explained in section 1.4.4, "Accelerated Academic Achievement," A+ is BayTech's program for gifted/highly gifted students. This condensed training program helps students develop their critical and analytical thinking skills while

providing them with a motivational and challenging environment by utilizing prestigious math, science and computer competitions at the regional, national and international level.

A+ is offered both as an elective class and after school club at BayTech. Students have the opportunity to meet after school, over the weekends and at camps throughout the year to continue their advanced studies where they get coached by Stanford University faculty and Accord Institute's A+ program coaches.

Please see Appendix B3 for BayTech's A+ (Advanced STEM) curriculum, guidelines, and handbooks.

K. Advanced Placement (AP) Courses

As explained in section 1.4.4, "Accelerated Academic Achievement," BayTech will offer Advanced Placement (AP) classes as the School expands into the high school grades. AP courses are college-level courses, taught with college textbooks and exams that can give students college credit in the form of advanced standing when they enter their freshman year. Students have to pass the corresponding AP test in order to get college credit.

For the 2012-13 school year, BayTech offers AP Biology to freshmen. Depending on student needs and interests, the school plans to offer AP Language and Composition, AP Calculus, AP Biology, AP Chemistry, AP Physics, AP Computer Science, AP World History, AP US History, AP American Government, AP Economics, and AP Spanish Language in the coming years.

L. Math/ELA Enrichment/Intervention Classes

As explained in section 1.4.1, "Data Driven Design," we believe that early intervention is a must. BayTech quickly identifies the low-achieving students in the first weeks of the academic year, and implements an early intervention program. Students who are achieving substantially below grade level are identified through multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education's website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests.

For students achieving substantially below grade level in math or English, BayTech offers Math/ELA Enrichment/Intervention classes. Teachers use educational materials that provide review and re-teach programs. McGraw Hill's Acuity program, Holt McDougal Publisher's resources, Kuta software, Khan Academy, Accelerated Reader and Accelerated Math program allow teachers to monitor the progress of students who are achieving below grade level and provides software generated tests and personalized instructional materials based on California content standards/framework which have not been achieved.

M. Get Ready For Life (GRFL) Curriculum

As explained in section 1.4.1, "Life-long Learning," BayTech uses the "Get Ready for Life (GRFL)" program designed by Accord. This program contains topics on Life Skills, Study Skills, Test Taking Skills, Drug Prevention, Environmental Issues, College and Career Awareness and Character Education.

The GRFL course offered at BayTech is one period per week in each grade of middle school. During the year, we put into practice a well-structured character education plan through the GRFL class, announcements, quotes displayed on the board, special events and activities, and curriculum integration. The GRFL program addresses the following issues/topics as part of the curriculum:

- Patterns of Success (Essential skills to prepare for College & Academic Success)
- Respect

- Conflict Resolution (Addressing teen issues including: Bullying, Cyber bullying, Peer Pressure)
- Making Responsible Choices (Ethics, Drug/Alcohol Awareness/Prevention)
- Citizenship (Democratic Values)
- Human Relations (Social Interactions)
- Personal Qualities (Core Values)
- Self-Discipline (Developing a positive attitude)

GRFL is an enrichment course that provides students with valuable skills to excel academically and socially in the 21st century. Students participate in activities/projects to demonstrate their understanding of the values/lessons. Guest speakers and various forms of technology engage students in the course content.

Lesson plans include exemplary stories, effective PowerPoint presentations on character traits such as trustworthiness and integrity, skits by students and community activities such as nursing home visits. Parents are regularly informed about the topic of the week to ensure that they also be involved in our effort to inspire positive principles of conduct in our future leaders. Approximately every month there is a different topic that is discussed.

Please see Appendix B6 for an illustration of BayTech's "Get Ready For Life (GRFL)" course content through a weekly schedule.

N. Sustained Silent Reading (SSR)

BayTech provides daily Sustained Silent Reading (SSR)^{1,2} and utilizes the Accelerated Reader © program by Renaissance Learning. The classrooms are equipped with libraries to provide access to a wide variety of books at appropriate reading levels. In addition, students who are struggling academically participate in the English enrichment/intervention programs during the day and after-school.

Accelerated Reader is a computer program that helps teachers to manage and monitor a student's independent reading practice. Unlike other reading programs, students select a book at their level and read it during SSR. Once completed, the student is administered an online assessment to provide feedback for the teacher on whether the student understood the content. The assessment results are used to select a more appropriate leveled book, and ask more probing questions as the student is reading the book.

In order to determine the student's reading level, the STAR Reading Test, a computerized reading assessment that utilizes computer-adaptive technology is administered. The questions on the assessment continually adjust according to the student's responses. For example, if the response is correct, the difficulty level is increased, if the response is incorrect, the difficulty level is reduced. The assessment is comprised of multiple-choice questions and takes approximately 10 minutes. The results include a Zone of Proximal Development (ZPD), which is a range of books that will challenge the student without causing frustration.

Students' reading comprehension skills are monitored via their participation in the Accelerated Reader program. If a student continually obtains low scores while reading at his or her level, intervention is immediately implemented.

For BayTech, the the goals of the STAR Reading and AR programs are:

- 100% student and staff participation

¹ Yoon, Jun-Chae, "Three Decades of Sustained Silent Reading: A Meta-Analytic Review of the Effects of SSR on Attitude toward Reading" Reading Improvement, v39 n4 p186-95 Win 2002

² Akmal, Tariq T. "Ecological Approaches to Sustained Silent Reading: Conferencing, Contracting, and Relating to Middle School Students" Clearing House, v75 n3 p154-57 Jan-Feb 2002

- Students' average 90% comprehension on AR quizzes
- 20 minutes minimum reading per day (the primary expectation is that students read in SSR)
- 10% increase in ZPD range annually
- Maintain consistent testing conditions for maximally accurate data
- Recognition of students by staff for exemplary effort and performance
- Assessment results are used to inform Response to Intervention (RTI) strategies by all teachers.

O. Community Service

BayTech students will engage in community service to develop and demonstrate crucial life skills. This will help students gain "real life" experience and develop responsibility, caring and respect for others.

Students will be required to earn 40 hours (or the equivalent of 10 hours per each year of enrollment) of community service for an advanced or honors diploma. Students may begin to earn these hours once they complete their 8th grade year.

Please See Appendix B4 for more information about "Curriculum and Course Descriptions."

1.6 COMMUNICATION TO PARENTS AND STUDENTS REGARDING THE TRANSFERABILITY OF COURSES

BayTech is fully accredited by the Western Association of Schools and Colleges (WASC) through June 2017. BayTech's high school curriculum meets all California State Minimum Course Requirements for high school graduation and the "a-g" requirements of the University of California system. BayTech will inform parents and students through the school newsletters and school meetings about the transferability of the courses taken at BayTech to another institution. The annual student/parent handbook will also inform parents and students of transferability of courses.

1.7 PROFESSIONAL DEVELOPMENT

1.7.1 Staff Development

In addition to ongoing professional development activities that support efforts to increase student academic performance, BayTech provides all staff with multiple opportunities to grow professionally. BayTech assesses staff professional development needs through formal and informal performance observation and surveys. Based on these data and combined with the school improvement plan, BayTech determines common staff development days, and tailors staff development to individual staff needs.

Professional development occurs at different levels within the school. Further, the school is organized into Professional Learning Communities (PLC) by grade level and by department.

1.7.2 Professional Learning Communities (PLC)

BayTech makes use of PLCs to:

- Clarify intended outcomes
- Develop common assessments
- Jointly analyze student achievement data
- Establish team improvement goals
- Share best practices and materials
- Engage in collective inquiry and action research regarding student learning
- Support system and sense of efficacy
- Promote more engaged, motivated, and successful students with reduced absenteeism
- Focus on students' needs academically and behaviorally

PLCs seek to transform a school into a community that fosters mutual cooperation, emotional support, personal growth, and a synergy of effort. Combined with the school improvement plans, the answers to the following questions are studied in PLCs:

- How do we ensure that students learn?
- How do we foster a culture of collaboration?
- How do we ensure results?

As an implementation of the PLC at BayTech, all staff will read educational literature and make informed recommendations for school and system-wide improvement. The staff produces an annual reading list recommended by the PLCs. The following literature have recently been added to BayTech staff's reading list: "Failure Is Not An Option," "Classroom Management That Works," "How To Differentiate Instruction In Mixed-Ability Classrooms," and "Teach Like A Champion."

1.7.3 School-wide Meetings and Professional Development Activities

Administrative Meetings

The BayTech Principal, Dean of Academics, and Dean of Students meet weekly to act on general school issues including, academics, safety, attendance, overall communications, and student activities. Upcoming events are discussed and planned. The college advisor, resource teacher, and office manager participate as needed.

General Staff Meetings

BayTech staff meets every other week to discuss issues related to student discipline, academics, safety, counseling, etc. Presentations, trainings and discussions or concerns about current issues are discussed as time permits.

Department Chair Meetings

Department Chair meetings are held monthly. These meetings are held the week prior to the department meeting in order to review and complete the agenda.

Department Level Staff Meetings

All teachers meet departmentally every month to:

- Share Time: Presentation by a member on an effective classroom strategy
- Vertically align curriculum
- Analyze student achievement data (MAP, STAR, CELDT, etc.,)
- Improve instructional strategies per data indicators
- Differentiate instruction
- Plan major departmental events
- Discuss other departmental issues and policies

Department Chairs are responsible for minutes and forwarding action items to the appropriate administrative leaders.

Grade Chair Meetings

Grade Chair meetings are held monthly. These meetings should be held the week prior to the staff grade level meetings in order to review and complete the agenda for the grade level staff meeting.

Grade Level Staff Meetings

Grade level teachers meet once a month and collaborate on the issues below:

- Classroom strategies
- Sharing best practices
- Curricular and academic issues (grading uniformity, homework load, differentiation etc.,)
- Support for students with academic challenges (IEP, 504, RTI, SSR, A.R., A.M., Tutoring)

- Discussion of student academic supports (peer tutoring, mentorships, etc.,)
- Long-term projects (science fair projects, English & history & math projects)
- Integration/thematic units/horizontal alignment of the curriculum
- Field trips
- Discussions and strategies for students with behavioral problems
- School/grade level wide incentive programs
- Other common grade level and school wide issues

Grade Chairs are responsible for minutes and forwarding action items to the appropriate administrative leaders.

Wrap up Meetings

BayTech staff participates in end-of-the-year meetings to focus on evaluation of student achievement data, effectiveness of the programs such as testing, curriculum, and intervention programs, counseling, after school, etc. These meetings help staff prepare a professional learning plan for themselves and review what worked well during the school year. These plans and feedback are addressed in the summer in-service program.

Summer in-service programs

BayTech also holds orientations and trainings for both new and veteran teachers to familiarize them with policies and procedures regarding the schools' operations, and the academic and education program goals for the year. A teacher workshop/summer in service program is held in August for about two weeks. The program consists of at least four days of intensive training, after which teachers continue their studies at their school sites and communicate with each other via grade level and subject area email groups.

Peer Observations

BayTech believes that every effective teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally. Therefore, each teacher is required to make monthly class visits to other teachers' classrooms to observe effective strategies and reflect on his/her observations by using peer observation beneficiary forms. These forms are used to create a professional development plan for individual growth.

Formal Observations/Evaluations

All teachers are observed in the classroom by department chairs, administrative team (dean of academics, principal and chief academic officer), and by Accord. A rubric guides observation and allows for the development of constructive feedback. BayTech's formal teacher evaluation program is comprehensive and includes an evaluation of academic performance of their students. All teachers are evaluated annually. A pre-conference and post conference are scheduled for each of the evaluation.

Walkthroughs

BayTech administration/Department Chairs make regular walkthroughs in each teacher's classroom. This quick and informal visit provides teachers immediate and constructive feedback in specific areas to improve instruction and

student learning.

1.7.4 Beginning Teacher Support and Assessment Program (BTSA)

BayTech provides new teachers with BTSA, a two-year program that provides beginning teachers with collegial support, guidance, professional development, motivation to continue in the profession, and training. It links college level teacher preparation with classroom application.

1.7.5 Scheduled Professional Development

- **National Charter Schools Conference:** Based on organizational need aligned with the schedule, selected faculty and administrative staff attend the Annual National Charter Schools Conference, which is organized by The National Alliance for Public Charter Schools (NAPCS).
- **California Charter Schools Association (CCSA) Conference:** Based on organizational need aligned with the schedule, selected faculty and administrative staff attend the annual California Charter Schools Association (CCSA) Conference.
- **Charter Schools Development Center (CSDC):** Based on organizational need aligned with the schedule, selected emerging and new leaders attend the Charter Schools Development Center (CSDC) Leadership Institute.
- **Accord Institute for Education Research (Accord):** All BayTech faculty and administration attend the Accord Institute's annual Teacher and Leadership Workshop.
- **BayTech professional development days:** BayTech Professional Development Days are held for a full day once each semester. Issues such as student achievement data, differentiated instruction, intervention, and departmental collaboration among BayTech teachers are discussed.

Other professional development programs that BayTech considers include:

- **College Board's Workshops and Seminars**
- **Association of Latino Administrators and Superintendents Conference**
- **National Council of Teachers of Mathematics Conference**
- **National Science Teachers Association Conference**
- **National Council of Teachers of English Conference**
- **California Council for History Education Conference**
- **California Science Teachers Association (CSTA) annual PD program**
- **California Association of Mathematics Teacher Educators Conference**

Additionally, professors and professional teacher trainers from area universities as well as other universities and institutions will be identified and invited to conduct professional development activities at BayTech.

1.7.6 Ongoing Professional Development Program for Special Education

BayTech conducts ongoing in-services for special education. During the August in-service training a school psychologist trains our entire staff about services and programs related to students with learning disabilities. BayTech has a special education teacher to train the staff on the IEP documentation and how to implement accommodations and modifications in a general education classroom. Our special education teachers attend workshops and trainings provided by the District

and attend a resource conference to hear from additional experts in the field of special education.

The professional training in special education includes:

- Laws and regulations aligned with the IDEA
- Implementation of modifications and accommodations
- State test requirements/options for students with disabilities
- Writing Individualized Education Programs (IEP)
- IEP meeting procedures
- Rights and responsibilities of parents, students, and teachers
- Section 504 plans

In addition to the August sessions, BayTech conducts quarterly training sessions about special education.

1.8 LOW ACHIEVING STUDENTS

BayTech identifies the socio-economically disadvantaged and low-achieving students in the first weeks of the academic year, and implements early intervention where indicated. The School uses multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education's website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests for identification. Please see section 1.4.1, "Data Driven Design," for more information on early intervention.

To narrow the achievement gap for low-achieving students, specialized strategies are implemented both during school hours and in the after-school program. At BayTech, low-achieving students are given much needed individualized attention by their teachers and the school administration. The school asks the parents for cooperation in offering motivational support to their children. Targeted English & Math intervention classes are offered during elective periods to students who are not achieving at grade level. On an as-needed basis, a Student Improvement Plan (SIP) is prepared with the involvement of the recommending teacher, the Dean of Academics, and the student's parents. Such SIPs include subject-related readings, additional homework, and mandatory after-school tutoring. BayTech offers a customized after-school program to all its students depending on their academic achievement level, as depicted in Fig. 2 below. Individual and small group tutoring as well as homework clubs are also available.

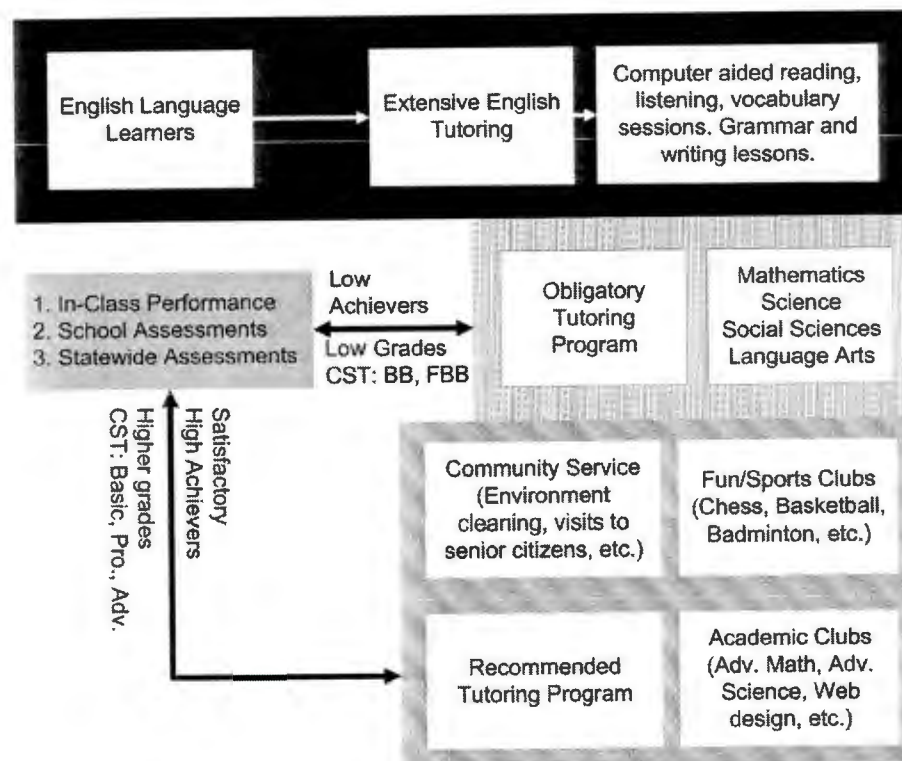


Figure 2 – BayTech after school program structure

Students identified as low achieving attend intensive obligatory after school programs tailored towards each student's needs. This specialized strategy provides the opportunity for struggling students to master the relevant subject's content standards. Low achieving students' progress is quantitatively measured through MAP, Acuity, Accelerated Reader, and Accelerated Math tests with the goal of attaining at least one year's academic progress within the school year.

Students demonstrating adequate improvement can advance to a satisfactory level where they are provided moderate tutoring sessions and various fun opportunities, such as recreational clubs, and community trips. For those low-achieving students who do not positively respond to this teaching method, the homeroom teachers may decide to include them in different recreational activities to promote students' interest in learning. The teacher regularly monitors academic improvement for these low achieving students through in-class assessments. Parents remain informed of their student's academic progress during this process via parent-student-teacher meetings and parent access to student grades and progress reports through the online school information system.

1.9 HIGH ACHIEVING STUDENTS

BayTech offers a broad range of academic learning opportunities to high-achieving, gifted, and talented students. Our students are engaged in advanced projects and activities in the areas of Math, Science, Technology, Social Studies and Language Arts. These projects and activities are supported by the school staff, volunteer college and graduate students, and parents. Funding for these endeavors is provided partially by the school and through grants, donations and fundraising.

High-achieving students will also learn computer programming and will be able to do science fair projects. Besides recreational after school clubs, there will be advanced study groups in STEM areas available for high achieving students.

Please see Section 1.4.4, "Accelerated Academic Achievement," for more information.

1.10 ENGLISH LEARNERS

BayTech will meet all requirements of federal and state laws as they pertain to providing equal educational opportunities for English Learners (EL). BayTech will implement an EL Master Plan which includes the following components:

- A. Initial Identification, Assessment, Parent Notification, and Placement of English Learners
- B. Implementation and Programs
- C. Monitoring Student Progress
- D. Staff Qualifications & Professional Development
- E. Evaluation of Program Effectiveness

A. Initial Identification, Assessment, Parent Notification, and Placement of English Learners

1- Identification: After a student enrolls in BayTech, the School will request information regarding the language spoken at home through a Home Language Survey (HLS). The purpose of the HLS is to determine if a language other than English is used in the student's home. Prior to completing the HLS, parents are to receive an explanation regarding its purpose and uses, as well as the possibility that their child may be given an assessment to measure their English language proficiency level.

2- Assessment: Students from homes where a language other than English is spoken will be evaluated first through the Fall MAP test (administered in the first two weeks of the school year with results arriving in 24 hours) to determine their level of proficiency in English, and with the California English Language Development Test (CELDT) (within thirty¹ days of enrollment and at least annually thereafter between July 1st and October 31st until re-designated as fluent English proficient), unless the school has proper documentation of the student's re-designation as Fluent English Proficient. The CELDT will also be used for the annual assessment of each student's ELD level, along with scores on California Standards Test (CST) in English-Language Arts (ELA), Measures of Academic Progress (MAP) tests, teacher observation, and optional parent input as secondary factors.

Northwest Evaluation Association (NWEA)'s Computer-Adapted Tests: Measures of Academic Progress (MAP)

MAP tests are a web-based assessment tool that provides detailed diagnostic data on each student's reading, language usage and math skills in a variety of sub-categories. In addition to generating reports broken down into sub-skills, NWEA can generate "skills reports" that identify which skills in reading, language, and mathematics each student has mastered and which skills the student still needs remedial support. Reports can be generated to look at students individually, by class, or by the school as a whole. NWEA can also generate RIT² scores that can project an equivalent performance level on the California Standards Test (CST) based on student performance in each of the sub-tests administered.

Teachers will use these reports in several ways. First, they will use them to create their standards-based curricular maps and unit plans by looking at the standards that students have already mastered and those that need to be developed.

¹ The thirty-day requirement applies to students who are entering a California public school for the first time or for students who have not yet been CELDT tested. All other students who have indicated a home language other than English will continue with annual CELDT testing based upon the date last tested at the prior school of enrollment.

² The RIT Scale is a curriculum scale that uses individual item difficulty values to estimate student achievement.
Source: <http://www.nwea.org/support/article/532>

Secondly, they will use them to assess the efficacy of the standards-based instruction that is being delivered and to make plans for re-teaching or acceleration as needed. Training in using NWEA for assessment and planning purposes will be part of the professional development that occurs prior to the start of school and ongoing throughout the year.

NWEA MAP tests are administered three times a year. BayTech generates reports from NWEA that includes student performance data for each test administration. The School's admin team analyzes the data and makes inferences. Student performance data is then shared with the school team for further study. Using teacher feedback, observations, and inferences from the student performance data, the School team collaborates to create an action plan that will include recommended student placement and support strategies. This plan will then be implemented throughout the school by the teachers, as well as during tutorial sessions.

3- Parent Notification: The School will notify all parents of its responsibility for CELDT testing and of CELDT results within thirty days of receiving results from publisher. The CELDT shall be used to fulfill the requirements under the No Child Left Behind Act for annual English proficiency testing.

4- Placement: Depending on the assessment results, the School admin, EL Coordinator, and the Response To Intervention (RTI) coordinator will determine the most appropriate placement and support strategies with the help of the student's parents and the teachers.

B. Implementation and Programs

Based on the assessment results and the EL Coordinator's evaluation the English Learners will be placed in either **Structured English Immersion Program** or **Mainstream English Instructional Program**. Students who perform below the 30th percentile rank in the Reading and Language Usage sections of the MAP test and/or at CELDT levels 1-3 will be placed in Structured English Immersion Program. Students who perform above the 30th percentile rank and/or at CELDT levels 4-5 will be placed in Mainstream English Instructional Programs.

Structured English Immersion Program: This program is designed in order to ensure acquisition of English language skills and access to core content so that ELs can succeed in a mainstream classroom. SEI is designed to ensure that ELs develop English proficiency and receive appropriate supports to make grade level content standards accessible. Following are the components of this program:

- Daily extra 50 minutes of structured English Language Development program during the Enrichment blocks of the School schedule will be provided through Specially Designed Academic Instruction in English methodology, utilizing standards-based materials and supplemental materials.
- Inclusion: All EL students will continue to receive regular 50 minutes of ELA classes during the day.
- Access to instruction in all curricular areas aligned to content standards
- Differentiated instruction in reading, writing, math, science, and social science
- Cooperative learning activities, conducted in English, in all classes that serve to immerse students in the language while giving them opportunities to practice listening, comprehension, and speaking skills
- Frequent writing assignments in all classes that give students opportunities to practice writing and editing in English

- After-school programs and tutoring
- Collaborative learning experiences through club projects

Mainstream English Immersion Program:

The goal of this program is to ensure that ELs continue to progress linguistically and academically to meet English Language Development and grade-level content standards. These students receive appropriately differentiated instruction and scaffolded academic content instruction and support.

BayTech's EL plan provides a content-based EL program during whole class instruction. Teachers draw on the EL components of the Language Arts curriculum. During whole class instruction teachers utilize materials within the curriculum and engage students by using thematic planning and SDAIE strategies. Manipulatives, visuals, graphic organizers, and interactive communication are just a few of the ways teachers create an educational environment that fosters language acquisition through content based lessons. Small group intervention is provided. All teachers will be trained in Specifically Designed Academic Instruction in English ("SDAIE") techniques.

Teachers work on simplifying classroom materials using SDAIE methods in a predominantly English speaking setting. When needed, teachers work one-on-one with students to ensure that beginning English speakers progress at an accelerated rate. Depending on the needs of the EL students, teachers will use proven strategies, such as peer mentoring, multi-sensory experiential activities, modeling and tutoring, cooperative learning, and use of media and visuals, to provide effective oral language, literacy and content area instructions.

Teachers will employ the following strategies to help their students:

- Simplify the language of instruction and not the concept being taught. Use simple sentence structure (verb-subject-object). Avoid the passive tense and compound and/or complex sentences. Avoid negative phrasing in questions, such as "which answer is not?" and "all of the above except."
- Provide instructions and messages in written and verbal form.
- Build background knowledge before teaching a lesson.
- Write homework assignments on the board.
- Modify assignments for new students so that they can be successful doing a part of the class assignment.
- Work toward depth, not breadth of information, presenting materials in a clear, concise, comprehensible manner, eliminating all nonessential information.
- Impart information through several learning modalities: oral, visual, auditory, and kinesthetic.
- Present content area vocabulary and concepts using pictures, objects and hands-on activities.
- Provide concrete examples of words using flashcards, pictures and objects.
- Use graphic organizers such as webs, Venn diagrams, and charts to make information more accessible. Textual material is usually too dense for second language learners.
- Employ a variety of questioning strategies in order to determine the student's level of comprehension. Structure questions to student's level of language understanding.

Class structure may be adjusted to help ELs:

- Students work in teams; ELs can then be active participants instead of simply observers.
- EL is paired with a student who is a native English speaker and of the same age.
- EL is paired with a student “buddy” in another grade.

C. Monitoring Student Progress

Students in the Structured Immersion Program will be continuously (weekly or bi-weekly) assessed through Renaissance’s Star Reading tests during the Enrichment/Intervention hours.

Other assessments to monitor student progress include NWEA MAP tests, Rosetta Stone, Holt McDougal Publisher’s resources, Accelerated Reader and teacher created assessments. These allow teachers to monitor the progress of students who are achieving below grade level in English and provide software generated tests and personalized instruction based on California content standards/framework which have not been achieved. ELs’ progress will be measured through satisfactory grades and scores in the following table:

Beginning of Year	Weekly	Quarterly	Year-End
<ul style="list-style-type: none"> ▪ Home Language Survey ▪ MAP Test-1 ▪ CELDT 	<ul style="list-style-type: none"> ▪ Renaissance STAR Reading Tests ▪ Weekly Tests and Quizzes ▪ McGraw Hill-Acuity’s standards-based formative assessments (Grades 6-8) 	<ul style="list-style-type: none"> ▪ Progress Reports with grades and teacher comments ▪ MAP Tests 	<ul style="list-style-type: none"> ▪ California Standards Test (CST) ▪ NWEA MAP Tests

D. Staff Qualifications & Professional Development

All teachers providing specialized academic instruction for EL students at BayTech must hold a CLAD or BCLAD credential or other CDE certification authorizing teaching to English Language Learners.

In addition to ongoing professional development activities, BayTech provides all staff with multiple opportunities to participate in external workshops and trainings to address their individual needs. BayTech staff meets biweekly in departments and grade levels and shares best practices and discusses issues such as academic and behavior support for students including ELs. Student achievement data, including CELDT results, is analyzed by staff. Intervention strategies for ELs, differentiated instruction, and use of effective pedagogical strategies are some of the topics that BayTech staff continues to revisit for professional development. BayTech staff will be required to:

- Consistently implement with fidelity the ELD curriculum as outlined in the English Learner Master Plan
- Provide instruction during core classes using research-based strategies and SDAIE methodology to ensure

students are able to access grade level instruction and do not incur academic deficits while they learn English

- Attend all professional development and professional learning community sessions
- Monitor student progress in ELD and access to core class instruction for progress towards minimum expected benchmark achievements
- Maintain contact with the students' families and keep them apprised of their children's progress.

E. Evaluation of Program Effectiveness

The School will use NWEA MAP assessment data, CST data, and CELDT results to evaluate the success and effectiveness of the EL Programs and growth of ELs. School admin team will evaluate the assessment data at the school level. School admin team will be required to:

- Supervise classroom instruction for content and pedagogy to ensure the delivery of ELD and Access to the Core through SDAIE and/or primary language instruction or support
- Provide leadership and support to teachers and staff to improve student achievement and accelerate the learning of ELs
- Conduct regular classroom walkthroughs to ensure that ELD and SDAIE instruction or support are being delivered in the manner outlined in the English Learner Master Plan
- Identify, design and implement appropriate interventions for ELs when they do not meet minimum progress benchmark achievement
- Utilize multiple sources of data to monitor EL program implementation
- Review placement of ELs in ELD instruction prior to the beginning of each semester and correct any inconsistencies with the Master Plan
- Ensure that teachers have professional development opportunities to continue to develop their skills and knowledge in ELD and SDAIE and/or primary language instruction or support
- Ensure that interventions are designed and delivered consistent with the Master Plan
- Provide a welcoming environment for parents of EL students and ensure that they are regularly apprised of the EL assessment and reclassification process and results, instructional program options and placement, EL progress monitoring

1.11 STUDENTS WITH SPECIAL NEEDS

1.11.1 Special Education Program Overview

BayTech shall comply with all applicable requirements of federal and state law concerning the education of children with disabilities, including the requirements of the Individuals with Disabilities in Education Improvement Act ("IDEIA," 20 U.S.C. § 1401 *et seq.*), Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794) and the Americans with Disabilities Act (42 U.S.C. § 12101 *et seq.*). The School shall implement a Student Study Team Process (SST), a regular education function, to monitor and guide referrals for Section 504 and Special Education services. The facilities to be utilized by BayTech shall be accessible for all students with disabilities. All students will be given equal access to BayTech regardless of disabilities. BayTech will not discriminate against any student based upon disabilities. BayTech will offer a free appropriate public education ("FAPE") to all students.

1.11.2 Section 504 of the Rehabilitation Act

BayTech recognizes its legal responsibility to ensure that no qualified person with a disability shall, on the basis of disability, be excluded from participation, be denied the benefits of, or otherwise be subjected to discrimination under any program of BayTech. Any student, who has an objectively identified disability which substantially limits a major life activity including but not limited to learning, is eligible for accommodation by the School.

A 504 team will be assembled by the Principal and shall include the parent/guardian, the student (where appropriate) and other qualified persons knowledgeable about the student, the meaning of the evaluation data, placement options, and accommodations. The 504 team will review the student's existing records; including academic, social and behavioral records, and is responsible for making a determination as to whether an evaluation for 504 services is appropriate. If the student has already been evaluated under the IDEIA but found ineligible for special education instruction or related services under the IDEIA, those evaluations may be used to help determine eligibility under Section 504. The student evaluation shall be carried out by the 504 team who will evaluate the nature of the student's disability and the impact upon the student's education. This evaluation will include consideration of any behaviors that interfere with regular participation in the educational program and/or activities. The 504 team may also consider the following information in its evaluation:

Tests and other evaluation materials that have been validated for the specific purpose for which they are used and are administered by trained personnel.

Tests and other evaluation materials include those tailored to assess specific areas of educational need, and not merely those which are designed to provide a single general intelligent quotient.

Tests are selected and administered to ensure that when a test is administered to a student with impaired sensory, manual or speaking skills, the test results accurately reflect the student's aptitude or achievement level, or whatever factor the test purports to measure, rather than reflecting the student's impaired sensory, manual or speaking skills.

The final determination of whether the student will or will not be identified as a person with a disability is made by the 504 team in writing and notice is given in writing to the parent or guardian of the student in their primary language along with the procedural safeguards available to them. If during the evaluation, the 504 team obtains information indicating possible eligibility of the student for special education per the IDEIA, a referral for assessment under the IDEIA will be made by the 504 team.

If the student is found by the 504 team to have a disability under Section 504, the 504 team shall be responsible for

determining what, if any, accommodations or services are needed to ensure that the student receives the free and appropriate public education ("FAPE"). In developing the 504 Plan, the 504 team shall consider all relevant information utilized during the evaluation of the student, drawing upon a variety of sources, including, but not limited to, assessments conducted by the School's professional staff.

The 504 Plan shall describe the Section 504 disability and any program accommodations, modifications or services that may be necessary.

All 504 team participants, parents, guardians, teachers and any other participants in the student's education, including substitutes and tutors, must have a copy of each student's 504 Plan. The site administrator will ensure that teachers include 504 Plans with lesson plans for short-term substitutes and that he/she review the 504 Plan with a long-term substitute. A copy of the 504 Plan shall be maintained in the student's file. Each student's 504 Plan will be reviewed at least once per year to determine the appropriateness of the Plan, needed modifications to the plan, and continued eligibility.

1.11.3 SELPA Membership and Supervision

The School is currently designated as "a public school of the local education agency that granted the charter" for special education services. The School reserves the right to apply to any Special Education Local Plan Area (SELPA) in the state to operate as a local educational agency within the SELPA. If the School chooses to leave the OUSD SELPA, the School will give a written one year notice of its intent to leave the OUSD SELPA as required by California law. If the school is admitted to a SELPA, and submits evidence of such admission to OUSD, the School shall be designated as an independent local education agency. If this occurs, BayTech will become its own Local Education Agency ("LEA") in accordance with Education Code Section 47641(a) and will adhere to all the requirements of being an LEA. If BayTech does become its own LEA, it will be responsible for hiring the necessary special education personnel to provide all services needed to the special education students attending BayTech. BayTech agrees that any change in the School's SELPA affiliation shall require written notification to and approval from the OUSD. BayTech has consulted with the OUSD SELPA Director regarding special education responsibilities of the Charter and application of SELPA policies.

BayTech currently functions as a "public school of the local education agency that granted the charter" for purposes of providing special education and related services pursuant to Education Code Section 47641(b) and is a member of the District SELPA. Each school year, during which the school operates as an arm of OUSD for special education purposes, the school understands that it is required to contribute an equitable share of its charter block grant funding to support District-wide special education instruction and service costs. Pursuant to Education Code Section 47646(b), the District shall provide the school with funding and/or services reasonably necessary to ensure that all students with exceptional needs who attend the school are provided a free and appropriate education.

1.11.4 Provision of Services

BayTech and OUSD shall annually and in good faith negotiate and enter into a written agreement to more clearly identify the specific desired mix of special education funding and services to be provided. The school shall enjoy reasonable flexibility to decide whether to receive services, funding, or some combination of both pursuant to Education Code Section 47646(b). If the volume or scale of activities related to assessment, individualized education plan (IEP) development, and/or delivery of the special education and related services is sufficient, the school may seek to assume responsibility for directly providing and managing these functions with its own staff, with appropriate adjustments to the mix of funding and services provided under the terms of Education Code section 47646(b).

BayTech pledges full compliance with the IDEIA and Education Code provisions regarding special education as well as all OUSD and SELPA policies as they relate to special education.

BayTech shall be deemed a public school of the District for special education purposes. A child with disabilities attending BayTech shall receive special educational instruction or designated instruction and services, or both, at a level equivalent to a child with disabilities who attends another public school of the District. The District shall work with BayTech to ensure that all children with disabilities enrolled in BayTech receive special education and designated instruction and services in a manner that is consistent with their individualized education program and in compliance with the IDEA.

BayTech and the District intend that BayTech will be treated as any other public school in the District with respect to the provision of special education services, including the allocation of duties between on-site staff and resources and the District staff and resources. All individuals providing services to the BayTech shall be appropriately credentialed under California and Federal law.

To the extent that the District provides special education services to BayTech, the District and BayTech agree to allocate responsibility for the provision of services (including but not limited to identification, evaluation, IEP development and modification, and educational services) in a manner consistent with their allocation between the District and its local traditional public school sites. Where particular services are generally provided by staff at the local school site level, BayTech will be responsible for providing said staff and programming; where particular services are provided to the school by the Central District Office, those services will be made available to BayTech in a similar fashion.

Similarly, BayTech and the District intend that they will jointly ensure all students entitled to services under the IDEIA and California Education Code Section 56000, et seq., will receive those services. If needed, due to limited special education staff, the District may seek out contracts with other school districts, or companies, or organizations to serve BayTech students.

To the extent that the District provides special education services to BayTech, it shall be responsible for providing all services to all students of BayTech regardless of their school district of residence. BayTech commits to informing the district of residence as well as OUSD when a student with exceptional needs has enrolled in or district -enrolls from BayTech.

BayTech will comply with the following assurances:

1.11.5 Most Appropriate and Least Restrictive Programs

BayTech will comply with the federal requirement of offering and maintaining the least restrictive environment (LRE) for students with disabilities. This means that, to the maximum extent appropriate, children with disabilities are educated with non-disabled children. Special classes, separate schooling, or other removal of children with disabilities from the regular education environment occurs only when the nature or severity of the disability is such that education in regular classes with the use of accommodations, modifications, and related services is no longer reasonably calculated to provide a free appropriate public education.

1.11.6 IEP Design, Implementation and Review

The school will have a Student Study Team ("SST") as part of the general education program and as part of the IDEIA child search/find requirements, as a vehicle of exhausting all general education possibilities before a student is referred for a special education evaluation by school personnel. However, the SST shall not be used to delay assessment of a pupil after parent request.

The primary method of identifying students eligible for special education services is through the registration process, after a student has been accepted for enrollment. Students are also eligible for special education identification and eligibility determination through the "child find" process. Each affiliate site shall assure that all students with disabilities are identified, located and evaluated in accordance with applicable law.

Instructional staff will be instructed about the characteristics of special education handicapping conditions and referral procedures. If a student is receiving special education services, his or her IEP will be reviewed in an IEP meeting at least once a year to determine how well it is meeting student needs. In addition, every three years, student progress will be reassessed and the IEP reviewed in accordance with applicable law unless otherwise agreed upon by BayTech and the parent/guardian. BayTech shall, prior to the placement of the individual with exceptional needs, ensure that the regular teacher or teachers, the special education teacher or teachers, and other persons who provide special education, related services, or both to the individual with exceptional needs shall be knowledgeable of the content of the IEP. A copy of each IEP shall be maintained at the school site. Service providers from other agencies who provide instruction or a related service to the individual off the school site shall be provided a copy of the IEP. All IEPs shall be maintained in accordance with state and federal student record confidentiality laws.

If a parent or teacher has concerns that the educational needs of students already enrolled in special education are not being met, either the parent or the teacher may request a reassessment or an IEP meeting to review the IEP anytime during the school year.

1.11.7 Procedural Safeguards

BayTech shall ensure that parents receive procedural safeguards as required by law to ensure parents are informed of their rights under state and federal law.

1.11.8 Confidentiality

BayTech shall assure that the confidentiality of personally identifiable data shall be protected at collection, storage, disclosure and destruction.

1.11.9 Personnel Standards

BayTech shall assure that it will make good faith efforts to recruit and hire appropriately and adequately trained personnel to provide special education and related services to children with disabilities.

1.11.10 Participation in Assessments

BayTech shall assure that students with disabilities are included in general State-wide assessment programs with appropriate accommodations, when required by applicable law.

ELEMENT 2: MEASURABLE STUDENT OUTCOMES

Governing Law: The measurable pupil outcomes identified for use by the charter school. "Pupil outcomes," for purposes of this part, means the extent to which all pupils of the school demonstrate that they have attained the skills, knowledge, and attitudes specified as goals in the school's educational program. Education Code Section 47605(b)(5)(B).

To better serve the students and the community, BayTech will continue to examine and update the following list of measurable student outcomes over time to reflect the school's mission and any changes to state or local standards that support such a mission. Should any changes to the measurable pupil outcomes be made, BayTech will submit those changes to the OUSD as an update to the charter. BayTech shall pursue the following measurable pupil outcomes:

- Meet or exceed the academic performance index ("API") growth in the year prior to charter renewal or two of the last three years prior to renewal
- Meet adequate yearly progress ("AYP") targets as defined under the No Child Left Behind Act ("NCLB") in the year prior to charter renewal or two of the last three years prior to charter renewal
- Exceed the similar school API ranking of identified similar schools in the year prior to charter renewal or two of the last three years prior to renewal (*Currently identified similar schools are: Madison MS, Explore College Prep, Claremont MS, Frick MS, and West Oakland Middle School.*)
- Graduation rate higher than the OUSD average; dropout rate lower than the OUSD average
- 10th grade CAHSEE passing rate of more than 70% during the first test administration of the year
- Student attendance rate of at least 95%
- Additional targets as detailed in section 2.4

2.1 GRADING, PROMOTION, AND GRADUATION

The primary purpose for grading is to provide feedback to students and parents on the achievement of learning goals. At BayTech course report card grades are to be represented in letter-grade equivalent to the percentage earned in each course.

Course report card grades are based on in-class performance tasks (assessments, projects, assignments, and classroom participation), homework, responsibility, and in some instances, additional discretionary components. Each department will work with the Department Chair in conjunction with the School's Academic Coordinator to develop specific and consistent weights for each component, to be shared with parents and students.

BayTech will follow a standard scale to assign letter grades for semester work. Grading is based on a 4.0 (unweighted) scale for regular courses and a 5.0 (weighted) scale for AP and approved college courses.

2.1.1 Middle School Grade Promotion

In grades 6 through 8, for year-long courses, the numerical grades of two semesters will be averaged to determine an end-of-the-year grade. The average numerical grade will then be converted to a letter-grade and grade-point equivalent for

GPA calculations. To earn credit, the end-of-the-year grade for the class must be at least a "C" (=2.0) or the second semester grade should be at least a "B-" (2.7).

To be promoted to the next grade, a middle school student must have a 2.0 grade point average (GPA) and passing end-of-the-year grades in all core courses before the start of the next school year. Core courses are Math, Science, English Language Arts, and History/Social Science.

Students who fail three or more core courses at the end of the year will not be promoted to the next grade. Eighth graders who are not being promoted will not be able to participate in eighth grade promotion activities. Students who fail one or two core courses can attend summer school at a public school or participate in the BayTech Intensive Home Study Program (IHSP) to make up failed courses during summer. Students who attend IHSP will receive a maximum grade of "C". Student transcripts will be updated to include summer grades and GPA will be recalculated.

2.1.2 High School Grade Promotion

In high school, course grades are semester-based and credit is granted at the end of each semester. Students need to have an end-of-the-semester final grade of at least a "C" (=2.0) to earn credit for the course.

To be promoted to the next grade, a high school student must have a 2.0 grade point average (GPA) and the minimum required credits described below before the start of the next school year. (Core courses are Math, Science, English Language Arts, and History/Social Science.)

- To be enrolled in grade 10, a student must have a minimum of 50 credits, including at least 20 credits in core courses.
- To be enrolled in grade 11, a student must have a minimum of 100 credits, including at least 50 credits in core courses.
- To be enrolled in grade 12, a student must have a minimum of 150 credits, including at least 90 credits in core courses.

Please refer to the Student/Parent handbook for more detailed information on grading and promotion.

2.2 GRADUATION REQUIREMENTS

BayTech believes that students need to have physical and mental experience in high school, which includes academic, life skills, and applied experiences. BayTech meets and exceeds the admission requirements of all four-year universities including University of California.

Currently, every student must earn a total of 210 semester credits in grades 9 through 12 in order to receive a high school diploma. Each high school course at BayTech is semester based and worth 5 credits. Students need to have an end-of-the-semester final grade of at least a "C" (=2.0) to earn credit for the course. Credit is awarded on the basis of student participation, mastery of subject matter, and/or attainment of skills.

The table on the following pages lists courses required in order to graduate from BayTech. BayTech offers three different high school diploma types: standard, advanced, and honors. Each diploma has minimum requirements that meet and exceed the state graduation requirements and the "a-g" subject requirements of California's four-year public universities. Students are always welcome, and often encouraged, to exceed these minimum requirements. (The advanced and honors diploma types will apply to the class of 2017 – students who are entering the 9th grade during the 2013-14 school year.)

Students will be required to pass the California High School Exit Exam (CAHSEE) in order to receive a BayTech Diploma. Letter of completion will be given to students who do not pass the CAHSEE.

BayTech math requirements are threefold:

- Credit requirements: BayTech requires at least 30 semester credits of math for a standard diploma and 40 semester credits of math for an advanced or honors diploma. Some of these credits can be earned in middle school.
- Year requirements: BayTech requires students to be enrolled in a math course for at least two years in grades nine through twelve for a standard diploma (state requirement) and at least three years in grades nine through twelve for an advanced or honors diploma. For example; a student may take Algebra-I in seventh grade, Geometry in eighth grade, and Algebra II in ninth grade. The student still needs to take one more year of math for a standard diploma and two more years of math for an advanced or honors diploma.
- Course requirements: Students need to complete Algebra I, Geometry, and Intermediate Algebra (Algebra II) before graduation.

BayTech encourages students to engage in community service to develop and demonstrate crucial life skills. This will help students gain “real life” experience and develop responsibility, caring and respect for the community. Therefore, students will be required to earn 40 hours of community service before graduation for an advanced or honors diploma. Students may begin to earn these hours once they complete their 8th grade year.

In order for students to participate in any senior activities they must have a total of 150 credits at the beginning of the first semester and/or 180 credits at the beginning of the second semester of their senior year. In addition, students have to fulfill all the graduation requirements to participate in the Graduation Ceremony.

Table 1 – BayTech Graduation Requirements

Subject Area	Minimum Course Requirements	Sample Elective Courses	STANDARD Diploma	ADVANCED Diploma	HONORS Diploma
(a) History/Social Science	Three years, including World History US History American Government and Civics (1/2) Economics (1/2)	Sociology AP Psychology AP World History AP US History AP US Government & Politics	30	30	30
(b) English	Four years of approved courses English 9 English 10 English 11 English 12	Creative Writing Journalism Public Speaking AP English Language and Composition AP English Literature and Composition	40	40	40
(c) Mathematics	Three years, including Algebra I Geometry Intermediate Algebra (Algebra II) <i>(Four years recommended)</i>	Trigonometry Probability and Statistics Pre-Calculus AP Calculus AB AP Calculus BC AP Statistics	30	40	40
(d) Science	Two years with lab required; lab chosen from: Biology Chemistry Physics <i>(Three years recommended)</i>	Earth Science Environmental Science Marine Biology AP Biology AP Chemistry AP Physics B AP Physics C	20	30	40
(e) Language Other Than English	Two years in same language required. <i>(Three years recommended)</i>	Spanish-1, Spanish-2, Spanish-3, Spanish-4, AP Spanish Language, Other world languages offered by the School	20	20	30
(f) Visual & Performing Arts	One year of visual and performing arts chosen from the following: dance, drama/theater, music or visual art	Art Drama Multimedia Music Photography Web Design & Graphic Arts	10	10	10
(g) Electives*	20 or 30 credits of electives required depending on diploma type.	Additional courses in History/Social Science, English, Mathematics, Science, Language Other Than English, Visual & Performing Arts and Computers & Technology	30	30	20

Physical Education	Two years required.		20	20	20
Computers & Technology	One year required.	3-D Modeling Advanced Office Computer Aided Design Computer Literacy-1 Computer Literacy-2 Desktop Publishing Digital Arts Introduction to Engineering Design Introduction to Programming Pre-AP Computers Principles of Engineering Robotics Web Authoring AP Computer Science A	10	10	10
Total Required Credits			210	230	240
AP Course / College Credit Requirements	AP * or college courses can be taken to meet minimum course requirements or as elective.		N/A	20	40
Other Requirements	California High School Exit Exam Minimum Cumulative GPA Required Service Learning Hours		2.00 N/A	3.25 40 hrs	3.50 40 hrs

* Elective / AP course offerings may change depending on student needs/demands and availability of teachers and resources.

2.3 ACADEMIC PERFORMANCE INDEX

BayTech is aware of the importance of meeting API targets. It will aim to increase the API continuously by at least the amount required by the state and NCLB. To reach this goal, BayTech will strive for continuous school-wide improvement. As discussed above, BayTech has a standards-based curriculum, which will help bolster student performance on California Standards Tests. MAP Tests will help BayTech refine instruction to achieve its targets.

Please see Appendix A1, titled "Self-Reflection," to see the progress the School has made towards meeting API targets.

2.4 SCHOOLWIDE GOALS

BayTech recognizes that student academic achievement and growth are significantly influenced by student conduct, attendance, parental involvement, and the dropout rate. BayTech has established a well-disciplined school with extensive parental involvement and will maximize a class attendance average of 95% or higher, and a dropout rate lower than the OUSD average.

The following table is a summary of academic skill goals in each of the academic areas of the curriculum that will provide key data about the efficacy of BayTech's academic program. This data is used to drive decisions about overall program development, as well as informing ongoing curriculum modifications and allocation of resources.

2.4.1 Academic Skill Goals

Table 2 – Representative core academic skills and assessment tools

Curricular Focus	Measurable Outcomes	Assessment Tools
Academic Student Outcome Goals	<ul style="list-style-type: none"> Students will demonstrate improvement on standardized tests and will compare favorably with schools that have similar student populations in terms of race, gender, and socio-economic status 	<ul style="list-style-type: none"> State-mandated tests (e.g., CST) (all grades) California Assessment Test 6th Edition (CAT-6) (Grade 7) School-designed tests (all grades)
Core Academic Skills (Science)	<ul style="list-style-type: none"> A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the California Content Standards. Work individually and on a team, using scientific inquiry and skills and the scientific method to ask and answer questions about the physical world. Use critical thinking skills to analyze scientific problems and reach conclusions. Effectively communicate results verbally and in writing. Be aware of the range of careers available in science. 	<ul style="list-style-type: none"> Assignments, tests and activities designed by the teacher or using published materials and sometimes scored using rubrics. State-mandated tests aligned to standards (e.g., CST) (grades 6 – 11) Portfolios of student work, reports and/or exhibits scored by the teacher using rubrics.

Curricular Focus	Measurable Outcomes	Assessment Tools
Core Academic Skills (Mathematics)	<ul style="list-style-type: none"> A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the Curriculum Content Standards for California Ability to solve text-based as well as real-world problems using a variety of mathematics tools and procedures Implement a variety of problem-solving strategies. Develop fluency in basic computational/procedural skills. Communicate precisely about quantities and logical relationships. Make connections among mathematical ideas and between mathematics and other disciplines. Be aware of the range of careers available in mathematics. 	<ul style="list-style-type: none"> Assignments, tests and activities designed by the teacher or using published materials and sometimes scored using rubrics. State-mandated tests aligned to standards (e.g., CST) Portfolios of student work, reports and/or presentations scored by the teacher using rubrics. MAP Testing
Core Academic Skills (Language Arts)	<ul style="list-style-type: none"> Grade-level and critical reading skills. Knowledge of a coherent body of literature from the traditional canon. Effective and accurate writing skills. Effective verbal communication skills. Critical-thinking skills. 	<ul style="list-style-type: none"> Assignments, tests and activities designed by the teacher or using published materials and sometimes scored using rubrics. State-mandated tests aligned to standards (e.g., CST) Portfolios of student work, reports and/or presentations scored by the teacher using rubrics.
Core Academic Skills (History - Social Science)	<ul style="list-style-type: none"> Ability to analyze, explain, and evaluate world, US and world history. Ability to link events in one historical period to another. Effective writing and verbal communication skills. Critical-thinking skills. Critical-reading skills. Understanding of cause and effect. Understanding the importance of belief systems. 	<ul style="list-style-type: none"> Assignments, tests and activities designed by the teacher or using published materials and sometimes scored using rubrics. State-mandated tests aligned to standards (e.g., CST) Portfolios of student work, reports and/or presentations scored by the teacher using rubrics.
Core Academic Skills (Computers and Technology)	<ul style="list-style-type: none"> Use the Internet for research and information retrieval. Use technology for data acquisition. Use technology for communication. Effectively use applications such as word processors and spreadsheets. Write code to solve simple problems. 	<ul style="list-style-type: none"> School- and/or teacher-developed assignments, tests, and activities Portfolios, presentations and/or exhibits of student work
Core Academic	<ul style="list-style-type: none"> Understand the history of art Appreciate art and artistic expression 	<ul style="list-style-type: none"> School- and/or teacher-developed assignments, tests, and activities

Curricular Focus	Measurable Outcomes	Assessment Tools
Skills (Visual and Performing Arts)	<ul style="list-style-type: none"> Understand the connections among the different forms of artistic expression Use materials to create art. Demonstrate artistic skills to express and communicate imaginative responses to experiences. Apply design elements and principles. 	<ul style="list-style-type: none"> Portfolios, presentations, peer competitions and/or exhibits of student work
Core Academic Skills (Foreign Language)	<ul style="list-style-type: none"> Proficiency in speaking in the foreign language Proficiency in reading standard texts in the foreign language Proficiency in writing in the foreign language Understanding of the culture and society 	<ul style="list-style-type: none"> Publisher-developed assignments and tests School- and/or teacher-developed assignments, tests, and activities
Core Academic Skills (Physical Education /Health)	<ul style="list-style-type: none"> To be competent in many movement activities and use these to enhance his or her skills. Achieve and maintain a health enhancing level of physical fitness. Exhibit a physically active lifestyle and will understand that physical activity provides opportunities for enjoyment, challenge, and self-expression. Demonstrate responsible personal behavior while participating in movement activities. Demonstrate responsible social behavior while participating in movement activities. 	<ul style="list-style-type: none"> Demonstration of basic abilities in selected activities Evidence of maintaining physical fitness Peer competitions Teacher-developed assignments, tests, portfolio and/or activities State-mandated tests, such as the Physical Fitness Test (grades 7 and 9)

Measurable outcomes and assessment tools are important to tracking performance progress. The principal, staff, and teachers will be held accountable by the Board of Directors for meeting outcome goals. Benchmark skills and specific classroom-level skills will be updated annually.

Please see Appendix A1, titled "Self-Reflection," to see the progress the School has made towards meeting these goals.

2.4.2 Measurable Student Outcome Goals

Table 3 – Representative measurable student outcomes and assessment tools in academic areas

Outcome	Goal	State-level Year-end Assessments / Local Benchmark Instruments
Academic Performance Index ("API") growth	<ul style="list-style-type: none"> Meet or exceed the API growth in the year prior to charter renewal or two of the last three years prior to renewal 	<ul style="list-style-type: none"> API reports School-designed content benchmark assessments; MAP test results
Adequate Yearly Progress ("AYP")	<ul style="list-style-type: none"> Meet AYP targets as defined under the No Child Left Behind ("NCLB") in the year prior to charter renewal or two of the last three years prior to charter renewal 	<ul style="list-style-type: none"> AYP reports School-designed content benchmark assessments; MAP test results
Similar school API ranking	<ul style="list-style-type: none"> Exceed the similar school API ranking of identified similar schools in the year prior to charter renewal or two of the last three years prior to renewal (<i>Currently identified similar schools are: Madison MS, Explore College Prep, Claremont MS, Frick MS, and West Oakland Middle School.</i>) 	<ul style="list-style-type: none"> API reports
Graduation rate	<ul style="list-style-type: none"> Graduation rate higher than the OUSD average 	<ul style="list-style-type: none"> CDE records Enrollment and graduation records
Dropout rate	<ul style="list-style-type: none"> Dropout rate lower than the OUSD average 	<ul style="list-style-type: none"> CDE records Enrollment and graduation records
CAHSEE passing rate	<ul style="list-style-type: none"> 10th grade CAHSEE passing rate of more than 70% during the first test administration of the year 	<ul style="list-style-type: none"> CAHSEE reports
Student attendance rate	<ul style="list-style-type: none"> Average daily attendance rate of at least 95% 	<ul style="list-style-type: none"> ADA rate Daily attendance reporting via School Information System
Student suspension rate	<ul style="list-style-type: none"> Suspension rate lower than the OUSD average 	<ul style="list-style-type: none"> CDE records Suspension reporting via School Information System
Schoolwide CST performance	<ul style="list-style-type: none"> Less than 25% Far Below Basic in ELA and Math each year 5% increase of Proficient or Advanced in ELA and Math each year 	<ul style="list-style-type: none"> CST reports School-designed content benchmark assessments; MAP test results
English Learner (EL) performance	<ul style="list-style-type: none"> 50% of ELs will advance one overall performance level on the CELDT each year 	<ul style="list-style-type: none"> CELDT reports CDE records

Outcome	Goal	State-level Year-end Assessments / Local Benchmark Instruments
	<ul style="list-style-type: none"> 50% of ELs at overall Early Advanced performance level on the CELDT who are enrolled in BayTech no less than one year will be reclassified to fluent English proficient (RFEP) each year. 	<ul style="list-style-type: none"> School records
Daily reading	<ul style="list-style-type: none"> At least 70% of students will meet their daily reading goals. 	<ul style="list-style-type: none"> Student Reading Survey Accelerated Reader (AR) reports Sustained Silent Reading (SSR) logs
Science fair participation	<ul style="list-style-type: none"> At least 50% of students will participate in the school science fair. 	<ul style="list-style-type: none"> Science fair registration logs Grade reporting via School Information System
After-school participation	<ul style="list-style-type: none"> At least 40% of students will participate in after-school programs. 	<ul style="list-style-type: none"> After-school sign-in logs ASES reporting

ELEMENT 3: METHODS TO ASSESS STUDENT PROGRESS

Governing Law: The method by which pupil progress in meeting those pupil outcomes is to be measured. Education Code Section 47605(b)(5)(C).

BayTech will use multiple measures to assess student and the school progress towards meeting the goals described in the previous section. Assessments will be aligned to the school's mission, exit outcomes and the curriculum. This section describes these assessment methods. Results of these assessments will be used to facilitate continuous improvement of the programs offered at each school site. BayTech will conduct the pupil assessments required pursuant to Sections 60605 and 60851 and any other statewide standards authorized in statute or assessments applicable to students in non-charter public schools.

3.1 ACADEMIC AREAS

The measures that will be used to assess student progress include all state-mandated standardized tests such as the Standardized Testing and Reporting (STAR) tests. MAP testing will be utilized to measure student progress three times a year. As explained in section 1.4.1, "Data Driven Design," students who are achieving substantially below grade level are identified through multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education's website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests. For students achieving substantially below grade level, we use educational materials that provide review and re-teach programs. McGraw Hill's Acuity program software, Holt McDougal Publisher's resources, and Accelerated Math program allow teachers to monitor the progress of students who are achieving below grade level and provides software generated tests and personalized instructional materials based on California content standards/framework which have not been achieved.

Teachers will also, with the help of published materials, create standards-aligned formative assignments and tests that will be evaluated using rubrics. Individual and team projects will be evaluated using rubrics, and students will be required to demonstrate research and critical thinking skills.

3.2 STANDARDIZED TESTS

BayTech will use state-mandated tests to monitor each student's performance and academic growth. State-mandated tests will be administered as required by law. Other standards-aligned assessment tools (such as teacher-designed tests, publisher-designed tests, portfolios, presentations, etc) will also help teachers evaluate students.

BayTech will use STAR assessment tools including CST produced for public schools and California Achievement Tests, Sixth Edition (CAT/6) in reading, language and mathematics, CELDT, and CAHSEE.

BayTech will continue over time to examine and refine its methods for assessing student outcomes to reflect the school's mission and any changes in statewide student assessments that may become applicable to charter schools.

3.3 COMPUTER ADAPTED TESTS

Please see section 1.4.1.A about MAP testing.

3.4 USE AND REPORTING OF DATA

The results of STAR assessments, along with school-specific assessment data, will be used to evaluate progress. Each school site's staff, led by the dean of academics, department chairs, and intervention/enrichment coordinator, will collect, analyze and review the results of school-wide assessment and recommend modifications, if they are needed, to the school's curriculum and other programs at the end of every semester. Parents will be apprised of their students' progress through quarterly report cards. The school will record grades, attendance, homework, and student progress reports online, and provide regular access to parents. For those parents without access to a computer, BayTech will have at least one computer on campus available for parent use.

Teachers will use standards-aligned formative assessments to continually monitor student progress and to make adjustments on the curriculum and instructions when such is necessary and appropriate.

The progress of ELL students will be monitored using the CELDT, CST scores, teacher evaluations (based on teacher-designed tests and performance on class work and homework), and parent input. Students who have been re-designated as English proficient will be monitored for at least two years following their re-designation.

BayTech acknowledges that pursuant to Article XVI section 8.5(e) of the California Constitution, sections 2(e), 6, and 8 of Proposition 98, and sections 33126.1(b), 35256(c), and 35258 of the Education Code require schools, including BayTech, to provide certain information in certain formats in certain ways to the general public and specifically to parents of students at BayTech and of the District. BayTech further acknowledges that it has the obligation to provide all of such information to the District that is required by these referenced authorities in a timely manner so that the District may meet its obligations under those authorities as well. To the extent that there is information that the District has, but that BayTech does not have that BayTech needs in order to meet its obligations, the District shall provide the same to BayTech in a reasonably timely manner upon request.

If BayTech does not test (i.e., STAR) with the District, BayTech hereby grants authority to the State of California to provide a copy of all test results directly to the District as well as the charter school. Test results for the prior year, if not provided directly to the District by the State, will be provided by the charter school to the District no later than September 1 of each year.

BayTech will maintain sufficient staff and systems including technology, required to ensure timely reporting necessary to comply with the law and to meet all reasonable inquiries from District and other authorized reporting agencies.

3.5 COOLSIS: BAYTECH'S SCHOOL INFORMATION SYSTEM

BayTech utilizes CoolSIS for its internal school information system (SIS). Aside from providing a very effective online communication tool for teachers, students and parents (for course material, homework assignments, projects, course grade statistics and records of student grades), the system enables BayTech administrators to create and print any reports within seconds. The system can produce more than 70 pre-designed reports including CA State ADA and CSIS reports as well as empowering administrators to easily design reports customized to their needs.

CoolSIS is a great asset to BayTech such that:

- CoolSIS empowers BayTech administrators to supervise the school easily from anywhere. BayTech administrators can take a snapshot of the school any time in any aspect including past data.
- This custom-made system is highly adjustable according to BayTech's needs and it's being developed to meet BayTech's needs.

- Longitudinal studies can be performed using CoolSIS.

The system is very cost-effective, considering the number of custom-designed reports.

ELEMENT 4: GOVERNANCE STRUCTURE

Governing Law: The governance structure of the school, including, but not limited to, the process to be followed to ensure parental involvement. Education Code Section 47605(b)(5)(D).

4.1 NONPROFIT PUBLIC BENEFIT CORPORATION

BayTech is a direct funded independent charter school operated by Willow Education (WE), a California Nonprofit Public Benefit Corporation, pursuant to California law.

BayTech will operate autonomously from the District with the exception of the supervisory oversight as required by statute. Pursuant to California Education Code Section 47604(c), the District shall not be liable for the debts and obligations of BayTech, operated by a California non-profit benefit corporation or for claims arising from the performance of acts, errors, or omissions by the charter school as long as the District has complied with all oversight responsibilities required by law. BayTech and/or its non-profit corporation will be solely responsible for the debts and obligations of the charter school.

Attached, as Appendix C, please find the Articles of Incorporation and Corporate Bylaws of WE.

4.2 BOARD OF DIRECTORS

The Willow Education (WE) Board of Directors ("the Board") is ultimately responsible for BayTech's operation and governance. The principal, appointed by the Board, is responsible for execution of daily management duties on behalf of the Board. The Board of Directors shall consist of a minimum of three (3) and a maximum of eleven (11) voting members. The District reserves the right to appoint a single representative to the Board pursuant to California Education Code Section 47604(b). In addition, the Board will also have a parent representative from the school. Please see Appendix C for biographies of the directors of the WE Board of Directors.

BayTech will be governed in accordance with all applicable laws and regulations relating to public agencies and charter schools and its corporate bylaws. The Board will comply with the Brown Act and Roberts Rules of Order. The School will be nonsectarian in its programs, admission policies, employment practices, and all other operations and will not discriminate on the basis of any characteristic listed in Education Code Section 220.

The Board meets at least bimonthly. Board meeting agendas with date, time, and location are posted at the school campus and on the web site, in compliance with the Brown Act, to maximize public participation. A book of minutes of all meetings, proceedings, and actions is kept at the School or such other place as the Board may direct according to its Bylaws.

The Board is fully responsible for the operational and fiscal affairs of BayTech including but not limited to the following:

- Hire, supervise, evaluate, discipline, and dismissal of the Principal of BayTech
- Approve major contractual agreements
- Approve and monitor the implementation of general policies of BayTech. These will include effective human resource policies for career growth and compensation of the staff.

- Approve and monitor BayTech's annual budget and budget revisions
- Act as a fiscal agent. This includes the receipt of funds for the operation of BayTech in accordance with charter school laws and the receipt of grants and donations consistent with the mission of BayTech.
- Contract with an external independent auditor to produce an annual financial audit according to generally accepted accounting practices
- Establish operational committees as needed
- Regularly oversee the progress of both student and staff performance
- Involve parents and the community in school related programs
- Execute all applicable responsibilities provided for in the California Corporations Code
- Strategic Planning
- Approve the school calendar and schedule of Board meetings
- Participate in the dispute resolution procedure and complaint procedures when necessary
- Approve charter amendments as necessary and submit material revisions as necessary for District consideration
- Approve annual fiscal audit and performance report
- Appoint an administrative panel or act as a hearing body and take action on recommended student expulsions

The Board may initiate and carry on any program or activity or may otherwise act in a manner which is not in conflict with or inconsistent with or preempted by any law and which are not in conflict with the purposes for which the school is established.

The Board may execute any powers delegated by law to it and shall discharge any duty imposed by law upon it and may delegate to an employee of BayTech any of those duties with the exception of budget approval or revision, approval of the fiscal and performance audits, and the adoption of Board policies. The Board, however, retains ultimate responsibility over the performance of those powers or duties so delegated. Such delegation will:

- Be in writing
- Specify the entity designated
- Describe in specific terms the authority of the Board of Directors being delegated, any conditions on the delegated authority or its exercise and the beginning and ending dates of the delegation, and require an affirmative vote of a majority of Board members.

4.3 PRINCIPAL

The Principal is responsible of the school operation and is accountable to the Board. Please see section 5.3 for the Principal's responsibilities and duties.

4.4 WILLOW EDUCATION (WE) ADVISORY COMMITTEE

The Board has formed an advisory committee to advise on the performance of WE and provide recommendations on major decisions. The Advisory Committee has members from:

- Representatives from the local communities
- Experts from local universities and businesses

The Advisory Committee will meet at least once a year to advise on operations of WE. The committee will produce a report and offer recommendations for future changes, if any. The Advisory Committee has no binding power on the Board, or the School. However, their recommendations will be considered crucially important for the success of WE.

4.5 SCHOOL SITE COUNCIL (SSC)

The School Site Council (SSC) is mainly an advisory body that works with the principal to develop, review, and evaluate school improvement programs. The SSC will be formed at BayTech shortly after the school commences and will consist of:

- The school principal
- 1 Teacher representative elected by the faculty
- 1 Parent representative elected by the Parent Club
- 1 Student representative elected by the Student Council
- 1 Community representative appointed by the Board

SSC recommends suggested courses of action for the board to adopt regarding site-specific issues. The school principal will communicate these policies to the Board.

4.6 ENGLISH LEARNER ADVISORY COMMITTEE (ELAC)

The English Learner Advisory Committee (ELAC) is mainly a committee of parents or other community members who want to advocate for English Learners. The committee provides parents of English Learners opportunities to learn more about the programs offered to their students and advises the principal and the School Site Council on programs and services for English Learners.

State law mandates each school site with 21 or more students of Limited English Proficiency (LEP) in attendance, regardless of language, to form a functioning English Learner Advisory Committee (ELAC). The ELAC will be formed at BayTech when the school has 21 or more students of LEP.

4.7 PARENTAL INVOLVEMENT

WE strongly encourages parents to participate in and share the responsibility for the educational process and educational results of BayTech. By having representative(s) on the SSC, parents are active participants in developing local school policies and leading efforts to engage the support of the community, making recommendations about issues related to the

school, and reviewing parental and community concerns. Other opportunities for parental involvement include:

- The Parent/Guardian Club will meet regularly and advise the SSC.
- Teachers will be encouraged to make home visits to discuss student progress with the parents. Parents, students, and teachers meet throughout the year to monitor students' progress. (See descriptions of home visits above.)
- Parents complete a survey each year evaluating the strengths and weakness they identify with the program at BayTech.
- There will be various opportunities for parents to volunteer. For example, they may help in classrooms, lead extra-curricular activities, assist in event planning, tutor, assist with lunch distribution, and attend field trips. It is not required, but expected, that parents will contribute a minimum of 10 hours per year to the school.
- BayTech will organize parent education groups where parents will learn the importance of their involvement in their child's education.
- Teachers will meet one-on-one with parents of low-achieving students on an as needed basis to ensure the proper supports are in place for the student.
- Parents will have the opportunity to attend periodic dinners for teambuilding, presentation of the latest school news, and recognition of parent contributions to the school community.

4.8 GRIEVANCE PROCEDURE FOR PARENTS AND STUDENTS

BayTech will establish complaint procedures that address both complaints alleging discrimination or violations of law and complaints regarding other areas. BayTech will not, at any time, refer complaints to the District.

The complaint procedures will include the clear information with respect to the response timeline of the school, whether the school's response will be in writing, the party identified to respond to complaints, the party identified and charged with making final decisions regarding complaints, and whether the final decision will be issued in writing. The procedures will also identify an ombudsperson for situations in which the school leader is the subject of the complaint. The complaint procedures will be clearly articulated in the school's student and family handbook or distributed widely.

BayTech will designate at least one employee at each site to coordinate its efforts to comply with and carry out its responsibilities under Title IX of the Education Amendments of 1972 (Title IX) and Section 504 of the Rehabilitation Act of 1973 (Section 504) including any investigation of any complaint filed with BayTech alleging its noncompliance with these laws or alleging any actions which would be prohibited by these laws. BayTech will notify all its students and employees of the name, office address, and telephone number of the designated employee or employees.

BayTech will adopt and publish grievance procedures providing for prompt and equitable resolution of student and employee complaints alleging any action, which would be prohibited by Title IX, or Section 504.

BayTech will implement specific and continuing steps to notify applicants for admission and employment, students and parents of elementary and secondary school students, employees, sources of referral of applicants for admission and employment, and all unions or professional organizations holding collective bargaining or professional agreements with the recipient, that it does not discriminate on the basis of sex or mental or physical disability in the educational program or activity which it operates, and that it is required by Title IX and Section 504 not to discriminate in such a manner.

4.9 ORGANIZATIONAL CHART

Please see the following figure for organizational chart of BayTech.

Figure 1 - Organizational chart of BayTech



4.10 REQUIRED CHARTER TEXT

BayTech will comply with the District policy related to charter schools to the extent it aligns with and does not exceed the law applicable to charter schools, as it may be changed from time to time as long as the charter school has been given written notice of the policy change.

BayTech, in accordance with Education Code Section 47604.3, shall promptly respond to all reasonable inquiries, including but not limited to, inquiries regarding financial records, from the District and shall consult with the District regarding any such inquiries. BayTech acknowledges that it is subject to audit by OUSD if OUSD seeks an audit of BayTech, it shall assume all costs of such audit. This obligation for the District to pay for an audit only applies if the audit requested is specifically requested by the District and is not otherwise required to be completed by BayTech by law or charter provisions.

Members of BayTech's Governing Board, any administrators, managers or employees, and any other committees of the School shall at all times comply with federal and state laws, nonprofit integrity standards and OUSD's Charter School policies and regulations regarding ethics and conflicts of interest so long as such policies and regulations are not in conflict with any then-existing applicable statutes or regulations applicable to charter schools.

BayTech and/or its non-profit corporation will be solely responsible for the debts and obligations of the charter school.

ELEMENT 5: EMPLOYEE QUALIFICATIONS

Governing Law: The qualifications to be met by individuals to be employed by the school. Education Code Section 47605(b)(5)(E).

BayTech believes that all persons are entitled to equal employment opportunity. BayTech shall not discriminate against qualified applicants or employees on the basis of race, color, religion, sex, gender identity, sexual orientation, pregnancy, national origin, ancestry, citizenship, age, marital status, physical disability, mental disability, medical condition, or any other characteristic protected by California or federal law. Equal employment opportunity shall be extended to all aspects of the employer-employee relationship, including recruitment, hiring, upgrading, training, promotion, transfer, discipline, layoff, recall, and dismissal from employment. BayTech will be nonsectarian in its programs, admission policies, employment practices, and all other operations. BayTech will not require any employee to work at the charter school.

5.1 BACKGROUND CHECKS

BayTech adheres to Education Code Section 44237 regarding fingerprinting of employees. Prior to the first day of work for every employee, BayTech will process background checks through LiveScan, administered by the Department of Justice. BayTech will adhere to school policy pertaining to the safety and health of all employees and students. All employees must furnish or be able to provide:

- Medical clearance including proof of medical exam and tuberculosis (TB) testing
- Fingerprinting and the service fee to the Department of Justice for criminal record check. Applicants will be required to provide a full disclosure statement regarding prior criminal record. No employee may begin work prior to Department of Justice check in accordance with education Code Section 44237
- Documents establishing legal citizenship and work status, current copies of all teacher certificates

The documents listed above will be kept on-site and will be ready for inspection any time pursuant to a request from the District.

5.2 RECRUITING QUALIFIED TEACHERS

BayTech will comply with the Elementary and Secondary Education Act (reauthorized as No Child Left Behind Act of 2001). BayTech will hire teachers that meet the following qualifications:

- California Commission on Teacher Credentialing certificate in accordance with the provisions of the No Child Left Behind (NCLB) Act. Our teachers will be highly qualified in NCLB core academic subjects: English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography. All “a-g” courses, as defined by the University of California, including the high school technology course ‘Computer Science’ will be taught by NCLB compliant teachers. BayTech will require physical education health teachers, middle school technology teachers, and teachers of any other non-core, non-college preparatory courses to have a bachelor’s degree and competency in a related field as defined by the Title 5 California Code of Regulations, section 6111:

In addition to a bachelor's degree and either current enrollment in an approved intern program for less than three years or a credential in the subject taught, a teacher who meets NCLB requirements and is new to the profession at the middle and high school levels must have passed or completed one of the following for every core subject currently assigned:

- (1) A validated statewide subject matter examination certified by the Commission on Teacher Credentialing,
- (2) University subject matter program approved by the Commission on Teacher Credentialing,
- (3) Undergraduate major in the subject taught,
- (4) Graduate degree in the subject taught, or
- (5) Coursework equivalent to undergraduate major.

Appropriate records of credentials held by BayTech teachers and supporting documentation will be monitored and maintained by the School. Credentials will be monitored annually in compliance with state and federal law.

BayTech teachers will be required and expected to:

- Abide by the BayTech staff handbook
- Have ELL authorization if teaching to ELL students
- Be proficient in the use of computers, including but not limited to technology skills to handle BayTech's Technology Integrated Education (TIE), word processing, spreadsheets, multimedia presentations, e-mail, the Internet, and/or digital media, and demonstrate strong classroom management skills
- Have knowledge of curriculum and instruction

Please see section 6.3 for staff selection and expected skills, qualifications, responsibilities, and duties.

5.3 STAFF SELECTION AND QUALIFICATIONS OF THE SCHOOL PERSONNEL

5.3.1 Hiring Process and Schedule

Willow Education (WE) Board of Directors hires the Principal and authorizes the Principal to handle human resources including hiring and firing all school personnel. The Principal establishes a hiring committee to interview teacher candidates. The hiring committee may consist of the principal, an administrator and a teacher of the relevant subject from BayTech. If applicable, the interview process includes, but is not limited to a sample lesson through which prospective teachers' classroom management skills and subject competency are observed. In addition, teachers' technology and computer skills are tested and BayTech's years of success in hiring qualified teachers has proven this process to be very effective. The following schedule will be used in the hiring process:

- WE will hire the Principal. Preferably, the principal should have teaching experience in STEM areas and have leadership skills to perform administrative duties.
- In order to recruit new teachers, the principal will start advertising on frequently visited websites such as <http://www.edjoin.org> and in local newspapers by the beginning of May. Referrals from BayTech's staff and parents will also be taken into consideration.
- The hiring committee will conduct interviews during the months of May through August to hire the teachers. The hiring committee will consider the school's mission and the target student population in selecting the most

qualified teachers for the positions available.

5.3.2 Principal, Assistant Principals/Deans

The principal will orchestrate program and service delivery to students through teaching and auxiliary staff. Assistant Principals/deans will assist the principal in instructional program administration and student activities and services.

Skills and Qualifications:

- B.S. degree in Education, Engineering, or Natural Sciences
- Experience in teaching science and/or technology and administrative duties
- Up-to-date computer and technology knowledge
- Knowledge of school law, finance, and curriculum
- Ability to manage personnel
- Ability to interpret policy, procedures, and data
- Exceptional organizational, communication, public relations, and interpersonal skills.

Principal's Responsibilities and Duties:

- Monitor instructional and administrative processes to ensure that program activities are related to program outcomes and use findings to take corrective actions.
- Report to and consult with the Board.
- Hire, supervise, and evaluate the faculty and school site staff.
- Comply with state and federal laws and regulations affecting the school.
- Compile, maintain, and file all physical and computerized reports, records, and other documents required by law and BayTech policy, including accurate and timely reports of maximum attendance to requisition textbook.
- Manage use of school facilities. Supervise maintenance of facilities to ensure a clean, orderly and safe campus.
- Direct and manage extracurricular and intramural programs.
- Work with faculty and students to implement a student discipline management system that encourages positive student behavior and enhances the school climate.
- Ensure that school rules are uniformly observed and that student discipline is appropriate and equitable in accordance with the student handbook.
- Conduct conferences about student and school issues with parents, students, and teachers.
- Demonstrate awareness of school and community needs and initiate activities to meet those needs.
- Use appropriate and effective techniques to encourage community and parent involvement.
- Communicate with the chartering agency and attend necessary meetings.
- Report to the chartering agency when required.
-

*Deans' Responsibilities and Duties:**Dean of Academics:**Academic Program*

- Assist with curriculum developments and improvement
- Supervise textbook review and textbook ordering
- Oversee the development of curriculum, lesson plans and instruction in the classroom
- Update course descriptions and offerings to UC, school manual and school website
- Coordinate teacher and student involvement of after school program including payment issues
- Evaluate course credits for all incoming high school students
- Responsible for developing and changes of daily class schedule
- Coordinate all academic activities with the department chairs
- Oversee all fieldtrip planning
- Coordinate failing letters and summer school/preparation
- Bring academic and event calendar to administrative meetings weekly

Student Performance

- Help students prepare a four year plan
- Conference with students/parents on academic issues
- Responsible for scheduling and coordination of the tutorial program and afterschool/Saturday school activities
- Assess grade reports and mid-quarter reports before they go home to families
- Prepare standardized testing schedules, and inventory for standardized testing in a combined effort with the administrative assistant
- Oversee homework, class work, projects, tests, for teachers in CoolSIS
- Report weekly at administration meeting any teachers who are not using CoolSIS properly
- Review student progress at the end of each quarter and notifies parents of students on academic probation
- Maintain list of high honor/honor students

School Improvement

- Assist in organization of school improvement plan with staff, parents and community members

Personnel Management

- Hold employee evaluation conferences based on records of performance evaluation
- Administration and Fiscal/Facilities Management
- Oversee school operations in principal's absence

- Assist in scheduling student activities by participating in the development of class schedules, teacher assignments and extracurricular activity schedules
- Oversee student attendance records and assist the office manager on truancy issues
- Aid in safety drill practices and inspections.

Staff Development

- Hold teacher orientation and in-service training throughout the year
- Regularly prepare items for staff development for weekly faculty meetings and attend weekly administrative meetings
- Conference with teachers on academic issues in the classroom
- Conduct formal and informal teacher observations

Dean of Students:

Student Management

- Provide for supervision of students during non-instructional hours
- Help students develop positive behavior through a student discipline management system
- Provide for uniform enforcement of school rules and oversee appropriate and reasonable student discipline
- Hold parent/teacher/student conferences in regard to student and school issues
- Demonstrate use of productive and efficient skills to raise community and parent involvement

Supervision

- Supervise teachers with their before/after school and lunch duties
- Supervise at transition periods, lunch, before and after school

Discipline

- Oversee discipline issues for teachers in CoolSIS
- Coordinate and chair the school discipline committee

Support Services

- Supervise safety and welfare of students
- Manage support services including transportation, custodial and cafeteria

5.3.3 Teachers

The primary role and purpose of a teacher is to provide students with appropriate educational activities and experiences that will enable them to fulfill their potential for intellectual, emotional, physical and social growth. Teachers will help students develop the skills necessary to be productive members of society.

Skills and Qualifications:

- BA or BS (as appropriate) degree in subject matter with emphasis in engineering or natural science
- California Commission on Teacher Credentialing credential, certificate, permit or other documentation equivalent to what a teacher in other public schools would be required to hold
- Highly qualified in core courses as defined in section 6.2
- Understanding of subjects assigned
- Knowledge of curriculum and instruction
- Capability of instructing students and managing their behavior
- Exceptional organizational, communication and interpersonal skills

Teacher's Responsibilities and Duties:

Instructional Strategies

- Design, write and use lesson plans that conform to the charter's curriculum. Ensure written plans are available for review. The dean of academics will review all lesson plans
- Ensure lesson plans show modifications for differences in student learning styles
- Teach instructional subjects according to guidelines established by California Department of Education, charter policies and administrative regulations
- Implement appropriate instructional and learning strategies, activities, materials and equipment to ensure comprehension of learning styles and student needs
- Design instructional activities by using data from student learning style assessments
- Collaborate with special education teachers on student Individual Education Plans to ensure all modifications are met
- Collaborate with staff to determine charter requirements for the instructional goals, objective and methods.
- Produce and oversee teacher aide and volunteer assignments
- Employ technology practices to strengthen the instructional process

Growth and Development

- Help students assess and enhance their study methods and habits
- Produce formal and informal testing to evaluate student success
- Coordinate and manage extracurricular duties as assigned

- Sponsor outside activities approved by the charter principal
- Serve as an example for students, support mission of the charter

Classroom Management and Organization

- Prepare classroom to enhance learning and to aid in physical, social and emotional development of students
- Control student behavior in agreement with the student handbook
- Ensure necessary and reasonable measures are taken to protect students, equipment, materials and facilities
- Provide input on book, equipment and material selection

Communication

- Establish communication rapport with parents, students, principals and teachers through conferences.
- Create and maintain a professional relationship with colleagues, students, parents and community members.
- Present information accurately through clear communication skills

Other

- Enrich job skills through professional development activities
- Keep up to date on and abide by state and charter regulations and policies for classroom teachers
- Gather, manage and file all reports, records and other documents required
- Be active in faculty meetings and assist in staff committees as necessary

5.3.4 Special Education Teacher

The primary role and responsibility of a Special Education Teacher is to provide services to special education students with appropriate learning activities and experiences that will enable them to fulfill their potential for intellectual, emotional, physical and social growth. The Special Education teacher will develop student ability level instructional materials through modified curriculum and prepared lesson plans. The Special Education teacher will conduct work in self-contained, team, departmental or itinerant capacity as necessary.

Skills and Qualifications:

- B.A. or B.S. degree
- Knowledge of special needs of students in assigned area
- Knowledge of Individual Education Plan (IEP) goal setting process and implementation
- Knowledge of curriculum and instruction
- California Commission on Teacher Credentialing certificate, permit or other documentation equivalent to what a special education teacher in other public schools would be required to hold
- Highly Qualified in accordance with the No Child Left behind Act

Special Education Teacher's Responsibilities and Duties:

Instructional Strategies

- Work in conjunction with students, parents and other members of staff to develop IEPs
- Design, write and use instructional, therapeutic or skill development programs for assigned students and ensure written plan is available for review
- Ensure comprehension of learning styles and student needs are met through creation and implementation of appropriate instructional and learning strategies, activities, materials and equipment
- Collaborate with classroom teacher on student IEP to ensure all modifications are met and help special education students in regular class when appropriate
- Design instructional activities by using data from student learning style assessments
- Ensure IEP guidelines are met when presenting subject matter
- Use an assortment of media and techniques to meet the needs and capabilities of each student assigned
- Produce and oversee teacher aide and volunteer assignments
- Employ technology practices to strengthen the instructional process

Growth and Development

- Produce formal and informal testing to evaluate student success
- Oversee or ensure personal care, medical care and feeding of students as stated in IEP
- Coordinate and manage extracurricular duties as assigned
- Sponsor outside activities approved by the charter principal
- Serve as an example for students, support mission of the charter

Classroom Management and Organization

- Prepare classroom to enhance learning and to aid in physical, social and emotional development of students
- Control student behavior and implement discipline plan. This includes handling crisis situations and physically restraining students as necessary according to IEPs.
- Collaborate with the classroom teachers regarding student behavior management programs according to IEPs
- Collaborate with charter and outside resource people regarding education, social, medical and personal needs of students
- Ensure necessary and reasonable measures are taken to protect students, equipment, materials and facilities
- Provide input on book, equipment and material selection

Communication

- Ensure good communication rapport with parents, students, principals and teachers through conferences
- Create and maintain a professional relationship with colleagues, students, parents and community members
- Present information accurately through clear communication skills

Other

- Enrich job skills through professional development activities
- Keep up to date on and abide by state and charter regulations and policies for classroom teachers
- Gather, manage and file all reports, records and other documents required
- Be active in faculty meetings and assist in staff committees as necessary

5.3.5 Special Education Aide

The primary role and purpose of a Special Education Aide is to provide assistance to the Special Education teacher for the physical and instructional needs of the charter students with disabilities in the special education program. The Special Education Aide will help implement educational programs, including self-help, behavior management and instructional programs for students. The Special Education Aide will work under direct supervision of a certified teacher and indirect supervision of the principal.

Skills and Qualifications:

- Capable of working with children with disabilities
- Capable of following verbal and written instructions
- Capable of communicating effectively
- Able to use general office equipment

Special Education Aide's Responsibilities and Duties:

Instructional Support

- Prepare educational materials and displays for the classroom with the assistance of the classroom teacher
- Assist in keeping class neat and orderly
- Assist teacher in handling administrative records and reports
- Help substitute teachers with classroom layout, or other pertinent classroom management
- Assist with inventory, care and maintenance of equipment

Student Management

- Help physically disabled students according to their needs, including but not limited to transferring to and from wheelchairs, lifting, or positioning
- Help students with physical needs and personal care, including but not limited to feeding, bathroom needs, and personal hygiene
- Assist in student behavior management; this includes handling crisis situations and restraining disruptive or dangerous students as needed
- Take responsibility for learning and conforming to each student's special medical, physical, communicative and emotional needs
- Coordinate educational activities assigned by the teacher; help individual students or small groups
- Assist in overseeing students throughout school day, inside and outside classroom; this includes lunchroom, bus

and playground duty

- Advise teacher on special needs or problems of individual students

Other

- Ensure confidentiality
- Enhance job skills by participating in staff development programs
- Be active in faculty meetings and special events as assigned

5.3.6 Substitute Teachers and Tutors

A pool of daily substitute teachers and tutors will be established for tutoring activities during weekdays and weekends under the flexible education program. All tutoring activities at BayTech will be free of charge for all students.

5.3.7 Other Certificated, Classified and Other Personnel

The Principal will select other classified and other personnel based on an application and interview. Selection will depend on the ability to perform the job duties for that position.

- Other certificated personnel will perform duties as suitable for their job positions
- Office personnel will perform daily school business such as answering phone calls, typing letters, filing reports, and other necessary administrative duties.
- Maintenance duties will include janitorial services, light maintenance, and limited gardening duties. Food service duties may include food preparation, distribution, and maintaining a clean kitchen area

All personnel will abide by the Administrative Handbook and commit to the BayTech mission and vision. All employees' job descriptions and work schedules will be reviewed and modified as needed to meet the needs of the school and its students. The job descriptions will be based on the job duties and the work calendar as outlined in the Charter.

5.4 EVALUATION OF THE SCHOOL PERSONNEL

Evaluations will be performed annually. Performance measures will be used to evaluate all school personnel.

5.4.1 Principal

The Board will evaluate the Principal in the following areas:

- Overall successful school academic program and achievement of educational goals
- High parental and community involvement
- Completion of required job duties
- Creating a supportive learning environment

5.4.2 Teachers

The Principal will evaluate teachers in the following areas:

- Student progress as determined by the standardized tests
- Effectiveness of teaching strategies as evaluated by the principal through class visitations

- Performance of job duties
- The progress of the students on the basis of the school designed test results.

5.4.3 Other Personnel

The Principal will evaluate classified and other personnel based upon completion of assigned job duties and regular, punctual attendance.

5.5 PERFORMANCE AND ACKNOWLEDGEMENT

Exceptional performance will be acknowledged; staff may earn performance pay in the form of bonuses.

ELEMENT 6: HEALTH AND SAFETY

Governing Law: The procedures that the school will follow to ensure the health and safety of pupils and staff. These procedures shall include the requirement that each employee of the school furnish the school with a criminal record summary as described in Section 44237. Education Code Section 47605(b)(5)(F).

The health and safety of BayTech staff and pupils is a high priority for the school. The school will follow all required safety regulations including emergency policies and procedures. BayTech will comply with all applicable health and safety laws and regulations. BayTech will operate as a drug, alcohol, and tobacco free workplace. BayTech has adopted and implemented a comprehensive health and safety plan to create a safe and secure learning environment, keep it on file for review and train its staff annually on the safety procedures outlined in the plan. It will be the task of the school administration to monitor all activities consistently to provide safety and security for the students. For this purpose, a "team-on-duty" will be created among teachers and assistant teachers to supervise students at all times. The health and safety policies include, but are not be limited to, the following topics:

6.1 FACILITIES

BayTech shall comply with Education Code Section 47610 by utilizing facilities that are compliant with the California Building Standards Code. If BayTech fails to submit a certificate of occupancy or other valid documentation to the District verifying that the intended facility in which the school will operate complies with Education Code Section 47610, not less than 30 days before the school is scheduled to begin operation pursuant to the first year of this renewal term, it may not commence operations unless an exception is made by the Office of Charter Schools and/or the local planning department or equivalent agency. If BayTech moves or expands to another facility during the term of this charter, BayTech shall provide a certificate of occupancy or other valid documentation to the District verifying that the intended facility in which the school will operate complies with the Education Code Section 47610, to the District for each facility at least 30 days before the school is scheduled to begin operations in the facility or facilities. BayTech shall not begin operation in any location for which it has failed to timely provide a certificate of occupancy to the District, unless an exception is made by the Office of Charter Schools and/or the local planning department or equivalent agency. Notwithstanding any language to the contrary in this charter, the interpretation, application, and enforcement of this provision are not subject to the Dispute Resolution Process.

The school site will be housed in facilities that have received state Fire Marshal approval and that have been evaluated by a qualified structural engineer who has determined that the facilities present no substantial seismic safety hazard, and that the school will maintain appropriate facility compliance documents on file. The School agrees to test sprinkler systems, fire extinguishers, and fire alarms annually at its facilities to ensure that they are maintained in an operable condition at all times. The School shall conduct fire drills at least twice a year.

BayTech shall occupy facilities that comply with the Asbestos requirement as cited in the Asbestos Hazard Emergency Response Act (AHERA), 40CFR part 763. AHERA requires that any building leased or acquired that is to be used as a school or administrative building shall maintain an asbestos management plan.

Dependent on the facility lease requirements, BayTech will outsource all maintenance/custodial duties and operational functions including major and minor repairs, pest control, landscaping and gardening to vendors qualified to perform

such functions.

6.2 AUXILIARY SERVICES

School administrative staff will conduct annual reviews to ensure all applicable auxiliary services are safe (food services, transportation, custodial services, hazardous materials) by developing appropriate policies and awareness training.

6.3 IMMUNIZATIONS AND TUBERCULOSIS TESTING

All enrolling students and staff will provide records documenting immunizations to the extent required for enrollment in non-charter public schools pursuant to Health and Safety Code Sections 120325-120375 and Title 17, California Regulations Section 6000-6075. Records of student immunizations shall be maintained. BayTech will follow education Code Section 49406 with regard to tuberculosis testing.

6.4 PRESCRIPTION MEDICATIONS

Students requiring prescription medications and other medicines during school hours will be accommodated as per Education Code Section 49423. Parents must bring medication to the office in the original containers, with the name of the prescribing physician, the name of the student, and dispensing instructions. Parents will complete the appropriate form authorizing school staff to administer medication. Designated staff will put medications in a locked cabinet or refrigerator as needed for medications requiring refrigeration. Designated staff will log times for administering medications for each student and will establish a tickler system to ensure that medications are dispensed at the appropriate times. Designated staff will call students to receive medications at the appropriate times. In cases where medications are long-term prescriptions, designated staff will provide parents with one week's notice to alert them that additional medication is needed.

6.5 VISION, HEARING, AND SCOLIOSIS SCREENING

Students will be screened for vision, hearing and scoliosis. The Charter School will adhere to Education Code Section 49450, et seq., as applicable to the grade levels served by the school.

6.6 DIABETES

BayTech will provide an information sheet regarding type 2 diabetes to the parent or guardian of incoming 7th grade students. The information sheet shall include, but shall not be limited to, all of the following:

1. A description of type 2 diabetes.
2. A description of the risk factors and warning signs associated with type 2 diabetes.
3. A recommendation that students displaying or possibly suffering from risk factors or warning signs associated with type 2 diabetes should be screened for type 2 diabetes.
4. A description of treatments and prevention of methods of type 2 diabetes.
5. A description of the different types of diabetes screening tests available.

6.7 BLOOD BORNE PATHOGENS

BayTech shall meet state and federal standards for dealing with blood borne pathogens and other potentially infectious materials in the work place. The Board shall establish a written infectious control plan designed to protect employees and students from possible infection due to contact with blood borne viruses, including human immunodeficiency virus

("HIV") and hepatitis B virus ("HBV").

Whenever exposed to blood or other bodily fluids through injury or accident, staff and students shall follow the latest medical protocol for disinfecting procedures.

6.8 EMERGENCY SITUATIONS

BayTech shall utilize its School Safety Plan in responding to emergency situations. The School will ensure that the staff has been trained in health, safety, and emergency procedures. Staff will receive internal memos regarding relevant health and safety issues. Schoolwide drills in preparation for fires, earthquakes, intruders on campus, or other emergency/disaster situations will be conducted at regular intervals throughout the year. The School will create and maintain a record of each drill. Additionally, important safety and health topics will be addressed in the School's newsletter.

6.8.1 Fire Drills

BayTech shall conduct fire drills at least twice a year. The Office will maintain a record of each drill conducted with the amount of time it takes for complete evacuation.

Whenever the alarm is given, all students, teachers and other employees shall quickly leave the building in an orderly manner. Teachers shall ascertain that no student remains in the building. Designated evacuation routes shall be posted in each room. Teachers shall be prepared to select alternate exits and direct their classes to these exits in the event the designated evacuation route is blocked.

Students are to remain with their teacher in the evacuation area. Teachers shall take their roll to ensure that all students are accounted for and be prepared to identify missing students to the office staff and the administrators. Students will remain with their teachers at the designated evacuation area until the administrative staff gives the "all clear" signal. In a successful fire drill, orderly evacuation begins immediately and is completed within five minutes of the initial alarm. The students and staff will then return to their appropriate classrooms and the teachers will take roll once more. Missing students will be reported to the attendance office.

6.8.2 Earthquake and Other Disaster Drills

BayTech shall conduct bimonthly disaster drills to prepare students and staff for any seismic activity and other disasters. The practice drills include the "duck, hold, cover" procedure. A disaster drill commencing with the "duck, hold, cover" procedure will be initiated by an announcement over the intercom. Students and staff will hear, "This is an emergency drill. Duck, hold, and cover." Teachers will then turn off the lights and have students get under a desk/table or against the wall away from the windows. Students are to remain quiet and orderly so they will be able to hear additional instructions when given. All drills will be concluded with an "all clear" announcement on the intercom, or a visible signal from the administrative staff.

In the case of a real earthquake, everyone must engage in the "duck, hold, cover" procedure immediately and remain in position until the teacher determines that it is safe to leave the building. If remaining in the room becomes dangerous, or when the shaking stops, teachers will proceed with their students to the evacuation site or another safety zone. If students are on the playground or other outdoor area when a disaster drill is called or during an actual earthquake, students are to drop immediately to the ground, away from trees and power lines, and cover their heads with their hands. They are to remain in that position until given additional instructions.

In the case of disasters other than earthquakes, the administrative staff will contact each room, advise staff of potential dangers, and give further directions or orders. Teachers and students will remain in their classrooms until instructions are received for an "all clear" or an evacuation. For safety purposes, no one is to leave the rooms. If there has been a chemical spill, the teacher must make sure that all doors, windows, and vents remain closed. The school site maintenance staff will turn off the gas. All unassigned staff will report to the office for assignments such as searching offices, bathrooms, and all other common areas, including outdoor facilities.

Teachers will stay with their classes for the duration of the emergency. In the event of an earthquake or other natural disaster, all school employees are immediately designated "Civil Defense Workers" and are not allowed to leave school until they are given official clearance to do so by the administrative staff.

BayTech has prepared general classroom safety rules to help make classrooms safer in the event of serious seismic activity. This list of rules advises teachers, for example, to have their emergency clipboards readily available near the entrance/exit to their classrooms, instructs teachers and staff not to store heavy objects on top of cabinets, exits and ways of travel are to be kept free of obstructions and have their earthquake buckets at a visible location in the classroom. BayTech also participates in the Great California ShakeOut, a statewide program that helps people and organizations prepare for major earthquakes, and also practice how to respond when they happen.

6.8.3 Bomb Threats

Every person receiving the call must understand the importance of a calm and reasonable action when a bomb threat is received. Information obtained by that person might be of great importance. Therefore, the person receiving the threat will get as much information as possible from the caller. This includes the time of the day, wording of the message, background noises, quality of the voice and information about where the bomb is, what time it will go off, etc. The person receiving the threat should delay the caller as long as possible while s/he alerts another adult to the crisis. That adult will immediately notify the telephone company to trace the call and immediately thereafter notify the police via 911.

Based on the information at hand, the administrative staff will make a decision whether an immediate evacuation is warranted. If so, the evacuation code word "safe school drill" will be given over the intercom and evacuation procedures will be followed. The office staff will coordinate information requests from/to law enforcement, the telephone company, and the parents/guardians. If an immediate evacuation is not warranted, the administrative staff will notify teachers to inspect their room for any suspicious materials or unknown packages without alarming students. All unassigned staff will report to the office for assignments such as searching offices, bathrooms, and all other common areas including outdoor facilities.

6.8.4 Evacuation Plan

A disaster of a significant nature may require the evacuation of the school. Immediately upon notification by outside authorities that the school must be evacuated, the administrative staff will verify the name and position of the person placing the alert. Once the source is confirmed, the administrative staff will give the evacuation code word "safe school drill" over the intercom. Teachers will proceed with their students to the nearest school exit indicated on the evacuation map posted for this purpose. Before leaving the room, teachers will make sure they have their emergency clipboards that include class attendance rosters with them. Students who are not in a classroom at the time the intercom signal is given will attach themselves to the nearest teacher exiting the building for purposes of getting to the designated evacuation site. Prior to evacuation, offices, bathrooms, and all other common areas, including outdoor facilities, will be searched by unassigned staff members designated by the administrative staff.

Once at the designated evacuation site, teachers and other staff will ensure that all students find their respective teachers. Teachers will then take roll to ensure that all students are accounted for. The names of any missing students will be given to the office personnel and an individual will be assigned the task of finding any missing students. Teachers will work together to take care of students with injuries, respiratory problems, or other medical conditions.

Teachers will stay with their classes for the duration of the emergency. In the event of an evacuation, all school employees are immediately designated "Civil Defense Workers" and are not allowed to leave school until they are given official clearance to do so by the administrative staff.

Students will remain with their teachers at the designated evacuation site until the administrative staff gives the "all clear" signal. In the event students cannot return to the school site, the administrative staff will notify parents and/or the media as to where students can be picked up. The office personnel will sign out students as they are being picked up by a parent or other adult listed on the emergency information card. Parents will be asked to remain in a designated area, and students will be escorted to the designated area for release.

6.9 DRUG FREE/ALCOHOL FREE/SMOKE FREE ENVIRONMENT

BayTech shall function as a drug, alcohol and tobacco free workplace.

6.10 CRIMINAL BACKGROUND CHECKS

Each employee and contractor of the school will submit to a criminal background check and furnish a criminal record summary as required by Education Code Section 44237 and 45125.1. Employees and contractors will submit fingerprints to the Department of Justice via LiveScan processing. Employees will not start working until results are received from the Department of Justice and they are cleared to begin work. The Principal shall monitor compliance with this policy and report to the Board on a regular basis. The Board shall monitor the fingerprinting and background clearance of the Principal. Volunteers who will volunteer outside of the direct supervision of a credentialed employee shall be fingerprinted and receive background clearance prior to volunteering without the direct supervision of a credentialed employee.

6.11 COMPREHENSIVE SEXUAL HARASSMENT POLICIES AND PROCEDURES

BayTech is committed to providing a school that is free from sexual harassment, as well as any harassment based upon such factors as race, religion, creed, color, national origin, ancestry, age, medical condition, marital status, sexual orientation, or disability. BayTech has developed a comprehensive policy to prevent and immediately remediate any concerns about sexual discrimination or harassment at the Charter School (including employee to employee, employee to student, and student to employee misconduct).

6.12 CHILD ABUSE REPORTING

BayTech will adhere to the requirements of California Penal Code Section 11166 regarding child abuse reporting. BayTech staff must report to the proper authorities if they suspect the following occurring to a student:

- Sexual assault
- Neglect
- Willful cruelty or unjustifiable punishment
- Cruel or inhuman corporal punishment or injury
- Abuse in out-of-home care

The reporting person need only to "reasonably suspect" that abuse or neglect has occurred. The reporting person does not have to prove abuse.

The Principal will work with all faculty and staff members to make sure all appropriate steps are taken if a child abuse situation occurs. All faculty and staff will understand that it is their duty and responsibility to report any suspicions of child abuse. Staff will understand that under California law, failure to report an incident of known or reasonably suspected child abuse or neglect is guilty of a misdemeanor punishable by up to six months confinement in a county jail or by a fine of one thousand dollars (\$1,000) or by both. Staff will not be made to investigate any incident, only report to the Principal and/or proper authorities.

All suspected cases of child abuse will be brought to the Principal and/or proper authorities. A written report of the situation will be completed and the Department of Child Support Services will be immediately notified. If necessary, the Police Department will be informed of the situation as well. The reporting person will be responsible for providing all the necessary information and child abuse reports to the Department of Children Services and/or the Police Department since he/she will be most knowledgeable of the situation.

Should it be necessary to remove the child from school, BayTech staff will obtain the contact information of the agency person removing the child. This information will be placed in the student's record and be available to the parent /guardian.

6.13 WORKPLACE SAFETY

All employees are responsible for their own safety, as well as that of others in the workplace. BayTech will rely upon its employees to ensure that work areas are kept safe and free of hazardous conditions. Employees will report any unsafe conditions or potential hazards to their supervisor immediately. If an employee suspects a concealed danger is present on the school premises, or in a product, facility, piece of equipment, process, or business practice for which BayTech is responsible, the employee will bring it to the attention of their supervisor or Principal immediately. Supervisors will arrange for the correction of any unsafe condition or concealed danger immediately and will contact the Principal the problem.

Employees will be encouraged to report any workplace injury, accident, to their supervisor as soon as possible, regardless of the severity of the injury or accident. If medical attention is required immediately, supervisors will assist employees in obtaining medical care, after which the details of the injury or accident must be reported.

On a periodic basis BayTech will issue rules and guidelines governing workplace safety and health in its employee handbook. All employees will familiarize themselves with the rules and guidelines, as strict compliance will be expected. Failure to comply with rules and guidelines regarding health and safety or work performance as described in BayTech's employee handbook will not be tolerated.

6.14 INSURANCE

BayTech will secure and maintain general liability, workers compensation, and other necessary insurance coverage as required by the District.

ELEMENT 7: RACIAL AND ETHNIC BALANCE

Governing Law: The means by which the school will achieve a racial and ethnic balance among its pupils that is reflective of the general population residing within the territorial jurisdiction of the school district to which the charter petition is submitted. Education Code Section 47605(b)(5)(G).

BayTech implements a special recruitment process to achieve racial and ethnic balance among its students that reflects the general population residing in the geographic boundaries of the District. This process involves the following:

- Hold discussions and distribute application materials at places where diverse populations may be reached, including community centers, neighborhood meeting areas, and existing schools;
- Distribute materials in English and Spanish to reach the limited English proficient populations that exist in the target area;
- Employ bilingual individuals who specialize in public relations with underrepresented communities and neighborhoods;
- Host Open Houses and provide tours of the school;
- Monthly or biweekly public presentations;
- All means of advertising will be used, such as electronic media, flyers, and direct mail.
- Distributing flyers at playgrounds, recreation centers and/or sports clubs in our neighborhood;
- Direct mailing to the parents/guardians who have 5th and 6th grade children.

BayTech will maintain an accurate accounting of the ethnic and racial balance of students enrolled in the school. Such data may drive additional recruitment measures should the data indicate that the racial and ethnic distribution is not reflective of the surrounding communities. BayTech will also document the efforts made to achieve racial and ethnic balance in accordance with the charter petition and standards of charter legislation.

ELEMENT 8: ADMISSION REQUIREMENTS

Governing Law: Admission requirements, of the charter school, if applicable. Education Code Section 47605(b)(5)(H).

BayTech will comply with all applicable state laws pertaining to student admission and enrollment including California Education Section Code 47605(b) and 47605(d). BayTech will admit all students residing in California who wish to attend on a space-available basis as outlined in Education Code 47605(d)(2).

BayTech will be nonsectarian in its programs, admission policies, and all other operations, and will not charge tuition nor discriminate against any pupil on the basis of the characteristics listed in Section 220 (actual or perceived disability, gender, nationality, race or ethnicity, religion, sexual orientation, or any other characteristic that is contained in the definition of hate crimes set forth in Section 422.55 of the Penal Code or association with an individual who has any of the aforementioned characteristics). Student diversity is expected to reflect the ethnic and racial balance of people residing within the territorial jurisdiction of OUSD. There is no district residency requirement for the student or for the student's parent or guardian.

BayTech will not enroll pupils over 19 years of age unless they have been continuously enrolled in public school upon turning age 19 and making satisfactory progress toward high school diploma requirements and are not more than 22 years of age. BayTech will not require any pupil to attend the charter school. BayTech will adhere to the provisions of the McKinney-Vento Homeless Assistance Act and ensure that each child of a homeless individual and each homeless youth has equal access to the same free, appropriate public education as provided to other children and youths.

A written admissions application is required for each student. A student's IEP will never be required prior to participation in any enrollment lottery or as a condition for enrollment. An open application period will be publicly announced each year. The school will include specific information in its outreach materials, on the school website, at community meetings and open forums notifying parents of the school's open application period and lottery dates as well as the District's contact information to access additional information regarding enrollment. As part of the Fall Information Update, BayTech will notify the District in writing of the application deadline and proposed lottery date. BayTech will ensure that all application materials will reference these dates as well as provide complete information regarding application procedures, key dates, and admissions preferences and requirements consistent with approved charter.

Parents/guardians will be encouraged to either attend BayTech workshops or meet with a designated BayTech staff or faculty member before admission to learn about the school mission, teaching philosophy, and how parents can contribute to the school. In these meetings and workshops, our staff will explain the expectations from the parents at home to enable their students to comply with the school schedule and homework requirements, as well as how parents will participate in the activities of subcommittees that help operate the school.

8.1 INFORMING PARENTS ABOUT THE ENROLLMENT LOTTERY

BayTech shall admit all pupils who wish to attend the school. However, if the number of pupils who wish to attend the charter school exceeds the school's capacity, attendance, except for existing pupils of the charter school, shall be determined by a public random drawing. The public random drawing ("lottery") will take place within 30 days of the closing of the open application period. The school will choose a date and time (preferably on the weekend or on a

weekday evening) so that most interested parties will be able to attend.

The school will inform parents of all applicants and all interested parties of the rules to be followed during the lottery process, location, date and time of the lottery through various media outlets prior to the lottery date. The lottery will be held at the school site if the school facility can accommodate all interested parties. Otherwise, the school will secure a meeting room that is large enough to accommodate all parties and to allow them observe the lottery.

8.2 LOTTERY PROCEDURE

Enrollment preferences in the case of a lottery will be given in the following order:

1. Siblings of existing students
2. Children of employees or board members of BayTech
3. Students residing in District boundaries
4. All other students permitted by law

In the lottery, all names are drawn and listed in order, separately, for each grade level. Once the school capacity is met, the remaining students' names will continue to be drawn randomly and placed in the order they are drawn on the waiting list. The students who do not apply in the open enrollment period are added to the end of the waiting list in the order they applied. All waiting lists expire annually at the end of the formal academic year, or as otherwise determined by the Board of Directors. BayTech will maintain auditable records of the above activities.

BayTech will invite District representatives as official observers of the lottery to verify the lottery procedures are fairly executed. The lottery will be video-recorded and the School will keep documents in record including a written statement signed by the principal that identifies the procedures used, details of the event, lists of all applicants and applicants who secured a spot at the School through the lottery.

8.3 NOTIFICATIONS OF ADMISSION STATUS

Notifications of admission status will be mailed to all applicants. Enrollment packets will be sent to admitted students; students not admitted will be informed of their waiting list priority number as determined by the admissions lottery or application order.

If the enrollment packets are not returned within 10 business days from the date of postage, then admission for that student is forfeited, and an admission notice will be mailed to the next student on the waiting list. In addition, the School shall attempt on at least two separate occasions to contact the parents/guardians of promoted students by telephone. Those families not returning the enrollment packets within the 10-day period forfeit their right to enroll their student in the School for that school year, and an admission notice will be mailed to the next student on the waiting list.

ELEMENT 9: ANNUAL FINANCIAL AUDITS

Governing Law: The manner in which annual, independent financial audits shall be conducted, which shall employ generally accepted accounting principles, and the manner in which audit exceptions and deficiencies shall be resolved to the satisfaction of the chartering authority. Education Code Section 47605(b)(5)(I).

Each fiscal year, an independent The Board contracts and oversees the preparation and completion of an annual audit of the school's financial affairs. WE retains independent auditors with educational audit experience. The audit is conducted in accordance with generally accepted accounting principles applicable to the school. To the extent required under applicable federal law, the audit scope is expanded to include items and processes specified in any applicable Office of Management and Budget Circulars. WE reviews any audit exceptions or deficiencies and report to the Board with recommendations and a timeline no longer than 90 days to resolve them.

These financial audits are conducted by a qualified Certified Public Accountant familiar with school finances and operations. The audit verifies the accuracy of the school's financial statements, revenue-related data collection and reporting practices and reviews the school's internal controls. The audit also includes a review of ADA reported by BayTech. Moreover, the audits assure that the school's funds are being handled responsibly. Within 14 days, audit exceptions and deficiencies shall be resolved in a meeting with the auditor and/or the District financial office to the satisfaction of the auditing agency and the results are reported to OUSD. The audit is completed and submitted to OUSD, Alameda County Office of Education, the State Controller's Office the California Department of Education, and the State Board of Education by December 15 following each school year. BayTech provides interim financial data required by the District to fulfill its obligation to the county and state.

BayTech will receive funding pursuant to California Education Code Sections 47630-47635 and all applicable education codes and chooses to receive the funds directly from the State to be deposited into its own account at the County Treasury. Any funds due to the school will flow to the school according to the schedules outlined in the appropriate Education Code sections.

9.1 BUDGETS

In Appendix E1, "Proposed Budget and Cash Flow," please find the following:

- Projected operational budgets for five years of operation
- Cash flow projections for three years of operation

These documents are based upon the best data available to the Petitioners at this time.

9.2 FINANCIAL REPORTS

BayTech guarantees to provide reports required by the OUSD as outlined below.

- CBEDS (California Basic Educational Data System)
- ADA (Average Daily Attendance) reports
- SARC (School Accountability Report Card)

Copies of annual, independent financial audits employing generally accepted accounting principles shall be presented to the District no later than December 15 following the close of the school year.

In order to ensure the necessary oversight and review of mandated reports for which the authorizer must determine fiscal health and sustainability, the following schedule of reporting deadline to the District will apply each year of the term of this charter:

- September 1 – Final Unaudited Financial Report for Prior Year
- December 1 – Final Audited Financial Report for Prior Year
- December 1 – First Interim Financial Report for Current Year
- March 1 – Second Interim Financial Report for Current Year
- June 15 – Preliminary Budget for Subsequent Year

9.3 ACCOUNTABILITY

To the extent that BayTech is a recipient of federal funds, including federal Title I, Part A funds, BayTech has agreed to meet all of the programmatic, fiscal and other regulatory requirements of the No Child Left Behind Act (NCLB) and other applicable federal grant programs. BayTech agrees that it will keep and make available to the District any documentation necessary to demonstrate compliance with the requirements of NCLB and other applicable federal programs, including, but not limited to, documentation related to required parental notifications, appropriate credentialing of teaching and paraprofessional staff, where applicable, or any other mandated federal program requirement. The mandated requirements of NCLB include, but are not limited to, the following:

- Notify parents at the beginning of each school year of their “right to know” the professional qualifications of their child’s classroom teacher including a timely notice to each individual parent that the parent’s child has been assigned, or taught for four or more consecutive weeks by, a teacher who is not highly qualified
- Develop jointly with, and distribute to, parents of participating children, a school-parent compact
- Hold an annual Title I meeting for parents of participating Title I students
- Develop jointly with, agree on with, and distribute to, parents of participating children a written parent involvement policy.

BayTech also understands that as part of its oversight of the school, the Office of Charter Schools may conduct program review of federal and state compliance issues.

ELEMENT 10: SUSPENSION AND EXPULSION

Governing Law: The procedures by which pupils can be suspended or expelled. Education Code Section 47605(b)(5)(J).

The following is the suspension and expulsion policy that will be followed by BayTech:

This Student Suspension and Expulsion Policy has been established in order to promote learning and protect the safety and well-being of all students at BayTech. When the policy is violated, it may be necessary to suspend or expel a student from regular classroom instruction. This policy shall serve as BayTech's policy and procedures for student suspension and expulsion, and it may be amended from time to time without the need to amend the charter so long as the amendments comport with legal requirements.

Staff shall enforce disciplinary rules and procedures fairly and consistently among all students. This Policy and its Procedures will clearly describe discipline expectations, and it will be printed and distributed as part of the Student Handbook which is sent to each student at the beginning of the school year. The BayTech administration shall ensure that students and their parents/guardians are notified in writing upon enrollment of all discipline policies and procedures.

Discipline includes but is not limited to advising and counseling students, conferring with parents/guardians, detention during and after school hours, use of alternative educational environments, suspension and expulsion.

Corporal punishment shall not be used as a disciplinary measure against any student. Corporal punishment includes the willful infliction of or willfully causing the infliction of physical pain on a student. For purposes of the Policy, corporal punishment does not include an employee's use of force that is reasonable and necessary to protect the employee, students, staff or other persons or to prevent damage to school property.

Suspended or expelled students shall be excluded from all school and school-related activities unless otherwise agreed during the period of suspension or expulsion.

A student identified as an individual with disabilities or for whom BayTech has a basis of knowledge of a suspected disability pursuant to the Individuals with Disabilities Education Improvement Act of 2004 ("IDEIA") or who is qualified for services under Section 504 of the Rehabilitation Act of 1973 ("Section 504") is subject to the same grounds for suspension and expulsion and is accorded the same due process procedures applicable to regular education students except when federal and state law mandates additional or different procedures. BayTech will follow all applicable federal and state laws when imposing any form of discipline on a student identified as an individual with disabilities or for whom BayTech has a basis of knowledge of a suspected disability or who is otherwise qualified for such services or protections in according due process to such students.

10.1 PROGRESSIVE POSITIVE DISCIPLINE

Positive student behavior and improvements will be acknowledged and encouraged. Teachers will not only report discipline issues on the school information system, CoolSIS, but also positive behaviors and accomplishments. Parents will also be informed of positive behavior and improvements via phone, email, and home visits. Students will receive certificates and/or rewards for outstanding performance and behaviors.

10.2 GROUNDS FOR SUSPENSION AND EXPULSION OF STUDENTS

A student may be suspended or expelled for prohibited misconduct if the act is (1) related to school activity; (2) school

attendance occurring at BayTech or at any other school; or (3) a BayTech sponsored event. A student may be suspended or expelled for acts that are enumerated below and related to school activity or attendance that occur at any time, including, but not limited to, and of the following:

- a) while on school grounds;
- b) while going to or coming from school;
- c) during the lunch period, whether on or off the school campus; or
- d) during, going to, or coming from a school-sponsored activity.

10.3 ENUMERATED OFFENSES

Students may be suspended or expelled for any of the following acts when it is determined the student:

1. Caused, attempted to cause, or threatened to cause physical injury to another person.
2. Willfully used force of violence upon the person of another, except self-defense.
3. Possessed, sold, or otherwise furnished any firearm, knife, explosive, or other dangerous object unless, in the case of possession of any object of this type, the students had obtained written permission to possess the item from a certificated school employee, with the Principal or designee's concurrence.
4. Unlawfully possessed, used, sold or otherwise furnished, or was under the influence of any controlled substance, as defined in Health and Safety Code Sections 11053-11058, alcoholic beverage, or intoxicant of any kind.
5. Unlawfully offered, arranged, or negotiated to sell any controlled substance as defined in Health and Safety Code Sections 11053-11058, alcoholic beverage or intoxicant of any kind, and then sold, delivered or otherwise furnished to any person another liquid substance or material and represented same as controlled substance, alcoholic beverage or intoxicant.
6. Committed or attempted to commit robbery or extortion.
7. Caused or attempted to cause damage to school property or private property.
8. Stole or attempted to steal school property or private property.
9. Possessed or used tobacco or products containing tobacco or nicotine products, including but not limited to cigars, cigarettes, miniature cigars, clove cigarettes, smokeless tobacco, snuff, chew packets and betel. This section does not prohibit the use of his or her own prescription products by a student.
10. Committed an obscene act or engaged in habitual profanity or vulgarity.
11. Unlawfully possessed or unlawfully offered, arranged, or negotiated to sell any drug paraphernalia, as defined in Health and Safety Code Section 11014.5.
12. Disrupted school activities or otherwise willfully defied the valid authority of supervisors, teachers, administrators, other school officials, or other school personnel engaged in the performance of their duties.
13. Knowingly received stolen school property or private property.
14. Possessed an imitation firearm, i.e.: a replica of a firearm that is so substantially similar in physical properties to an existing firearm as to lead a reasonable person to conclude that the replica is a firearm.

15. Committed or attempted to commit a sexual assault as defined in Penal Code Sections 261, 266c, 286, 288, 288a or 289, or committed a sexual battery as defined in Penal Code Section 243.4.
16. Harassed, threatened, or intimidated a student who is a complaining witness or witness in a school disciplinary proceeding for the purpose of preventing that student from being a witness and/or retaliating against that student for being a witness.
17. Unlawfully offered, arranged to sell, negotiated to sell, or sold the prescription drug Soma.
18. Engaged in, or attempted to engage in hazing. For the purposes of this subdivision, "hazing" means a method of initiation or pre-initiation into a student organization or body, whether or not the organization or body is officially recognized by an educational institution, which is likely to cause serious bodily injury or personal degradation or disgrace resulting in physical or mental harm to a former, current, or prospective student. For purposes of this section, "hazing" does not include athletic events or school-sanctioned events.
19. Made terrorist threats against school officials and/or school property. For purposes of this section, "terroristic threat" shall include any statement, whether written or oral, by a person who willfully threatens to commit a crime which will result in death, great bodily injury to another person, or property damage in excess of one thousand dollars (\$1,000), with the specific intent that the statement is to be taken as a threat, even if there is no intent of actually carrying it out, which, on its face and under the circumstances in which it is made, is so unequivocal, unconditional, immediate, and specific as to convey to the person threatened, a gravity of purpose and an immediate prospect of execution of the threat, and thereby causes that person reasonably to be in sustained fear for his or her own safety or for his or her immediate family's safety, or for the protection of school property, or the personal property of the person threatened or his or her immediate family.
20. Committed sexual harassment, as defined in Education Code Section 212.5. For the purposes of this section, the conduct described in Section 212.5 must be considered by a reasonable person of the same gender as the victim to be sufficiently severe or pervasive to have a negative impact upon the individual's academic performance or to create an intimidating, hostile, or offensive educational environment. This section shall apply to students in any of grades 4 to 12, inclusive.
21. Caused, attempted to cause, threaten to cause or participated in an act of hate violence, as defined in subdivision (e) of Section 233 of the Education Code. This section shall apply to students in any of grades 4 to 12, inclusive.
22. Intentionally harassed, threatened or intimidated a student or group of students to the extent of having the actual and reasonably expected effect of materially disrupting class work, creating substantial disorder and invading student rights by creating an intimidating or hostile educational environment. This section shall apply to students in any of grades 4 to 12, inclusive.

Alternatives to suspension or expulsion will first be attempted with students who are truant, tardy, or otherwise absent from assigned school activities.

10.4 SUSPENSION PROCEDURE

Suspensions shall be initiated according to the following procedures:

10.4.1 Conference

Suspension shall be preceded, if possible, by a conference conducted by the Principal or the Principal's designee with the

student and his or her parent and, whenever practical, the teacher, supervisor or school employee who referred the student to the Principal. The conference may be omitted if the Principal or designee determines that an emergency situation exists. An "emergency situation" involves a clear and present danger to the lives, safety or health of students or school personnel. If a student is suspended without this conference, both the parent/guardian and student shall be notified of the student's right to return to school for the purpose of a conference.

At the conference, the student shall be informed of the reason for the disciplinary action and the evidence against him or her and shall be given the opportunity to present his or her version and evidence in his or her defense.

This conference shall be held within two school days, unless the student waives this right or is physically unable to attend for any reason including, but not limited to, incarceration or hospitalization.

No penalties may be imposed on a student for failure of the student's parent or guardian to attend a conference with school officials. Reinstatement of the suspended student shall not be contingent upon attendance by the student's parent or guardian at the conference.

10.4.2 Notice to Parents/Guardians

At the time of suspension, the Principal or designee shall make a reasonable effort to contact the parent/guardian by telephone or in person. Whenever a student is suspended, the parent/guardian shall be notified in writing of the suspension and the date of return following suspension. This notice shall state the specific offense committed by the student. In addition, the notice may also state the date and time when the student may return to school. If school officials wish to ask the parent/guardian to confer regarding matters pertinent to the suspension, the notice may request that the parent/guardian respond to such requests without delay.

10.4.3 Suspension Time Limits/Recommendation for Placement/Expulsion

Suspensions, when not including a recommendation for expulsion, shall not exceed five (5) consecutive school days per suspension.

Upon a recommendation of Placement/Expulsion by the Principal or Principal's designee, the student and the student's guardian or representative will be invited to a conference to determine if the suspension for the student should be extended pending an expulsion hearing. This determination will be made by the Principal or designee upon either of the following determinations: (1) the student's presence will be disruptive to the education process; or (2) the student poses a threat or danger to others. Upon either determination, the student's suspension will be extended pending the results of an expulsion hearing.

10.5 AUTHORITY TO EXPEL

A student may be expelled either by the Willow Education Board following a hearing before it or by the Willow Education Board upon the recommendation of an Administrative Panel to be assigned by the Willow Education Board as needed. The Administrative Panel should consist of at least three members who are certificated and neither a teacher of the student or a Board member of the Willow Education Board. The Administrative Panel may recommend expulsion of any student found to have committed an expellable offense.

10.6 EXPULSION PROCEDURES

Students recommended for expulsion are entitled to a hearing to determine whether the student should be expelled. Unless postponed for good cause, the hearing shall be held within thirty (30) school days after the Principal or designee

determines that the Student has committed an expellable offense.

In the event an administrative panel hears the case, it will make a recommendation to the Willow Education Board for a final decision whether to expel. The hearing shall be held in closed session unless the student makes a written request for a public hearing three (3) days prior to the hearing.

Written notice of the hearing shall be forwarded to the student and the student's parent/guardian at least ten (10) calendar days before the date of the hearing. Upon mailing the notice, it shall be deemed served upon the student. The notice shall include:

1. The date and place of the expulsion hearing;
2. A statement of specific facts, charges and offenses upon which the proposed expulsion is based;
3. A copy of BayTech's disciplinary rules which relate to the alleged violation;
4. Notification of the student's or parent/guardian's obligation to provide information about the student's status at the school to any other school district or school to which the student seeks enrollment;
5. The opportunity for the student or the student's parent/guardian to appear in person or to employ and be represented by counsel or a non-attorney advisor;
6. The right to inspect and obtain copies of all documents to be used at the hearing;
7. The opportunity to confront and question all witnesses who testify at the hearing;
8. The opportunity to question all evidence presented and to present oral and documentary evidence on the student's behalf including witnesses.

10.7 SPECIAL PROCEDURES FOR EXPULSION HEARINGS INVOLVING SEXUAL ASSAULT OR BATTERY OFFENSES

BayTech may, upon finding a good cause, determine that the disclosure of either the identity of the witness or the testimony of that witness at the hearing, or both, would subject the witness to an unreasonable risk of psychological or physical harm. Upon this determination, the testimony of the witness may be presented at the hearing in the form of sworn declarations which shall be examined only by the Board, administrative panel, or the hearing officer. Copies of these sworn declarations, edited to delete the name and identity of the witness, shall be made available to the student.

1. The complaining witness in any sexual assault or battery case must be provided with a copy of the applicable disciplinary rules and advised of his/her right to (a) receive five days notice of his/her scheduled testimony, (b) have up to two (2) adult support persons of his/her choosing present in the hearing at the time he/she testifies, which may include a parent, guardian, or legal counsel, and (c) elect to have the hearing closed while testifying.
2. BayTech must also provide the victim a room separate from the hearing room for the complaining witness' use prior to and during breaks in testimony.
3. At the discretion of the person or panel conducting the hearing, the complaining witness shall be allowed periods of relief from examination and cross-examination during which he or she may leave the hearing room.

4. The person conducting the expulsion hearing may also arrange the seating within the hearing room to facilitate a less intimidating environment for the complaining witness.
5. The person conducting the expulsion hearing may also limit time for taking the testimony of the complaining witness to the hours he/she is normally in school, if there is no good cause to take the testimony during other hours.
6. Prior to a complaining witness testifying, the support persons must be admonished that the hearing is confidential. Nothing in the law precludes the person presiding over the hearing from removing a support person whom the presiding person finds is disrupting the hearing. The person conducting the hearing may permit any one of the support persons for the complaining witness to accompany him or her to the witness stand.
7. If one or both of the support persons is also a witness, BayTech must present evidence that the witness' presence is both desired by the witness and will be helpful to BayTech. The person presiding over the hearing shall permit the witness to stay unless it is established that there is a substantial risk that the testimony of the complaining witness would be influenced by the support person, in which case the presiding official shall admonish the support person or persons not to prompt, sway, or influence the witness in any way. Nothing shall preclude the presiding officer from exercising his or her discretion to remove a person from the hearing whom he or she believes is prompting, swaying, or influencing the witness.
8. The testimony of the support person shall be presented before the testimony of the complaining witness and the complaining witness shall be excluded from the courtroom during that testimony.
9. Especially for charges involving sexual assault or battery, if the hearing is to be conducted in the public at the request of the student being expelled, the complaining witness shall have the right to have his/her testimony heard in a closed session when testifying at a public meeting would threaten serious psychological harm to the complaining witness and there are not alternative procedures to avoid the threatened harm. The alternative procedures may include videotaped depositions or contemporaneous examination in another place communicated to the hearing by means of closed-circuit television.
10. Evidence of specific instances of a complaining witness' prior sexual conduct is presumed inadmissible and shall not be heard absent a determination by the person conducting the hearing that extraordinary circumstances exist requiring the evidence be heard. Before such a determination regarding extraordinary circumstances can be made, the witness shall be provided notice and an opportunity to present opposition to the introduction of the evidence. In the hearing on the admissibility of the evidence, the complaining witness shall be entitled to be represented by a parent, legal counsel, or other support person. Reputation or opinion evidence regarding the sexual behavior of the complaining witness is not admissible for any purpose.

10.8 RECORD OF HEARING

A record of the hearing shall be made and may be maintained by any means, including electronic recording, as long as a reasonably accurate and complete written transcription of the proceedings can be made.

10.9 PRESENTATION OF EVIDENCE

While technical rules of evidence do not apply to expulsion hearings, evidence may be admitted and used as proof only if it is the kind of evidence on which reasonable persons can rely in the conduct of serious affairs. A recommendation by the Administrative Panel to expel must be supported by substantial evidence that the student committed an expellable offense.

Findings of fact shall be based solely on the evidence at the hearing. While hearsay evidence is admissible, no decision to expel shall be based solely on hearsay and sworn declarations may be admitted as testimony from witnesses of whom the Board, Panel or designee determines that disclosure of their identity or testimony at the hearing may subject them to an unreasonable risk of physical or psychological harm.

If, due to a written request by the accused student, the hearing is held at a public meeting, and the charge is committing or attempting to commit a sexual assault or committing a sexual battery as defined in Education Code Section 48900, a complaining witness shall have the right to have his or her testimony heard in a session closed to the public.

The decision of the Administrative Panel shall be in the form of written findings of fact and a written recommendation to the Willow Education Board who will make a final determination regarding the expulsion. The final decision by the Board shall be made within ten (10) school days following the conclusion of the hearing. The decision of the Board is final.

If the expulsion hearing panel decides not to recommend expulsion, the student shall immediately be returned to his/her educational program.

10.10 WRITTEN NOTICE TO EXPEL

The Principal or designee following a decision of the Board to expel shall send written notice of the decision to expel, including the Board's adopted findings of fact, to the student or parent/guardian. This notice shall also include the following:

1. Notice of the specific offense committed by the student
2. Notice of the student's or parent/guardian's obligation to inform any new district in which the student seeks to enroll of the student's status with BayTech.

The Principal or designee shall send a copy of the written notice of the decision to expel to the student's district of residence. This notice shall include the following:

1. The student's name
2. The specific expellable offense committed by the student

10.11 DISCIPLINARY RECORDS

BayTech shall maintain records of all student suspensions and expulsions at BayTech. Such records shall be made available to the District upon request.

10.12 NO RIGHT TO APPEAL

The student shall have no right of appeal from expulsion from BayTech as the Board decision to expel shall be final.

10.13 EXPELLED STUDENTS/ALTERNATIVE EDUCATION

Students who are expelled shall be responsible for seeking alternative education programs including, but not limited to,

programs within the County or their school district of residence.

BayTech shall notify, within 30 days, the superintendent of the school district of any pupil who is expelled or leaves BayTech without graduating or completing the school year for any reason. The school district notified shall be determined by the pupil's last known address. BayTech shall, upon request, provide that school district with a copy of the cumulative record of the pupil, including a transcript of grades or report card and health information, pursuant to Education Code Section 47605(d)(3).

10.14 REHABILITATION PLANS

Students who are expelled from BayTech shall be given a rehabilitation plan upon expulsion as developed by the Board at the time of the expulsion order, which may include, but is not limited to, periodic review as well as assessment at the time of review for readmission. The rehabilitation plan should include a date not later than one (1) year from the date of expulsion when the student may reapply to BayTech for readmission.

10.15 READMISSION

The decision to readmit a student or to admit a previously expelled student from another school, school district or charter school shall be in the sole discretion of the Willow Education Board following a meeting with the Principal and the student and guardian or representative to determine whether the student has successfully completed the rehabilitation plan and to determine whether the student poses a threat to others or will be disruptive to the school environment. The Principal shall make a recommendation to the Board following the meeting regarding his or her determination. The student's readmission is also contingent upon BayTech's capacity at the time the student seeks readmission.

10.16 SPECIAL PROCEDURES FOR THE CONSIDERATION OF SUSPENSION AND EXPULSION OF STUDENTS WITH DISABILITIES

Services During Suspension

Students suspended for more than ten (10) school days in a school year shall continue to receive services so as to enable the student to continue to participate in the general education curriculum, although in another setting, and to progress toward meeting the goals set out in the child's IEP; and receive, as appropriate, a functional behavioral assessment or functional analysis, and behavioral intervention services and modifications, that are designed to address the behavior violation so that it does not recur. These services may be provided in an interim alternative educational setting.

Procedural Safeguards/Manifestation Determination

In the case of a special education student, or a student who receives 504 accommodations, BayTech will ensure that it makes the necessary adjustments to comply with the mandates of State and federal laws, including the IDEA and Section 504 of the Rehabilitation Plan of 1973, regarding the discipline of students with disabilities. Prior to recommending expulsion for a Section 504 student or special education student, the charter administrator will convene a review committee to determine:

- (1) If the conduct in question was caused by, or had a direct and substantial relationship to, the child's disability; or
- (2) If the conduct in question was the direct result of the LEA's failure to implement the 504 plan or IEP.

If it is determined that either of the above is applicable for the child, the conduct shall be determined to be a manifestation of the child's disability.

If the review committee makes the determination that the conduct was a manifestation of the child's disability, the IEP Team shall:

- Conduct a functional behavioral assessment or a functional analysis assessment, and implement a behavioral intervention plan for such child, provided that BayTech had not conducted such assessment prior to such determination before the behavior that resulted in a change in placement;
- If a behavioral intervention plan has been developed, review the behavioral intervention plan if the child already has such a behavioral intervention plan, and modify it, as necessary, to address the behavior; and
- Return the child to the placement from which the child was removed, unless the parent and BayTech agree to a change of placement as part of the modification of the behavioral intervention plan.

If it is determined that the student's misconduct was not caused by or had direct and substantial relationship to the child's disability or the conduct in question was not a direct result of the LEA's failure to implement the 504 plan or IEP, then BayTech may apply the relevant disciplinary procedures to children with disabilities in the same manner and for the same duration as the procedures would be applied to students without disabilities.

Due Process Appeals

The parent of a child with a disability who disagrees with any decision regarding placement, or the manifestation determination, or BayTech believes that maintaining the current placement of the child is substantially likely to result in injury to the child or to others, may request an expedited administrative hearing through the Special Education Unit of the Office of Administrative Hearings.

When an appeal relating to the placement of the student or the manifestation determination has been requested by either the parent or BayTech, the student shall remain in the interim alternative educational setting pending the decision of the hearing officer or until the expiration of the forty-five (45) day time period provided for in an interim alternative educational setting, whichever occurs first, unless the parent and BayTech agree otherwise.

Special Circumstances

BayTech personnel may consider any unique circumstances on a case-by-case basis when determining whether to order a change in placement for a child with a disability who violates a code of student conduct.

The Principal or designee may remove a student to an interim alternative educational setting for not more than forty-five (45) days without regard to whether the behavior is determined to be a manifestation of the student's disability in cases where a student:

- a) Carries or possesses a weapon, as defined in 18 USC 930, to or at school, on school premises, or to or at a school function;
- b) Knowingly possesses or uses illegal drugs, or sells or solicits the sale of a controlled substance, while at school, on school premises, or at a school function; or
- c) Has inflicted serious bodily injury, as defined by 20 USC 1415(k)(7)(D), upon a person while at school, on school premises, or at a school function.

Interim Alternative Educational Setting

The student's interim alternative educational setting shall be determined by the student's IEP team.

Procedures for Students Not Yet Eligible for Special Education Services

A student who has not been identified as an individual with disabilities pursuant to IDEIA and who has violated the BayTech's disciplinary procedures may assert the procedural safeguards granted under this administrative regulation only if BayTech had knowledge that the student was disabled before the behavior occurred.

BayTech shall be deemed to have knowledge that the student had a disability if one of the following conditions exists:

a) The parent/guardian has expressed concern in writing, or orally if the parent/guardian does not know how to write or has a disability that prevents a written statement, to BayTech supervisory or administrative personnel, or to one of the child's teachers, that the student is in need of special education or related services.

b) The parent has requested an evaluation of the child.

c) The child's teacher, or other BayTech personnel, has expressed specific concerns about a pattern of behavior demonstrated by the child, directly to the director of special education or to other BayTech supervisory personnel.

If BayTech knew or should have known the student had a disability under any of the three (3) circumstances described above, the student may assert any of the protections available to IDEIA-eligible children with disabilities, including the right to stay-put.

If BayTech had no basis for knowledge of the student's disability, it shall proceed with the proposed discipline. BayTech shall conduct an expedited evaluation if requested by the parents; however the student shall remain in the education placement determined by BayTech pending the results of the evaluation.

BayTech shall not be deemed to have knowledge of that the student had a disability if the parent has not allowed an evaluation, refused services, or if the student has been evaluated and determined to not be eligible.

10.17 OUTCOME DATA

Outcome data will be maintained including suspensions, expulsions & expulsion placements and reinstatements.

ELEMENT 11: RETIREMENT PROGRAMS AND EMPLOYMENT MATTERS

Governing Law: The manner by which staff members of the charter schools will be covered by the State Teachers' Retirement System, the Public Employees' Retirement System, or federal social security. Education Code Section 47605(b)(5)(K).

11.1 RETIREMENT

All full-time teaching employees who are eligible will participate in the State Teachers' Retirement System (STRS). All full-time non-teaching employees who are eligible will participate in the Public Employees Retirement System (PERS). BayTech will make any contribution that is legally required of the employer, including STRS, PERS, social security, and unemployment insurance. All withholdings from employees and the charter school will be forwarded to the STRS and PERS funds as required. BayTech will submit all retirement data and will comply with all policies and procedures for payroll reporting. Employees will accumulate service credit years in the same manner as all other members of STRS.

The School may establish other retirement plans for employees that include, but shall not be limited to, establishment of section 403(b), 457 or 401(k) plans.

11.2 MANDATORY BENEFITS

Mandatory contributions such as workers compensation, unemployment insurance, Medicare and social security (for non-STRS employees) will be paid by the employer.

11.3 HEALTH BENEFITS

Health, dental, vision and related benefits as part of the total compensation package for each employee will be determined as part of the individual employment agreement.

11.4 WORK SCHEDULE

Work calendars, hours per week, and vacation time will be determined by individual employment agreements consistent with the applicable calendar of workdays for each position. The principal will work for the school year with appropriate vacation time as specified in the employment agreement. Teachers and teachers' assistants will work a school year comprised of 11 months, which will include professional training beyond the regular teaching schedule. The teaching staff may also be required to attend weekly staff and several parent-community meetings each school term. Office and maintenance staff will work a calendar year of 12 months with appropriate vacation time. The standard day for the non-teaching staff is 8.0 working hours.

11.5 PROCESS FOR RESOLVING COMPLAINTS/GRIEVANCES

All staff members will follow state and federal laws for reporting alleged improprieties as well as adhere to BayTech's Employee Handbook.

The following process will apply to staff members filing a complaint /grievance:

- When a problem first arises, the grievant should discuss the matter with the School principal rather than fellow employees.

- The principal will review the problem and any relating policies. If the problem cannot be resolved informally through discussion or meeting, the grievance shall be reduced to writing by the grievant and submitted to the principal. The grievant should specify the problem to the fullest extent possible and any remedies sought.
- Following any necessary investigation, the principal shall prepare a written response to the grievant no later than ten (10) working days from the date of receipt of the grievance, unless for good cause, additional time is required for the response.
- If no satisfactory solution can be reached, the grievant may request to meet with the Chief Executive Officer or his/her designee and the Principal. The request for this meeting will be written and will include any and all documentation related to the grievance along with any solutions that have been proposed by either the grievant or the principal. Any decision by the Chief Executive Officer or his/her designee shall be final.

OUSD agrees not to intervene in the dispute without the consent of the school unless the matter directly relates to one of the reasons specified in law for which a charter may be revoked.

ELEMENT 12: PUBLIC SCHOOL ATTENDANCE ALTERNATIVES

Governing Law: The public school attendance alternatives for pupils residing within the school district who choose not to attend the charter school. Education Code Section 47605(b)(5)(L).

BayTech is a school of choice and no students shall be required to attend. Pupils who choose not to attend BayTech may choose to attend other public schools in their district of residence or pursue an intra- or inter-district transfer in accordance with existing enrollment and transfer policies of the district. Parents and guardians of each student enrolled in the charter school will be informed on admissions forms that the students have no right to admission in a particular school of an local education agency as a consequence of enrollment in BayTech, except to the extent that such a right is extended by the local education agency.

ELEMENT 13: EMPLOYEE RIGHTS AND RESPONSIBILITIES

Governing Law: A description of the rights of any employee of the school district upon leaving the employment of the school district to work in a charter school, and of any rights of return to the school district after employment at a charter school. Education Code Section 47605(b)(5)(M).

Any employee of an LEA including OUSD, who leaves the employment of the LEA to work at BayTech shall only have the rights to return to the LEA, to carry over sick/vacation leave rights from BayTech back to the LEA and to continue earning service credits (tenure) at the LEA while employed by BayTech as may be specified by the LEA pursuant to its policies, applicable collective bargaining agreements and applicable law.

BayTech will hire, employ, and treat all employees on the basis of professional merits and performance-oriented monitoring and will not discriminate against any employee on the basis of race, color, creed, age, sexual orientation, national origin, disability, or marital status.

All school personnel will follow and commit to BayTech's mission and vision. All job descriptions and work schedules will be reviewed and modified as necessary to meet the needs of the school and its students. The school expects a high level of professionalism from its staff including self-monitoring of higher education development. All staff members will follow state and federal laws for reporting alleged improprieties as well as adhere to BayTech Charter School Agreement.

Job applicants for positions at BayTech will be considered through an open process, and if hired, will enter into a contractual agreement with the school. Any OUSD or other LEA employee who is offered employment and chooses to work at BayTech will not be covered by his or her respective collective bargaining unit agreement, although BayTech may extend the same protections and benefits in individual employee contracts.

Employees will not be allowed to carry over their sick/vacation rights from their previous employment to BayTech. The individual contract will address, among other issues, salary, health and welfare benefits, work schedules, sick/vacation leaves, and responsibilities, accountability measurements, and standards for performance evaluations.

ELEMENT 14: DISPUTE RESOLUTION

Governing Law: The procedures to be followed by the charter school and the entity granting the charter to resolve disputes relating to the provisions of the charter. Education Code Section 47605(b)(5)(N).

14.1 DISPUTES BETWEEN BAYTECH AND OUSD

Parents, students, Board members, volunteers, and staff at BayTech are provided with a copy of the school's policies and dispute resolution process which aims to help school community members (school administration, students, teachers, parents, partner organizations, advisors, volunteers, and community members) to resolve their disputes within the school pursuant to schools' policies in a fair and timely manner in order to minimize oversight burden on the District. However, nothing in this dispute resolution procedure shall be interpreted to impede or act as a pre-requisite or prevent the District from pursuing revocation in accordance with Education Code Section 47607.

OUSD agrees to inform the Principal of BayTech if they are contacted regarding a conflict at BayTech. In the event that OUSD receives a written complaint regarding a dispute at BayTech, OUSD will pass the complaint to the Principal and the Board of Directors.

BayTech and OUSD agree to resolve controversies, claims, or disputes cooperatively and in good faith as expeditiously as possible. BayTech and OUSD agree that BayTech will have an opportunity to present its position before any action is taken regarding a dispute, and that every effort to resolve the issue amicably will be given before any conditions are given or potential charter revocations are taken. However, BayTech understands that OUSD may visit the school at any time, and that if OUSD has a strong basis to believe that a particular infraction of the charter may cause a severe and imminent threat to the health and safety of students or staff, then OUSD may move to revoke the charter immediately.

The staff and Governing Board Members of BayTech agree to attempt to resolve all disputes between the District and BayTech regarding this charter pursuant to the terms of this section. Both will refrain from public commentary regarding any disputes until the matter has progressed through the dispute resolution process.

Any controversy or claim arising out of or relating to the charter agreement between the District and BayTech, except any controversy or claim that in any way related to revocation of this charter, shall be handled first through an informal process in accordance with the procedures set forth below.

- (1) Any controversy or claim arising out of or related to the charter agreement, except any controversy or claim that in any way related to revocation of this charter, must be put in writing ("Written Notification") by the party asserting the existence of such dispute. The Written Notification must identify the nature of the dispute and all supporting facts known to the party giving the Written Notification. The Written Notification may be tendered by personal delivery, by facsimile, or by certified mail. The Written Notification shall be deemed received (a) if personally delivered, upon date of delivery to the address of the person to receive such notice if delivered by 5:00 PM or otherwise on the business day following personal delivery; (b) if by facsimile, upon electronic confirmation of receipt; or (c) if by mail, two (2) business days after deposit in the U.S. Mail. All written notices shall be addressed as follows:

To Charter School, c/o School Director:

Bay Area Technology School
8251 Fontaine St., Oakland, CA 94605

To Coordinator, Office of Charter Schools:

Educational Center at Tilden
4551 Steele Street, Room 10
Oakland, California 94619

- (2) A written response ("Written Response") shall be tendered to the party providing the Written Notification within twenty (20) business days from the date of receipt of the Written Notification. The Written Response shall state the responding party's position on all issues stated in the Written Notification and set forth all fact which the responding party believes supports its position. The Written Response may be tendered by personal delivery, by facsimile, or by certified mail. The Written Response shall be deemed received (a) if personally delivered, upon date of delivery to the address of the person to receive such notice if delivered by 5:00 PM or otherwise on the business day following personal delivery; (b) if by facsimile, upon electronic confirmation of receipt; or (c) if by mail, two (2) business days after deposit in the U.S. Mail. The parties agree to schedule a conference to discuss the claim or controversy ("Issue Conference"). The Issue Conference shall take place within fifteen (15) business days from the date the Written Response is received by the other party.
- (3) If the controversy, claim, or dispute cannot be resolved by mutual agreement at the Issue Conference, then either party may request that the matter be resolved by mediation. Each party shall bear its own costs and expenses associated with the mediation. The mediator's fees and the administrative fees of the mediation shall be shared equally among the parties. Mediation proceedings shall commence within 60 days from the date of the Issue Conference. The parties shall mutually agree upon the selection of a mediator to resolve the controversy or claim at dispute. If no agreement on a mediator is reached within 30 days after a request to mediate, the parties will use the processes and procedures of the American Arbitration Association (AAA) to have an arbitrator appointed.
- (4) If the mediation is not successful, the parties agree that each party has exhausted its administrative remedies and shall have any such recourse available by law.

14.2 INTERNAL DISPUTES

Except those disputes between the OUSD and BayTech relating to provisions of this charter, all disputes involving BayTech will be resolved by BayTech according to its policies. Complaints to the OUSD relating to the operation of the school and not to the terms of this charter or other issues regarding the School's and the OUSD's relationship will be resolved as set forth below:

BayTech will adopt policies and processes for airing and resolving disputes.

The OUSD agrees to refer all complaints regarding operations of BayTech to the Board or the Principal of BayTech for resolution in accordance with the site's adopted policies. In the event that the site's adopted policies and processes fail to resolve the dispute, the OUSD agrees not to intervene in the dispute without the consent of BayTech unless the matter directly relates to one of the reasons specified in law for which a charter may be revoked. Notwithstanding the above, the OUSD will have the ability to intervene in and respond to complaints about the operation of OUSD as is required by law.

ELEMENT 15: EXCLUSIVE PUBLIC SCHOOL EMPLOYER

Governing Law: A declaration whether or not the charter school shall be deemed the exclusive public school employer of the employees of the charter school for the purposes of the Educational Employment Relations Act (Chapter 10.7 (commencing with Section 3540) of Division 4 of Title 1 of the Government Code). Education Code Section 47605(b)(5)(O).

Willow Education (WE) will be the exclusive public school employer of all employees of the charter school for collective bargaining purposes. As such, WE will comply with all provisions of the Educational Employment Relations Act ("EERA"), and will act independently from the OUSD for bargaining purposes. In accordance with the EERA, the employees of BayTech may organize and choose to form a collective bargaining unit under the charter school. This unit will be independent of any other bargaining unit. If the employees form such a bargaining unit, the WE Board will negotiate in good faith. Unless the employees elect to be represented by an organization for bargaining purposes, all employees will be individually contracted.

ELEMENT 16: SCHOOL CLOSURE

Governing Law: A description of the procedures to be used if the charter school closes. The procedures shall ensure a final audit of the school to determine the disposition of all assets and liabilities of the charter school, including plans for disposing of any net assets and for the maintenance and transfer of public records. Education Code Section 47605(b)(5)(P).

16.1 REVOCATION

The District may revoke the charter of BayTech in accordance with Education Code Section 47607, any successor provisions to section 47607, or other statutory provisions, if enacted after the date of the charter, regarding the revocation of charters. The District may revoke the charter of BayTech if the District finds, through a showing of substantial evidence, that the Charter School did any of the following:

- BayTech committed a material violation of any of the conditions, standards, or procedures set forth in the charter.
- BayTech failed to meet or pursue any of the pupil outcomes identified in the charter.
- BayTech failed to meet generally accepted accounting principles, or engaged in fiscal mismanagement.
- BayTech violated any provision of law.

Prior to revocation, and in accordance with Cal. Educ. Code section 47607(d) and State regulations, the OUSD Board of Education will notify BayTech in writing of the specific violation, and give BayTech a reasonable opportunity to cure the violation, unless the OUSD Board of Education determines, in writing, that the violation constitutes a severe and imminent threat to the health or safety of the pupils. Revocation proceedings are not subject to the dispute resolution clause set forth in this charter.

16.2 CLOSURE ACTION

The decision to close BayTech, either by the BayTech governing Board or by the OUSD Board of Education, will be documented in a Closure Action. The Closure Action shall be deemed to have been automatically made when any of the following occur: the charter is revoked or non-renewed by the OUSD Board of Education; the Charter School board votes to close the Charter School; or the Charter lapses.

Closure of BayTech will be documented by official action of the Board of Directors. The action will identify the reason for closure. The official action will also identify an entity and person or persons responsible for closure-related activities.

16.3 CLOSURE PROCEDURES

The Board of Directors will promptly notify the District, the Alameda County Office of Education, the School's SELPA, the retirement systems in which the School's employees participate (e.g., Public Employees' Retirement System, State Teachers' Retirement System, and federal social security), and the California Department of Education of the closure as well as the effective date of the closure. This notice will also include the name(s) of and contact information for the person(s) to whom reasonable inquiries may be made regarding the closure; the pupils' school districts of residence; and the manner in which parents (guardians) may obtain copies of pupil records, including specific information on completed courses and credits that meet graduation requirements.

The Board will ensure that the notification to the parents and students of BayTech of the closure provides information to assist parents and students in locating suitable alternative programs. This notice will be provided promptly following the Board's decision to close BayTech.

The Board will also develop a list of pupils in each grade level and the classes they have completed, together with information on the pupils' districts of residence, which they will provide to the entity responsible for closure-related activities.

As applicable, BayTech will provide parents, students and the District with copies of all appropriate student records and will otherwise assist students in transferring to their next school. All transfers of student records will be made in compliance with the Family Educational Rights and Privacy Act ("FERPA") 20 U.S.C. §1232g. BayTech will ask the District to store original records of BayTech students. All records of BayTech shall be transferred to the District upon BayTech closure. If the District will not or cannot store the records, BayTech shall work with the County Office of Education to determine a suitable alternative location for storage.

All state assessment results, special education records, and personnel records will be transferred and maintained in accordance with applicable law.

As soon as reasonably practical, BayTech will prepare final financial records. BayTech will also have an independent audit completed within six months after closure. BayTech will pay for the final audit. The audit will be prepared by a qualified Certified Public Accountant selected by BayTech and will be provided to the District promptly upon its completion. The final audit will include an accounting of all financial assets, including cash and accounts receivable and an inventory of property, equipment, and other items of material value, an accounting of the liabilities, including accounts payable and any reduction in apportionments as a result of audit findings or other investigations, loans, and unpaid staff compensation, and an assessment of the disposition of any restricted funds received by or due to the charter school.

BayTech will complete and file any annual reports required pursuant to Education Code section 47604.33.

On closure of BayTech, all assets of BayTech, including but not limited to all leaseholds, personal property, intellectual property and all ADA apportionments and other revenues generated by students attending BayTech, remain the sole property of Willow Education and shall be distributed in accordance with the Articles of Incorporation. Any assets acquired from the District or District property will be promptly returned upon BayTech closure to the District. The distribution shall include return of any grant funds and restricted categorical funds to their source in accordance with the terms of the grant or state and federal law, as appropriate, which may include submission of final expenditure reports for entitlement grants and the filing of any required Final Expenditure Reports and Final Performance Reports, as well as the return of any donated materials and property in accordance with any conditions established when the donation of such materials or property was accepted.

On closure, BayTech shall remain solely responsible for all liabilities arising from the operation of BayTech.

As BayTech is operated by a non-profit public benefit corporation, should the corporation dissolve with the closure of BayTech, the Board will follow the procedures set forth in the California Corporations Code for the dissolution of a non-profit public benefit corporation and file all necessary filings with the appropriate state and federal agencies.

BayTech will utilize the reserve fund to undertake any expenses associated with the closure procedures identified above.

ADDITIONAL REQUIREMENTS: IMPACT ON AUTHORIZER

INTENT

This statement is intended to fulfill the terms of Education Code Section 46705 (g) and provides information regarding the proposed orientation and potential effects of BayTech on the Oakland Unified School District. This is an informational document on how the school may affect the District. It does not constitute a legally binding contract or agreement, and is not intended to govern the relationship of the school and the District.

LEGAL STATUS OF SCHOOL

BayTech is constituted as a public school operated by a California nonprofit corporation, Willow Education (WE), pursuant to applicable California laws on nonprofit organizations and in accordance with the bylaws duly adopted by the incorporators.

ATTENDANCE ACCOUNTING

Attendance accounting procedures will satisfy CDE and OUSD requirements. Daily attendance will be recorded by classroom teachers. Official registers will be completed on a monthly basis, documenting the month's attendance. Required reports will be completed regarding daily attendance and submitted to the requesting agencies. BayTech is permitted to operate an independent study program and such a program is required to comply with all independent study laws and regulations pertaining to attendance accounting for independent study programs.

FACILITIES

BayTech is located at a district facility acquired through Prop 39. This facility provides an ideal setting for our needs. At this time, the school does not anticipate having any material effect on the District's facility needs.

DISTRICT OVERSIGHT

The District is required by Education Code Section 47604.32 to provide oversight. The District shall visit BayTech at least annually. The District may charge for the actual costs of supervisorial oversight of BayTech not to exceed 1% of the charter school's revenue, or the District may charge for the actual costs of supervisorial oversight of the Charter School not to exceed 3% if BayTech is able to obtain substantially rent free facilities from the District. Notwithstanding the foregoing, the District may charge the maximum supervisorial oversight fee allowed under the law as it may change from time to time.

BayTech agrees to observe and abide by the following terms and conditions as a requirement for receiving and maintaining its charter authorization:

- BayTech is subject to District oversight.
- The District's statutory oversight responsibility continues throughout the life of the charter and requires that it, among other things, monitor the fiscal condition of BayTech.
- The District is authorized to revoke this charter for, among other reasons, the failure of BayTech to meet generally accepted accounting principles or if it engages in fiscal mismanagement in accordance with Education Code Section 47607.

Accordingly, the District hereby reserves the right at District cost, pursuant to its oversight responsibility, to audit BayTech's books, records, data, processes and procedures through the Office of Charter Schools or other means. The audit may include, but is not limited to, the following areas:

- Compliance with terms and conditions prescribed in the charter,
- Internal controls, both financial and operational in nature,
- The accuracy, recording and/or reporting of school financial information,
- The school's debt structure,
- Governance policies, procedures, and history,
- The recording and reporting of attendance data,
- The school's enrollment process, suspension and expulsion procedures, and parent involvement practices,
- Compliance with safety plans and procedures, and
- Compliance with applicable grant requirements

BayTech shall cooperate fully with such audits and to make available any and all records necessary for the performance of the audit upon 30 days notice to BayTech. When 30 days notice may defeat the purpose of the audit, the District may conduct the audit upon 24 hours notice.

In addition, if an allegation of waste, fraud or abuse related to BayTech's operations is received by the District, BayTech shall be expected to cooperate with any investigation undertaken by the Office of Charter Schools, at District cost. This obligation for the District to pay for an audit only applies if the audit requested is specifically requested by the District and is not otherwise required to be completed by BayTech by law or charter provisions.

ADMINISTRATIVE SERVICES

BayTech will be responsible for all fiscal operations such as payroll, staff benefits, purchasing, contracts, accounting, student attendance bookkeeping, and financial budgeting and reporting. The school will cooperate with OUSD to report STRS data, as necessary. OUSD can require a reasonable fee for this service. For business services, WE will support BayTech with the services provided by private vendors and contractors. The related contractors will work closely with the school administration on administrative and financial matters. The WE will have the responsibility to keep the school operations within the proposed budget and apply BayTech's purchasing and contracting principles as described in this petition. WE will utilize its successful three-year experience in BayTech in these matters. The following are some of the details related to how WE plans to perform business tasks (these details may change over time): i) Payroll services are outsourced to an agency, Paychex, ii) Health benefits are negotiated and purchased by the BayTech business manager, as BayTech managed to receive health benefits for its employees at lower rates than the OUSD, iii) WE appointed financial committee is responsible for certain aspects of other major school services such as the lunch program and its compatibility and compliance with the National School Lunch Program, iv) BayTech business manager will prepare financial reports required by the school District as well as the annual audit.

In the event that any administrative services are to be purchased from OUSD by BayTech, the specifics will be agreed to in a Memorandum of Understanding between BayTech and OUSD, or other mutually agreeable contract.

POTENTIAL CIVIL LIABILITY EFFECTS

WE is responsible for matters of civil and financial liability resulting from the operation of BayTech. WE will carry levels of general liability, property, workers' compensation, Directors and Officers, and unemployment insurance appropriate for the size and scope of the school's operation. Based on Willow Education's experience in Oakland, BayTech maintains the following types of insurance at roughly the following limits:

Type of Insurance	Coverage Limit (per occurrence)
Property	1,000,000 USD
General Liability & the Board Liability	1,000,000 USD
Workers' Compensation and Employers Liability	1,000,000 USD

In addition, BayTech shall include OUSD as an endorsed named insured on its policies. BayTech is willing to include liability understandings in the Memorandum of Understanding that hold OUSD harmless for BayTech debts and obligations of BayTech as well from all matters of civil liability resulting from the operation of the Charter. BayTech assumes that OUSD is willing to provide a parallel provision that holds BayTech harmless from OUSD's debts and obligations as well as all matters of civil liability resulting from the operations of OUSD (unrelated to the Charter), and for any negligence of OUSD relating to the Charter.

BayTech will be responsible for all supplies and equipment that it purchases, and in the event of loss by fire, disaster, or theft, OUSD shall have no responsibility for those items unless such loss was caused by the negligence of OUSD. In addition, we will agree that OUSD shall have no responsibility for losses of student property, and BayTech will hold OUSD harmless from any such losses unless such loss resulted from the negligence of OUSD.

Finally, BayTech agrees to provide in the Memorandum of Understanding that each respective party will pay for its own attorney, court and litigation costs should that need ever arise, including after the term of the charter.

TERM OF CHARTER

This charter for BayTech will be for the term of five years. The term of this charter will begin on July 1, 2013 and will expire five years thereafter. BayTech must submit its renewal petition to the Office of Charter Schools no earlier than 270 days before the charter is due to expire unless otherwise agreed by the Office of Charter Schools.

AMENDMENTS

Any amendments to the BayTech Charter must be formally approved by written consent of WE and OUSD Board of Education, or State Administrator, if any, prior to implementation.

BUDGET DEVELOPMENT/FISCAL REPORTS/AUDIT

Budget development will begin each year immediately following the January announcement of the governor's K-12 State Budget Proposals and will be continually refined through the May Revision to the State Budget Act. Budgeted resources will always be consistent with school goals. BayTech will submit financial statements to OUSD, CDE, the State, and any other state or federal agencies as required by applicable law. Every year, BayTech will have an audit by an independent agency and reports will be submitted to OUSD.

COMMUNICATIONS CLAUSE

All correspondence from the charter-granting agency should be mailed via the U.S. Postal Service or other appropriate means to:

Bay Area Technology School
8251 Fontaine St., Oakland, CA 94605

SEVERABILITY

If any clause is found to be invalid for any reason, all other clauses remain in effect.

TAB 5

APPENDICES

- A1. Self Reflection
- B1. Technology Integrated Education
- B2. Computer Science Program
- B3. A+ (Advanced STEM) Program
- B4. Curriculum and Course Descriptions
- B5. Home Visit Program
- B6. Get Ready For Life Program
- B7. College Mentorship and Leadership Program
- C1. Articles of Incorporation
- C2. Bylaws
- C3. Biographies of WE Board of Directors
- D1. Proposed Budget and Cash Flow

APPENDIX A1

SELF REFLECTION

1. BayTech Renewal Performance Report
2. BayTech 2012 Performance Analysis
3. BayTech 2011 & 2012 STAR Test Reports and Cluster Analysis

CHARTER RENEWAL PERFORMANCE REPORT GUIDELINES

In reviewing your performance report, the Office of Charter Schools is seeking an honest and reflective self-appraisal of strengths and weaknesses of the school's charter, with credible and compelling plans for building on success, maintaining momentum, and making necessary changes for improvement of the school.

- Where appropriate, please be evaluative and make your focus outcomes for students. When descriptive responses are requested, please provide comprehensive, yet concise responses.
- Please place an "X" against the grade (5-1) which most accurately reflects **your judgment** of overall quality in response to the questions.
- Please note that your ratings given here are intended to provide guidance for the inquiry that will occur during the renewal process, primarily at the time of the Renewal Site Inspection.
- If there are sections where you feel you are not in a position to respond, please consider eliciting responses from more appropriate parties (i.e. governing board president).
- You may find it helpful to refer to the renewal criteria and their respective characteristics outlined in the Renewal Handbook.

This report is to be submitted to the Board of Education in conjunction with the submission of the charter petition requesting charter renewal. Please submit a draft to the Office of Charter Schools in advance of your renewal inspection, consistent with the guidelines outlined in your Renewal Handbook.

1	What is distinctive about your school?
	<ul style="list-style-type: none"> ▪ The school's focus on science, technology, engineering, and math (STEM) education ▪ College-going culture and high expectations for all students ▪ Highly-qualified, dedicated staff who go the extra mile in supporting students' needs ▪ Small and safe learning environment (class size of maximum 28) ▪ Strong extra-curricular programs including free tutoring in all core subjects

2 How effective is your school overall?						
	5	4	3	2	1	
Evaluation: How do you know? BayTech has had two graduating classes where 100% of students graduated and were accepted to a higher learning institution. The School's API score has steadily increased to 759, with a 63 point jump in 2012. The school has been using data to drive curricular decisions, and working hard to involve parents in education. Our efforts have resulted in overall improvement in both student academics and behavior. What are its notable strengths? <ul style="list-style-type: none"> ▪ Highly-qualified, dedicated staff that supports students' needs in and out of class. ▪ Using data in instruction to drive curricular decisions (CSTs, MAP tests, Accelerated Reader/Math, etc.) ▪ Providing a support system for under-achieving students (Intervention/enrichment classes, Tutoring, Mentoring, etc.) 	Excellent	X				Unsatisfactory

- Providing a rich after-school program until 6 pm every day that supports students' needs and interests. Tutoring, academic and recreational clubs, sports, etc. are offered daily.
- College-going culture, college readiness and College Mentorship and Leadership Program (CMLP)
- Keeping the parents involved and notified of students' progress and school events
- Providing a very effective online communication tool for teachers, students and parents
- Effective home visit program
- The school organizes many field trips and invites guest speakers for motivation
- Individualized attention in small classes

What are the main priorities for improvement?

- We plan to focus on retention of highly-qualified, dedicated teachers
- We plan to continue to focus on the core skills of our students, especially those who enroll in our school below grade level, performing below or far below basic.
- We plan to focus on specific academic areas where our students did not perform proficient/advanced. See response to Question #4.
- We plan to have further involvement and contribution by our parents in school activities, functions, programs or events. The School will use a vast range of channels for communication including SchoolReach, flyers, e-mails, school website, newsletters, etc.

3 How well is the school regarded by its students and parents?

		5	4	3	2	1	Unsatisfactory
Evaluation:	Excellent		X				

How do you know?

Through verbal and written feedback, surveys, conversations during home visits, parent club meetings, and participation in school events we can evaluate our perception.

What do (a) students and (b) parents most like about the school?

- Students enjoy working with our established staff, our after-school programs, the small school atmosphere, and extra-curricular activities.
- Parents like the involvement of the staff, individualized attention and high expectations in a small, safe school environment, and the easy access to their students' grades and assignments online.

What do they feel needs improvement, and what action is being taken?

Parents would like the school to have a permanent facility so they can keep their children until graduation. The School works with the District in this regard.

Parents love the BayTech staff because the staff has established strong support with their children. They do not want any teacher to leave. BayTech intends to keep all our highly-qualified, dedicated staff. Therefore, we continue to maintain our family-like atmosphere by involving teachers in decision-making, providing an environment conducive to collaboration and professional development. BayTech has also introduced a new bonus system to motivate teachers in the desired performance areas.

4 How well do students achieve?**Evaluation:**

Excellent

5	4	3	2	1
	X			

Unsatisfactory

How do you know?

By our API scores, STAR test results, MAP test results, students' grades, graduation and college admission rates.

In which subjects and grades do students do best, and why?

There is an overall improvement in student achievement as indicated by our 2012 API score of 759; 63-point increase from 696 in 2011. The following areas show the best improvement from 2011 to 2012:

English Language Arts: Grade 8: 41% to 60%, Grade 9: 31% to 49%, Grade 10: 22% to 44%

Math: Grade 6: 36% to 43%, Grade 7: 46% to 55%

Science: Grade 8: 37% to 50%

History/Social Science: Grade 8: 27% to 40%

Grade 8 showed the best improvement since most of those students have been with us for all three years of the middle school and they have benefited from the school's support programs the longest. Overall, our middle school students perform better than our high school students in most areas. Most of the middle school students join BayTech at grade 6 and continue while there is consistency and a high retention rate. However, in our high school section, aside from grade 12, we experience high mobility; there are many new admissions as well as transfer-outs in grades 9-11.

In which subjects and grades is improvement needed, and what action is being taken?

The school needs improvement in Algebra I and II in Grades 8&9, and Physics in Grade 11. The School has started CAHSEE prep classes and English/math intervention classes besides offering after-school and weekend tutoring. We have invested in the Accelerated Math program to be able to create individualized instruction suited for each student's needs. Our college advisor is working with these students closely to ensure graduation. Also, the staff has analyzed "Cluster reports" to find out what specific areas students performed poorly on the CST to revise their curricula. The high school students' low performance also stems from the fact they have come to our school with less than adequate skills and knowledge levels, and not stayed at BayTech long enough to see quick improvement. We believe that the School's academic and behavior support system will allow us to see better results in the long-term as the School stays in one permanent facility and the students enroll in 6th or 7th grades.

Is there evidence of differential attainment according to gender, ethnic background or other grouping and, if so, what action is being taken?

For most of the CSTs, there is not a major evidence of differential attainment. All students benefit from the School's academic and behavior support programs. However, from the 2012 CST results, the two noticeable differentials are in Grade 6 English Language Arts where females performed 28% at or above proficient compared to boys performing at 50%, and African American students performed 15% at or above proficiency. This picture is not the same in other grade levels. Another area is African American students' performance in Algebra I. The School has taken the actions as stated in our response to the prior question. As an extra action item, female students who are now in 7th grade will be in our focus in English Language Arts. The female students who performed below or far below basic have been placed in the English intervention/enrichment classes. These students will be home visited to involve the parents more in their children's education. The dean of academics will also closely monitor the progress of these students and work with the families. The grade level coordinators of middle school and high school students will also have a more

productive, communicative and efficient approach in monitoring these students and subsequently, work collaboratively with teachers in grade level meetings and via emails and other means of communication to establish higher volume of interaction among all parties for the purpose of supporting these students.

5 How effective is the quality of instruction, including teaching, learning and curriculum?					
	5	4	3	2	1
Evaluation: How do you know? By our API scores, STAR test results, MAP test results, students' grades, graduation and college admission rates Which are the strongest features of teaching and learning, and why? <ul style="list-style-type: none"> ▪ <i>Teacher Quality:</i> BayTech has a diverse and effective faculty. Teachers are highly qualified in their subject areas. To implement the BayTech curriculum most effectively, teachers design instruction for diverse learners that engages them in active learning in meaningful, real-world activities by utilizing effective instructional approaches such as differentiation, scaffolding, brain-based learning, authentic multi-level teaching and learning, workshop teaching and multiple intelligences. Teachers do peer-observations and attend meetings/seminars/conferences to sharpen their skills and learn best practices to improve their instruction and classroom management. ▪ <i>Instructional Design:</i> The School program has four major components: Data-Driven Design, STEM Focus for Creativity and Innovation, Life-Long Learning, and Accelerated Academic Achievement. While the curriculum concentrates on a hands-on approach to STEM areas, the school also provides a solid education in humanities and social sciences to educate the whole child. ▪ <i>Instructional Strategies:</i> Teachers use a wide variety of effective instructional strategies to shape instruction, and the school administration does frequent walkthroughs to ensure these strategies are implemented. Some of those strategies can be listed as (1) Identifying similarities and differences; (2) Summarizing and note taking; (3) Reinforcing effort and providing recognition; (4) Homework and practice; (5) Nonlinguistic representations; (6) Cooperative learning; (7) Setting objectives and providing feedback; (8) Generating and testing hypotheses; (9) Cues questions, and advance organizers. ▪ <i>Technology Integrated Education:</i> Our teachers use various types of technology during classroom instruction including: computers and projectors for all teachers, online student information system (CoolSIS), Microsoft Office materials, and access to online educational websites such as Discovery Education, BrainPOP, Khan Academy, Kuta Software, EdModo, to name a few. In addition our teachers use Accelerated Reader and STAR Reading Tests to measure and monitor our student's reading & comprehension skills. 	Excellent	X			Unsatisfactory
What aspects of teaching and learning most need improvement, and what action is being taken? <ul style="list-style-type: none"> ▪ <i>Differentiated Instruction:</i> Our teachers try to differentiate instruction to meet the needs of a diverse student body. However, the number of preps sometimes limits the teacher's time to plan effective differentiation. As an action, we have made differentiated instruction the highlight of our professional development. Teachers share their best practices about differentiated instruction at department/grade-level meetings. Peer observations also help teachers see how instruction is differentiated in other classes. The administration also strives to make the scheduling so as to minimize the number of preps and maximize common planning time 					

among departments and/or grade levels.

- *Student motivation:* There are times when students come from home unmotivated about learning. Our teachers work hard to establish rapport with the students out of the classroom through extra-curricular activities and home visits. We sponsor guest speakers from different careers, teach motivational life skills lessons in the Get Ready For Life class, make connections to real-world applications in all classes, provide counseling opportunities, and try different venues to reach the unmotivated child and help them have a vision of their future and understand the importance of education in this vision.

6 How effective are the professional development opportunities provided to teachers and administrators?

	5	4	3	2	1	
Evaluation:		X				Unsatisfactory

Excellent

How do you know?

Through self-reflection and discussion during and after the PD activities to see how applicable it is in the school and classroom; through surveys and class observations

Which are the strongest features of professional development, and why?

The strongest features are the sharing opportunities between teachers of what actually works in the classroom. Having regular department and grade-level meetings with agenda make it effective. For example; teachers can discuss classroom strategies, curricular and academic issues, work on long-term projects, develop strategies for students with behavioral problems, analyze student achievement data, etc. during our regular dept. and grade-level meetings. Also, need-based, targeted PD, tailored to individual staff member or administrator needs makes PD more effective.

How are professional development activities selected and evaluated?

In addition to ongoing professional development activities that support efforts to increase student academic performance, BayTech provides all staff with multiple opportunities to grow professionally. BayTech assesses staff professional development needs through formal and informal performance observation and surveys. Based on these data and combined with the school improvement plan, BayTech determines common staff development days, and tailors staff development to individual staff needs. The School is also organized into Professional Learning Communities (PLC) by grade level and by department. Staff is also encouraged to attend conferences in their subjects such as National Council of Teachers of Mathematics Conference. The annual Accord Teacher and Leadership Conference also provides our staff with a variety of workshops and presentations to choose from. The staff is given a survey to write their needs long before this Conference and themes are designed to address these needs. Staff gets a chance to present as well. Evaluation is done through surveys, feedback from the staff and class observations.

What aspects of professional development need improvement, and what action is being taken?

There is always room for improvement. If PD could be tailored more to suit individual needs, it would be more effective. The School can do more frequent informal surveys among the staff and/or identify areas of need through class observations to recommend specific PD areas and resources for staff to utilize. The School has also been benefiting from Accord department chairs' visits and recommendations. It would also benefit the teachers if they could have more time to meet with fellow teachers that are teaching the same grade as they can share ideas. The School has set regular meeting times for these teachers with purposeful agenda. The School is also trying to maximize common conference periods during the day to allow more collaboration.

7 How effective is the assessment of student learning?

Evaluation:	5	4	3	2	1	Unsatisfactory
	Excellent	X				

How do you know?

Through our recently raised API score and MAP testing we can monitor our students' progress throughout the year.

What are the strongest features of assessment?

BayTech uses a variety of formative and summative assessments, including MAP tests, Accelerated Reader/Math tests, homework, discussions, quizzes, exams, interactive notebooks, essays, projects, verbal assessments, etc. Teachers frequently check for understanding on an informal basis and use exit ticket/slips to assess students understanding immediately after class. This enables teachers to drive their instruction based on student performance. All assessments are used to an extent per teacher discretion on an as needed basis. Teachers have decided on particular days that tests will be given for different subjects to prevent students from feeling overwhelmed with excessive assessments (formal). Therefore, assessments are given on a frequency per teacher discretion and planned on particular days to prevent students feeling overloaded. Teachers encourage students for feedback on their academic progress on a regular basis. They are asked to evaluate their CST data from the previous year and set goals for the current school year. Student progress is discussed and teachers have a meeting agenda item, "Focus student of the week." Here is where we focus on the academic, social and behavioral issues that students are facing. Our faculty discusses the results of assessments during department and grade level meetings, analyzes the class performance and individual student performances, and identifies areas of strength and areas that our students are struggling with academically to drive instruction.

What aspects need improvement, and what action is being taken?

Student motivation to try on these tests can sometimes be a challenge. For this we are using teacher encouragement and extrinsic and intrinsic motivators. Please see our response in Question #5 about "Student Motivation." We are also working on creating a quicker turn-around time between testing results and actions being taken. Our school information system is very practical in terms of student/parent access to grades. The staff is regularly monitored by the administration on posting of assessments, assessment analysis, lesson planning and parent contact.

8 How effective are the strategy and processes that you have put in place to ensure your school enrolls a diverse student population (i.e. representation of English language learners, students with disabilities, or of homeless status)?

		5	4	3	2	1	
Evaluation:	Excellent	X					Unsatisfactory

How do you know?

It can be seen by looking at our outreach efforts and student demographics data.

What are the strongest aspects of efforts to a diverse student population?

BayTech implements a special recruitment process to achieve racial and ethnic balance among its students that reflects the general population residing in the geographic boundaries of the school district in which each school is located. This process involves the following:

- Hold discussions and distribute application materials at places where diverse populations may be reached, including community centers, neighborhood meeting areas, and existing schools;
- Distribute materials in English and Spanish to reach the limited English proficient populations that exist in the target area; distribute flyers at playgrounds, recreation centers and/or sports clubs in our neighborhood;
- Employ bilingual individuals who specialize in public relations with underrepresented communities and neighborhoods;
- Host Open Houses and provide tours of the school;
- Monthly public presentations;
- All means of advertising are used, such as electronic media, flyers, and direct mail.

We have students from our local neighborhood and across town. This encourages students to share and learn about different backgrounds. The small and safe, welcoming atmosphere of the school is inviting to a diverse student population.

What aspects need improvement, and what action is being taken?

We have recently moved locations, so we need to outreach more to our new neighborhood. We have scheduled six open houses throughout the year to give the community an opportunity to learn more about what BayTech offers. We have also sent postcards, advertised in the newspaper, and talked to other local schools about our program.

Students are tested in four main subject areas: Reading, Language Usage, Mathematics, and Science. MAP produces reports in subject areas and subcategories and within each subject area student performance can be identified as:

- Proficient and growing
- Proficient and not growing
- Growing but not proficient
- Not growing and not proficient

Students who are achieving substantially below grade level are identified through multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education's website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests. For students achieving substantially below grade level in math or English, BayTech offers Math/ELA Enrichment/Intervention classes. Teachers use educational materials that provide review and re-teach programs. McGraw Hill's Acuity program, Holt McDougal Publisher's resources, Kuta software, Khan Academy, Accelerated Reader and Accelerated Math program allow teachers to monitor the progress of students who are achieving below grade level and provides software generated tests and personalized instructional materials based on California content standards/framework which have not been achieved.

Besides regular grade-level and departmental staff development meetings, the School plans professional development days to analyze student achievement data (MAP, CST, etc.) The faculty prepares a professional learning plan that addresses the needs of our students. At the summer in-service, throughout the year, and at the end-of-year wrap up meetings, the focus for faculty is to analyze student achievement data and evaluate the effectiveness of various programs implemented at the school (testing, curriculum, intervention, counseling and after-school tutoring).

Describe how the school is training administrators and teachers to understand and use assessment data.

The school organizes trainings where experienced coaches train the faculty in understanding and using assessment data. These include trainings on MAP testing, Accelerated Reader, Accelerated Math, CST analysis, etc. Coaches include trainers from the testing companies, Magnolia Public Schools and Accord data coaches, and experienced staff members within the faculty.

To what extent are parents and students informed of student performance data individually and schoolwide?

Letters/progress reports are sent home informing parents of student performance on CSTs, MAP tests, academic grades, etc. Parent/teacher meetings, CoolSIS reports, email communication, etc. are other means of sharing data with our parents. Our teachers and administration also track the low performing students' progress by reviewing progress reports and communicate the progress with the parents and students.

What most needs improvement, and what action is being taken?

There is always room for improvement in training teachers and administrators on understanding and using data. Our continued emphasis on use of data is creating a data-driven culture at BayTech. We are also basing our accountability systems, such as teacher/admin evaluations and bonus pays, on student achievement data to foster this culture. It is also our goal to present and keep data in user-friendly formats to enhance access and understanding of it. For this purpose, BayTech administration works closely with the Accord Institute's data team which provides detailed CST and MAP data analysis to BayTech staff in a desirable format. Parent involvement in student performance data is also an area that needs improvement. Please see our response to Question #10 to increase parent involvement in their children's education.

12 How effective are the methods and strategies by which your school assures that students with disabilities are provided a free appropriate public education in the least restrictive environment and English Language Learners are supported?

		5	4	3	2	1	
Evaluation:	Excellent		X				Unsatisfactory

How do you know?

Through CST and MAP test performance, academic grades, behavior records, EL reclassification, IEP meetings, and parent and teacher feedback, we can say that students with disabilities and limited English proficiency are supported effectively.

Which are the strongest features, and why?

Children with disabilities are educated with non-disabled children to the maximum extent appropriate. Accommodations, modifications, and related services are used to provide a FAPE to these students. The special ed. dept. and all staff and administration are on board to support the needs of students with disabilities. Students are only removed from class when the nature or severity of the disability is such that this support in regular classes is no longer reasonably calculated to provide a FAPE. BayTech teachers employ EL strategies, class structure and assessment accommodations to help their students in class. BayTech staff does a great job at grade level meetings by collaborating on support for students with academic challenges (IEP, 504, RTI, Tutoring, Mentorships, etc.) and behavioral problems. As school, we also believe that strong communication and collaboration among classroom teachers, administrators, and special education dept. is essential. Our faculty works as a team in recognizing and addressing the needs of these students.

What most needs improvement, and what action is being taken?

Teachers use a variety of EL strategies in their classes. It is one of our goals to focus on choosing some of these strategies as part of our schoolwide plan and consistently implement it in all classes. We plan to form a PLC consisting of ELA and resource teachers to create and present such plan to the whole staff. Further parent involvement is substantial with special education. All the in-school involvement on part of BayTech faculty, including administrators, teachers, education specialists, resource teachers and paraprofessionals, needs to be reinforced by the parents at home. We encourage parents to get involved in their children's education as much as possible. Please see our response to Question #10 regarding parent involvement.

13 How effective is your education program at diagnosing and addressing the needs of the following students: English Language Learners, students with disabilities, gifted students, and students in need of remediation.

		5	4	3	2	1	
Evaluation:	Excellent		X				Unsatisfactory

How do you know?

Through CELDT testing/EL reclassification data, student performance on assessments, parent/teacher feedback

Which are the strongest features, and why?

BayTech's commitment to helping each student achieve his or her full potential is our strongest feature. The School effectively identifies ELLs, students with special needs, and low or high achieving students through a variety of ways including but not limited to home language surveys, student records, "child find" process, parent and teacher feedback, SSTs, various levels of assessments, etc. Most appropriate placements and support strategies are determined depending on assessment results and parent/teacher recommendations. These include "least restrictive environment," academic intervention/enrichment classes, accelerated programs, e.g., A+ Advanced STEM program, EL teaching strategies, appropriate accommodations/modifications, after-school tutoring/clubs, competitions, and other support systems based on the needs of the students.

What most needs improvement, and what action is being taken?

It is our goal as faculty to improve in differentiating instruction and implementing consistent EL strategies to meet the needs of a diverse student body. The action plans are explained in our responses to Question #5 and #12.

14 How effective is the governing board of the school?

		5	4	3	2	1	
Evaluation:	Excellent	X					Unsatisfactory

How do you know?

Community feedback, district site-visits

Describe the process for selecting your governing board members. List all current board members, board committees and provide a current resume for each individual as an attachment to this report.

The BayTech Board consists of highly educated, well-respected individuals composed of Dr. Mehmet Sen (the president), Dr. Ayhan Mutlu (secretary), Mr. Sefa Isik (treasurer), Dr. Zeynep Araci, and Deniz Dogruer, MSc -all are great professionals in their working life and a role model parent in their family life. Please find their resumes attached.

According to the bylaws of Willow Education (WE), each director holds office for two (2) years and until a successor director has been designated, qualified, and elected. The term of office of the initial Board of Directors shall be staggered for one-, two-, and three- year terms. The term of office of a Director elected to fill a vacancy begins on the date of the director's election, and continues: (1) for the balance of the un-expired term in the case of a vacancy created because of the resignation, removal, or death of a director, or (2) for the term specified by the Board in the case of a vacancy resulting from the increase of the number of authorized directors. Any subsequent vacancies on the Board may be filled by a majority vote of a quorum of directors. The election of Board members is governed by the WE

Bylaws. Please refer to the bylaws for further information.

Describe the governing board's primary roles and responsibilities. In addition, give an example of a recent issue/policy that the board is working on.

The Board of Directors meets bimonthly to establish academic, fiscal, and operational policies in accordance with its fiduciary responsibilities. Board agendas containing relevant attachments to agenda items are posted in accordance with the Brown Act. The Board is updated with relevant information regarding the school's academic performance at every board meeting, and the Principal recommends policies to improve academic performance to the board for approval. Our school's academic policies are published in the Parent/Student Handbook, the Employee Handbook, and on our school's website. Adherence to, and implementation of, these policies is monitored by the school principal and the school administration. Ultimately, the Principal is accountable to the Board of Directors for achievement of the school's vision, mission and goals. An example of a recent policy that the Board is working on is "Performance Based Bonus Policy." In an effort to recognize teachers and administrators who work hard and demonstrate it through student achievement, the Board has been discussing to adopt such policy.

What are the notable features of the governing board in the school?

The board president and secretary, as well as other board members, have leadership experience at high-tech companies. The board members' experience, wisdom, academic quality, achievements and their striking personal characteristics as elite individuals in the community have always proved to be of priceless value to a small charter school as Bay Area Technology School. With their leadership and guidance, BayTech school administration, teachers, students, parents as well as the whole BayTech community have raised the bar of expectations for nine years to higher levels of success and platforms, even in tough times. Their contribution, dedication and passion for BayTech is well recognized by the BayTech community. Every two months the board members come together at BayTech enthusiastically and proud to raise the academic standards, to ensure financial stability of the school, to maintain a perfect communication channel with both parents and students and to devise ways to further support and help the school in a vast range of domains.

How effectively does the governing board work with the school leader/s?

The school Principal updates the Board with relevant information regarding the school's academic performance and progress at every board meeting. The Principal also gathers feedback from the School community including the administration, staff, students and parents (Parent Club, etc.), and recommends policies to improve academic performance to the Board for approval. Our school's academic policies are published in the Parent/Student Handbook, the Employee Handbook, and on our school's website. Adherence to, and implementation of, these policies is monitored by the school administration. Ultimately, the Principal is accountable to the Board of Directors for achievement of the school's vision, mission and goals. The Board works closely with the school Principal for input and demands results. Here is a quote from the Principal: "They [*the Board members*] are so demanding that they always keep me on my toes as the principal of the school. For them, the famous quote stands, 'Difficult is easy to achieve and the impossible takes a little longer.'"

15 How effective is the school at involving parents, teachers, and community members in the governance of the school?

	5	4	3	2	1	
Evaluation:	Excellent		X			Unsatisfactory

How do you know?

Through meetings of the Board, Parent Club, SSAC, ELAC, and the school staff

Which are the strongest features, and why?

BayTech values feedback from the faculty, parents and community members. BayTech teachers are actively involved in the curricular and instructional decision making process. The School has formed a School Site Advisory Committee (SSAC) as an advisory body to the School. This committee focuses on issues unique to the school and provides feedback to the school administration and the Board. The SSAC has a key role in communication among all the interested bodies within the school community. The SSAC may consist of school administrators, teacher representatives, elected by the faculty, student representatives, elected by the Student Council, and community representatives. In addition, the School has an active Parent Club which meets at least monthly and communicates school agenda to parents and parents' concerns to the school administration. The English Language Advisory Committee (ELAC) advises the school administration on services for English Language Learners. Parents and community members are encouraged to be involved in the governance of the school by becoming a board member, serving on committees, participating in the Parent Club, and providing their feedback to the school administration. The Principal gathers this feedback, and recommends policies to improve academic performance to the Board for approval.

What most needs improvement, and what action is being taken?

We would like to see more parental involvement. Please see our response to Question #10 to increase parental involvement in the school. The School administration continuously encourages parents to be active participants in their children's education as well as in school governance.

16 How effective is the school at ensuring fiscal soundness and legal compliance?

	5	4	3	2	1	
Evaluation:	Excellent		X			Unsatisfactory

How do you know?

Through fiscal reports, audits, and district site-visits

Which are the strongest features, and why?

The School ensures fiscal soundness and legal compliance in a variety of ways including but not limited to development of a sustainable budget and meeting the fiscal targets, close monitoring of fiscal operations and compliance with GAAP, working with Magnolia Public Schools to most effectively meet back-office needs and an independent auditor for annual fiscal audit. The School has been consistently applying for and receiving extra supplemental funding including federal Title funds and after-school grant in the amount of \$150K. The School has established a line of credit to overcome short-term cash flow issues. The Board of Directors effectively establishes

academic, fiscal, and operational policies in accordance with its fiduciary responsibilities. The Board, the school administration, and Magnolia Public Schools collaborate to ensure fiscal soundness and legal compliance.

What most needs improvement, and what action is being taken?

Since student enrollment is the major source of revenue, steady enrollment is a crucial factor in ensuring fiscal soundness. The School has moved twice within the current charter term that has affected student retention, but the School has been doing an extensive recruitment process as explained in response to Question #8.

17 How effectively is the school managed fiscally?

Evaluation:	5	4	3	2	1	Unsatisfactory
		X				

Excellent

How do you know?

Through fiscal reports, audits, district site-visits, CoolSIS information system

Which aspects of the school's fiscal operations work best?

The School has received no finding in the last two years' fiscal audits. The Board of Directors effectively monitors the fiscal operations of the school. The School works with Magnolia Public Schools (MPS), an experienced CMO, for fiscal management. BayTech has developed an effective budget in collaboration with MPS. The School also maintains internal control; there is proper segregation of duties. The school information system, CoolSIS, is an online tool where the school staff enters purchase and check requests. These requests go through various stages of approval before granted or denied, providing control over all school expenses. MPS, being a CMO, has purchasing and negotiation power, which saves the school in purchasing of school programs and supplies. MPS has also been consistently applying for and receiving extra supplemental funding for the school and helping with cash flow issues. Good communication, transparency and compliance with GAAP help Baytech run its fiscal operations effectively.

In what ways can the school's fiscal systems or operations be improved, and what action is being taken?

We would like to implement a more effective inventory tracking system. MPS is working on providing such system to BayTech for the 2013-14 FY. We would also like to make lunch money collection more convenient by providing a secure online payment system for parents. Another area of improvement is fundraising. We are working with our Parent Club to maximize our fundraising efforts.

18 What are the most significant aids and/or barriers to raising student achievement?

- Aids to raising student achievement at BayTech are as follows:
 - Highly-qualified, dedicated staff who go the extra mile in supporting students' needs
 - Effective instructional strategies
 - Curriculum that addresses the needs of diverse learners
 - College-going culture and high expectations for all students
 - Small and safe learning environment
 - Strong extra-curricular programs including free tutoring in all core subjects
 - Effective use of data to drive curricular decisions
- Generally speaking, some barriers to student achievement are:
 - Low student expectations (i.e., not challenging curriculum and instruction)
 - Low academic support (e.g., lack of resources)
 - Lack of motivation or positive reinforcement in the classroom

All BayTech faculty and governing bodies have high expectations and strive to provide a high level of academic support to all our students. Naturally, it creates a challenge when students come to school behind grade level or lack parental support. As explained through our responses in this report, BayTech is committed to helping each student who enrolls in our school achieve his or her full potential.

Charter Renewal Data Document

Name of school: Bay Area Technology School				Name of School Leader: Hayri Hatipoglu			
Financial Information				Year		2011-2012	
Total Operational Budget		\$ 1,414,282 \$ 1,329,682 (Depending on Prop 30)		Per Student Revenue		\$ 7,072	
Total Expenditure		\$ 1,394,357		Expenditure Per Student		\$ 7,416	
Balance brought forward from previous year		\$ 88,254		Projected balance carried forward to next year		\$ 23,579	
Special Populations		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Percentage of students receiving <i>free/reduced lunch</i>		74%	72%	71%	76%	85%	95%
Percentage of ELL students		6%	15%	12%	11%	10%	9%
Number of students with special educational needs		5	6	6	4	8	6
Pupil mobility in the school in prior year					Number of students		
					2011-2012	2012-2013	
Students who joined the school other than at the usual time of first admission					13	7	
Students who left the school other than at the usual time of leaving (excluding expulsions)					29	8	
Attendance for current and prior year					% Attendance		
School data					95%	98% (For the first 3 weeks)	
Background of students 2011-12	Number of students/Percent of Students	Number of students/Percent of Students	Discipline - prior school year(10-11)	Suspension #of incidents		Expulsion #of incidents	
				2011-2012	2012-2013	2011-2012	2012-2013
African-American	130/56%		African-American	4	1	0	0
Asian/Pacific Islander	2/1%		Asian/Pacific Islander	0	0	0	0
Hispanic	46/20%		Hispanic	2	0	0	0
White	41/17%		White	0	0	0	0
Mixed/ No Response	5/2%		Mixed/No Response	0	0	0	0
ELL	17/7%		ELL	0	0	0	0
SPED	10/4%		SPED	1	0	0	0
Gender (male/female)	127/103		Gender (male/female)	4/2	0	0	0
Homeless Students	N/A		Homeless Students	0	0	0	0
Lottery/Waitlist Information							
	Date of Lottery	Grades of Applicants	Number of Applicants (per grade)	Number of Available Spaces (per grade)	Number of Students on Waiting List (per grade)		

EXAMPLE (add rows as necessary to capture all grade levels served)		6	150	100	50
		7	200	100	100
		8	160	100	60
2011-2012 (for 2012-2013 school year)	N/A				
2010-2011 (for 2011-2012 school year)	N/A				
2009-2010 (for 2010-2011 school year)	N/A				
2008-2009 (for 2009-2010 school year)	N/A				
2007-2008 (for 2008-2009 school year)	N/A				

Graduation Information	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Graduation Rate	NA	NA	NA	100%	95%
Retention Rate (% of graduates enrolled since grade 9)	NA	NA	NA	62%	77%
Post Graduation Plans					
% attending 4-year college	N/A	N/A	N/A	40%	
% attending 2-year college	N/A	N/A	N/A	30%	
% attending vocational/technical training	N/A	N/A	N/A	13%	
% joined military	N/A	N/A	N/A	0	
% working exclusively	N/A	N/A	N/A	17%	

Teacher Recruitment/Retention					
	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Total # of Teachers	16	15	13	14	15
% New Hires	37%	20%	38%	35%	20%
% Retained from Prior Year	63%	80%	62%	65%	80%
Total number of vacant teaching posts currently (FTE)					

AYP	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
AYP Met?	No	No	No	No	Yes
% AMOS Met	No - No	No - No	Yes -Yes	Yes -Yes	Yes -Yes

% Proficient-AMOS: African-American	Yes – No	Yes- Yes	No -Yes	No – Yes	Yes -Yes
% Proficient-AMOS: Asian/PI	N/A	N/A	N/A	N/A	N/A
% Proficient-AMOS: Hispanic	N/A	N/A	N/A	N/A	N/A
% Proficient-AMOS: Mixed/No response	N/A	N/A	N/A	N/A	N/A
% Proficient-AMOS: White	N/A	N/A	N/A	N/A	N/A
% Proficient-AMOS: Socioeconomically Disadvantaged	Yes - No	No -Yes	Yes - Yes	Yes - Yes	Yes -Yes
ELL	N/A	N/A	N/A	N/A	N/A
Students with disabilities	N/A	N/A	N/A	N/A	N/A
API	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
API	635	658	674	696	759
Statewide rank	2	1	2	2	3
Similar schools rank	7	5	1	2	2
CST	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
ELA					
Proficient/Advanced	27.0%	34.0%	39%	39 %	46 %
Basic/Proficient/Advanced	65%	67%	67%	75.46	81.31%
Below Basic/Far Below Basic	36%	32%	35%	24.59%	18.41%
MATH					
Proficient/Advanced	20.4%	31.2%	26%	28%	33%
Basic/Proficient/Advanced	51%	56%	53%	59%	66%
Below Basic/Far Below Basic	49%	44%	47%	40%	33%
CAHSEE	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
10 th grade pass rate	NA	ELA 61%/ Math56%	ELA75%/Math 65%	ELA 83%/Math 79%	ELA 74%/Math 84%

Measurable Pupil Outcomes (Please add rows as necessary to include all MPOs in the current charter; Data for the last two years is available in your Spring Site Visit report.)							
Measurable Pupil Outcome	Instrument	Target	2007-08 Results	2008-09 Results	2009-10 Results	2010-11 Results	2011-12 Results
Achieve an average daily attendance of at least 95% each year of the charter term.	ADA	95% ADA		95%	95.03%	96%	95%
BayTech will meet or exceed AYP targets in year prior to renewal year, or in two of the three years prior to renewal.	AYP	Meet or exceed AYP target in year prior to renewal, or in two of the three years prior to	N/A	N/A	N/A	N/A	Yes

		renewal					
If BayTech is in PI status, it will not maintain PI status for more than two consecutive years.	PI status	Will not maintain PI status for more than two consecutive years.	Year 1	Year 2	Year 3	Year 4	year 5
BayTech will exceed the similar school API ranking as compared to all (100%) local comparison schools in each of the three years prior to renewal. Currently identified local comparison schools are: West Oakland Middle School, Claremont MS, Frick MS, Explore College Prep, and Madison MS.	API; API data for identified local comparison schools	Exceed similar API ranking as compared to all (100%) local comparison schools in each of the three years prior to renewal.		API 2009: Explore MS: 553 Frick MS: 586 BayTech: 658 Madison MS: 662 Claremont MS: 682 West Oakland: 687	API 2010: Explore MS: 579 Frick MS: 637 BayTech: 674 Madison MS: 728 Claremont MS: 703 West Oakland: 617	API 2011: Explore MS: NA West Oakland: 570 Frick MS: 656 BayTech: 696 Claremont MS: 720 Madison MS: 722	API 2012 BayTech 759 Madison: 725 Claremont: 679 Frick: 645 West Oak: 552
BayTech will have less than 25% Far Below Basic [CST performance school-wide] in both ELA and Math each year of its charter term.	CST	Less than 25% FBB in ELA and Math each year		2009 CST: FBB in ELA: 10% FBB in Math: 15%	2010 CST: FBB in ELA: 18% FBB in Math: 17%	2011 CST: FBB in ELA: 11% FBB in Math: 17%	2011 CST: FBB in ELA: 7% FBB in Math: 7%
In the first year of the charter term, BayTech will achieve a minimum range of 23% to 30% or above Proficient and Advanced CST performance school-wide in ELA and Math.	CST	In the first year of the charter term, will achieve a minimum range of 23% to 30% or above Proficient and Advanced in ELA and Math	N/A	2009 CST: Adv/Pro in ELA: 34% Adv/Pro in Math: 31.2%	N/A	N/A	N/A
BayTech will achieve a steady increase of 5% Proficient and Advanced CST performance school-wide in ELA and Math each year thereafter.	CST	Will achieve a steady increase of 5% Proficient and Advanced CST performance school-wide in ELA and Math each year thereafter	2007 CST Results ELA : 14% Math : 22% 2008 CST Results ELA : 27.0% Increase: 13% Math : 20.4% Increase: -2%	2008 CST Results ELA : 27.0% Math : 20.4% 2009 CST ELA : 34.3% increase: 7.3% Math : 31.2% increase: 10.2%	2009 CST ELA = 34.3% Math = 31.2% 2010 CST ELA : 39 % increase 4.7% Math : 26% decrease 5.2%	2010 CST ELA = 39% Math = 26% 2011 CST ELA : 39 % increase 0% Math : 28% increase 2%	2011 CST ELA : 39 % Math : 28% 2011 CST ELA : 46 % increase 7% Math : 33% increase 5%
BayTech [will achieve] English proficiency levels at a minimum of Early Advanced as measured by the Over-All CELDT performance as follows: 50% of students [entering at] Beginning and enrolled in BayTech's ELL program no less than [three] years;	CELDT; ELL program enrollment	Will achieve English proficiency levels at a minimum of Early Advanced by 50%			50%	53%	100% (1 out of 1 students)
BayTech [will achieve] English proficiency levels at a minimum of Early Advanced as measured by the Over-All CELDT performance as follows: 50% of students [entering at]	CELDT; ELL program enrollment	Will achieve English proficiency levels at a minimum of Early Advanced by 50%			100%		63% (5 out of 8 students)

Pre-Intermediate and enrolled in BayTech's ELL program no less than [two] years							
BayTech [will achieve] English proficiency levels at a minimum of Early Advanced as measured by the Over-All CELDT performance as follows: 50% of students [entering at] Intermediate and enrolled in BayTech's ELL program no less than [one] years.	CELDT; ELL program enrollment	Will achieve English proficiency levels at a minimum of Early Advanced by 50%			75%		50% (4 out of 8 students)
Reclassification target: 50% of BayTech's current or newly enrolled Early Advanced ELL students to be reclassified each year.	CELDT; ELL program enrollment	50% of current or newly enrolled Early Advanced ELL students to be reclassified each year.			71%		100% (5 out of 5 students)
90% of BayTech students enrolled a minimum of two years prior to graduation will attain a high school diploma [each year beginning with its first graduating class].	Graduation rate	90% of students enrolled a minimum of two years prior to graduation will attain a high school diploma [each year beginning with its first graduating class].			N/A	100% graduation rate	95% graduation rate
BayTech will achieve a High School Graduation rate that is higher than the average graduation rate of [at least three of the neighboring high schools] each year beginning with its first graduating class.	Graduation rate	Will achieve a High School Graduation rate higher than the average graduation rate of neighboring high schools, (Oakland Tech, Far West, McClymonds)	N/A	N/A	N/A	BayTech: 100% graduation rate	BayTech: 95% graduation rate
BayTech will achieve a CAHSEE passage rate [within grade level performance] that will be higher than the average passage rate [of at least three of the neighboring high schools] each year of the charter term.	CAHSEE	Will achieve a CAHSEE passage rate	N/A	2008-2009 BayTech Math : 56% ELA: 61%	2009-2010 BayTech Math : 65% ELA: 75%	2010-2011 BayTech Math : 79% ELA: 83% Oakland Tech Math : 79% ELA: 80% Oakland High Math: 74% ELA: 77% Far West Math : 51% ELA: 68%	2011-2012 BayTech Math : 84% ELA: 74% Oakland Tech Math : 83% ELA: 81% Oakland High Math: 69% ELA: 76% Far West Math : 47% ELA: 58%
BayTech will [maintain a drop-out rate of less than 6% [each year] [as defined by the "1 year Drop-Out Rate 9-12" from the CDE DataQuest web-based	Drop Out Rate	Will maintain a drop-out rate of less than 6%	BayTech's dropout rate is 0% in 2007-2008 year.	BayTech's dropout rate is 0% in 2008-2009 year. (CDE Data quest will need to be adjusted,	BayTech's dropout rate is 0% in 2010-2011 year.	BayTech's dropout rate is 0% in 2010-2011 year	BayTech's dropout rate is 0% in 2011-2012 year

data source].				current 6.7%).			
[65%] of students will demonstrate at least one [performance level] of growth towards grade-level proficiency in reading and language arts each year [as measured by curriculum embedded assessments, MAP, and ACUITY]	Curriculum embedded assessments; MAP; ACUITY	65% of students will demonstrate at least one [performance level] of growth towards grade-level proficiency in reading and language arts each year					
[65%] of students will demonstrate at least one year of growth towards grade-level proficiency on standards in areas of history, math, science, art, and a foreign language each year	CoolSIS Grade Reports	65% of students					
50% of students will develop a passion for reading and read daily both for information and pleasure [based on the Student Reading Survey]. BayTech's target is to increase this goal by [5%] each year towards its goal of 70%	Student Reading Survey	50% of students will develop a passion for reading and read daily both for information and pleasure, increasing this goal by 5% each year towards its goal of 70%					BayTech implemented Accelerated Program (AR) to increase students' reading skills. 42% of BayTech students have been involved in AR by taking quizzes online on the books that they have read.
All students are required to take a minimum of 5 integrated science and math assignments with computer technology and at least 70% of students are targeted to receive a grade B or better in overall integrated science/math assignment	CoolSIS Data (BayTech's Online Grade Book)	All students			BayTech students are receiving Science & Math Integration assignments as a part of their Science Courses. Assignments and their grades are entered into our online grade book, CoolSIS. 80% of our students received a grade which is B or better in these assignments.	BayTech students are receiving Science & Math Integration assignments as a part of their Science Courses. Assignments and their grades are entered into our online grade book, CoolSIS. At least 70% of our students received a grade which is B or better in these assignments.	BayTech students are receiving Science & Math Integration assignments as a part of their Science and Technology Courses. Assignments and their grades are entered into our online grade book, CoolSIS. At least 70% of our students received a grade which is B or better in these assignments.
At least 40% of BayTech students will participate in afterschool programs regularly, [based on ASES reporting]	ASES reporting	At least 40% of students			At least 40% of students have been participating to After School Activities at our school.	At least 40% of students have been participating to After School Activities at our school.	At least 60% of students have been participating to After School Activities at our school.
At least 40% of	Science	At least 40% of			%90 of all	%50 of all	%90 of all

students will participate in local science fair-competitions [based on science registration logs].	registration logs	students			BayTech students attended to BayTech Science Fair in 2009-10.	BayTech students participated in the 5 th Annual BayTech Science Fair in 2010-11.	BayTech students participated in the 6 th Annual BayTech Science Fair in 2011-12.
An average daily attendance rate at least as high as OUSD's average [or a minimum of 95% each year, whichever is higher].	ADA	At least as high as OUSD's average or a minimum of 95% each year, whichever is higher			ADA 96.79% OUSD's average for 2008-2009 school year: middle: 94.28% high: 92.95%	ADA 95%	ADA 95%
Suspension at a rate lower than the District's average [accounting for similar demographics and grade levels served].	Suspension rate	Suspension at a rate lower than the District's average			BayTech has 12 suspensions this school year.	BayTech has 10 suspensions this school year.	BayTech has 6 suspensions this school year.
80% attendance by parent [/guardians] at parent/teacher conferences.	BayTech Activity Follow Up form	80% attendance				BayTech reached to at least %80 of its parents either via Parent Conferences or Home Visits.	BayTech reached to at least %95 of its parents either via Parent Conferences or Home Visits or Individual Parent Meetings
70% of parents that attend parent workshops, Parent's Club and/or school events, exhibits and programs during the academic year.	BayTech Activity Follow Up form	70% attendance					BayTech recorded at least %50 of parent attendance to parent workshops, Parent's Club and/or school events, exhibits and programs during the past 6 months.
100% participation by parent [/guardian] in IEP [meetings].	BayTech Activity Follow Up form	100% participation			100% participation	100% participation	100% participation of five IEP meetings.
100% staff attendance at fall retreat. (Except for pre-approved absences/sick leave. 100% teacher's attendance at regular professional development workshops. (Except for pre-approved absences/sick leave).	Staff Meeting Follow Up Forms	100% attendance			BayTech has a 100% participation rate for staff meetings except pre-approved absences and sick leaves.	BayTech has a 100% participation rate for staff meetings except pre-approved absences and sick leaves.	BayTech has a 100% participation rate for staff meetings except pre-approved absences and sick leaves.
Teachers will demonstrate the following; Knowledge of subject matter, Knowledge of curriculum, Competence in methods and strategies, and professional attitude; through evaluation of test scores, annual	BayTech Teacher Evaluation Form	80% or better at Evaluations			BayTech teachers are expected to receive 80 or more at their observations during the school year. All BayTech teachers scored more than 80 at their	BayTech teachers are expected to receive 80 or more at their observations during the school year. All BayTech teachers scored more than 80 at their	BayTech teachers are expected to receive 80 or more at their observations during the school year. All BayTech teachers scored more than 80 at their

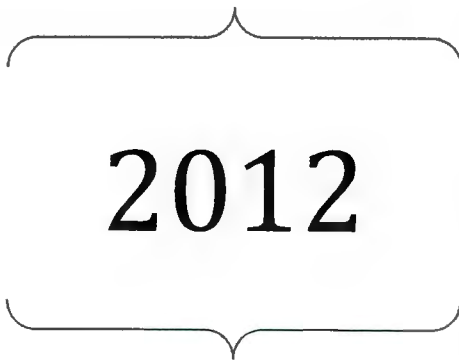
evaluation including classroom observations, parent/student assessment, and adherence to contract.					evaluations. Instrument: Teacher Evaluations	evaluations. Instrument: Teacher Evaluations	evaluations. Instrument: Teacher Evaluations
No deficit in operating budget [...] [based on annual budget, forecast budget and external audits].	Interim Reports	No deficit			No Deficit.	No Deficit.	No Deficit

Statutory Renewal Threshold	
1. API Growth Target:	
Did school attain API Growth Target in prior year?	Yes
Did school attain API Growth Target in two of last three years?	Yes
Did school attain API Growth Target in the aggregate of the prior three years?	Yes
2. API Rank:	
Is the school ranked 4 or higher on API in prior year?	No
Is the school ranked 4 or higher on API in two of last three years?	No
3. API Similar Schools Rank:	
Is the school ranked a 4 or higher on API Similar Schools in prior year?	No
Is the school ranked 4 or higher on API Similar Schools in two of last three years?	No
4. Is the school at least equal to the academic performance of schools students would have attended, including District as a whole?	

FACILITIES AND FUTURE PLANS

FACILITIES/ADA – APPLIES ONLY TO NON-OUUSD FACILITIES	
Is the facility meeting the needs of your staff and students?	Y
Will the facility continue to accommodate your growth needs?	Y
If applicable is your current lease still valid?	Y
Do they extend through the end of your requested charter term (2012-2017)?	Y
<p>If the lease does not extend through the end of your charter term please describe your plans for a facility solution which includes either:</p> <ul style="list-style-type: none"> A letter of intent, signed by the building owner, to lease or sell the proposed facility to your organization; or A memorandum of understanding, signed by the building owner that describes the status of negotiations with your organization regarding the possible lease or purchase of the building, describes any foreseeable conditions, circumstances or considerations that may affect the decision to lease or sell the building to your organization, specifies any decision-making process that may be required before an agreement can be finalized, specifies a date by which a decision to lease or sell is likely 	
<p>Describe the condition of your current facility.</p> <p>BayTech has just been relocated at the beginning of this educational year (2012-2013) through Prop39 legislation. BayTech goes through this every single year. The current facility is located at King Estate campus at 8251 Fontaine street, Oakland, 94605. BayTech shares this campus with three other schools: Sojourn Truth, Independent Study and Rudsdale. BayTech occupies the "c" section of the campus. The whole school campus went through massive construction reinforcement at the beginning of this year. Hence, the current facility is very good and well structured. BayTech has 7 portable teaching stations, 5 in- building teaching stations/labs and 1 office. All in all. Baytech occupies 13 rooms and shares the cafeteria, gym and playground with all the other schools. At this point in time, there are no complaints about the condition of the facility.</p>	
<p>What procedures are in place for handling facility repairs?</p> <p>The OUSD is very helpful with all the repairs. Because we go through the Prop 39 legislation, the district has us do all these repairs and maintenance work that needs to be done and reimburses the school of all these expenses through credit towards our facility agreement fees. The buildings and grounds under the OUSD supports and assists the school with all repair and maintenance work.</p> <p>Describe your systems for ongoing maintenance of the facility and if applicable, provide a copy of the contract for provision of maintenance services for the facility.</p> <p>Currently, the school gym is under maintenance and construction and it is due to finish in mid-October. Hopefully, in the second half of October our students will be able to utilize the gym for sports and P.E. purposes. Other than that, all other minor repair and maintenance has been done at the beginning of the year and in the first month of the educational calendar.</p>	
FUTURE PLANS	
Discuss the key challenges or risks that you see for your school in the next five year period.	

<ul style="list-style-type: none"> ▪ We have just moved to the current campus and therefore have lost %25 of our whole student population due to this relocation. Hence, outreach and recruitment is our greatest challenge. ▪ We go through Prop. 39 for acquiring facilities every year and our concern is that BayTech's school campus/location may change once or even more than once through this period. ▪ Transportation is the third greatest challenge as the school is far away from the down town beside the 580 off Keller Street merging to Fontaine Street. A significant number of students try to make their way from within downtown or thereabouts by taking two buses as there is no one bus route from there. This whole process takes minimum 35 minutes. <p>Describe what you are doing or plan to do to address each of the major challenges that you have identified.</p> <ul style="list-style-type: none"> ▪ We plan to do an extensive outreach/recruitment process through a variety of means: <ul style="list-style-type: none"> ○ Posting ads in local newspapers ○ Sending outreach materials (letters, flyers, postcards, etc.) to locals around ○ Hosting regular open houses ○ Utilizing Parent Club in spreading the word of mouth to the neighborhood, esp. locals from the vicinity. ▪ After renewal, we would like the OUSD to consider multi-year lease options for BayTech at our current campus. This could save both the School and the District a great deal of time and energy that can be used in other areas. Furthermore, this would eliminate the risk of another relocation which puts tremendous stress on the BayTech community. ▪ Meetings with AC transit needs to take place in an effort to have AC transit to add a dedicated bus from downtown to the school site. School principals in our area can collaborate in creating a plan to resolve this problem as this is our common problem. 	
<p><u>As applicable:</u> Describe any proposals for additional campuses your school may be approved for and/or are considering seeking approval for during this renewal period (2012-2017). N/A</p>	
<p><u>As applicable:</u> Describe any material revisions to your charter and rationale for this renewal period (2012-2017). This request will be considered as part of the renewal process.</p> <ul style="list-style-type: none"> • Material revisions include, but are not limited to, adding additional grades, potentially growing student enrollment beyond the capacity, changing the school's mission, purchasing a new facility, etc. • In order to have the material revision to your charter approved, your school needs to: <ul style="list-style-type: none"> ○ State the revision(s) the school's governing board wishes to make to the charter. ○ Describe the reasons for the request(s). ○ Describe the changes in the operations of the school that will be impacted by the proposed revision(s). Indicate how student enrollment, curriculum, staffing, governance, facilities, and budget may or will be impacted in the current school year and in the subsequent school years. • If the revision(s) directly affect(s) the students, explain if and how the proposed revision has been discussed with the parents. • If appropriate, describe how student achievement may be impacted by the proposed revision(s). 	



2012

WILLOW
EDUCATION

BAY AREA TECHNOLOGY SCHOOL:
2012 PERFORMANCE ANALYSIS

September 2012

Contents

EXECUTIVE SUMMARY	2
PART I: DEMOGRAPHICS	3
ENROLLMENT	3
ETHNICITY	4
Socio-Economically Disadvantaged	5
English Language Learners (ELLs).....	6
Special Education	7
DROPOUT RATES:.....	8
PART II: STATE TEST RESULTS.....	9
Annual Performance Index (API).....	9
Table 1: BayTech API	9
Table 2: Bay Tech API statewide and similar schools ranking	10
Adequate Yearly Progress (AYP)	11
Table 3: 2012 BayTech AYP	11
Standardized Testing and Reporting (STAR)	12
CST Results by Grade	17
CST 2012 Results Compared with State and County	21
CST 2012 Results of Hispanic-Latino Subgroup Compared by State and County	24
CST 2012 Results of African American Subgroup Compared by State and County	25
Grade and Subject Cluster Analysis	29

EXECUTIVE SUMMARY

Bay Area Technology School (BayTech) is a true advocate of data-driven instruction strategy in K-12 education. Many critical decisions from student placement to teaching staff assignment depend on the data that BayTech collects, analyzes, and turns into sound executive decisions to shape educational practices. The reports, graphs, tables, and through analysis is just a snapshot of what BayTech produces and utilizes. There is much more data analysis that BayTech does, such as MAP test analysis, etc. However, in order to provide a concise report, BayTech has provided a sample of its different reports generated through collaboration with the Accord Institute for Education Research.

In this report, BayTech has collected data from different sources and tools to measure and monitor its academic achievement in a comprehensive manner. The goal is to develop data-driven instructional policies and instructional decisions to continue to sustain the success that BayTech has enjoyed during its continuous growth. This report relies on the data from California Standardized Testing and Reporting Results (STAR), as well as the demographic information from California Department of Education (CDE) online sources and the school's information system. Demographic and state achievement data can be obtained from publicly available resources.

The report is divided into several sections. In the first part, the report focuses on the school demographics to provide a breakdown of the input that the school is receiving from the community as its baseline. This part is really key to understand where BayTech starts to build student academic competency.

The second part focuses on state test data. In this part, the report displays on how BayTech reads, analyzes, and interprets the data available as a result of state tests proctored annually. The report presents Academic Performance Index (API) and Adequate Yearly Progress (AYP) data points to provide where BayTech stands this year. All API and AYP data are from publicly available sources. In addition, this report provides grade by grade and subject by subject state test analysis to exhibit current performance levels of advanced, proficient, basic, below basic, and far below basic for BayTech based on the research file available through CDE online STAR Test Results website. The analysis covers ethnic, socioeconomic, special education, and English Language Learner subgroups. Finally, this part concludes with cluster analysis for each subject designed on CDE's annual public cluster reporting framework including statewide averages for correct items along with statewide percentages.

PART I: DEMOGRAPHICS

ENROLLMENT

Time series school enrollment data cited from CDE indicates an increasing trend in the enrollment for BayTech during the first four years. There is a decrease in 2008 and then an increasing trend is seen in the next following three years. The number of enrollment has reached to **230** in 2011-12. It decreased to 198 in 2012-13 school year. The school has changed two locations that explains the drops in the graph. The school was relocated from the Carter Campus in North Oakland to King Estate Campus in East Oakland -a nine-mile distance, but the school was able to maintain the majority of its students.

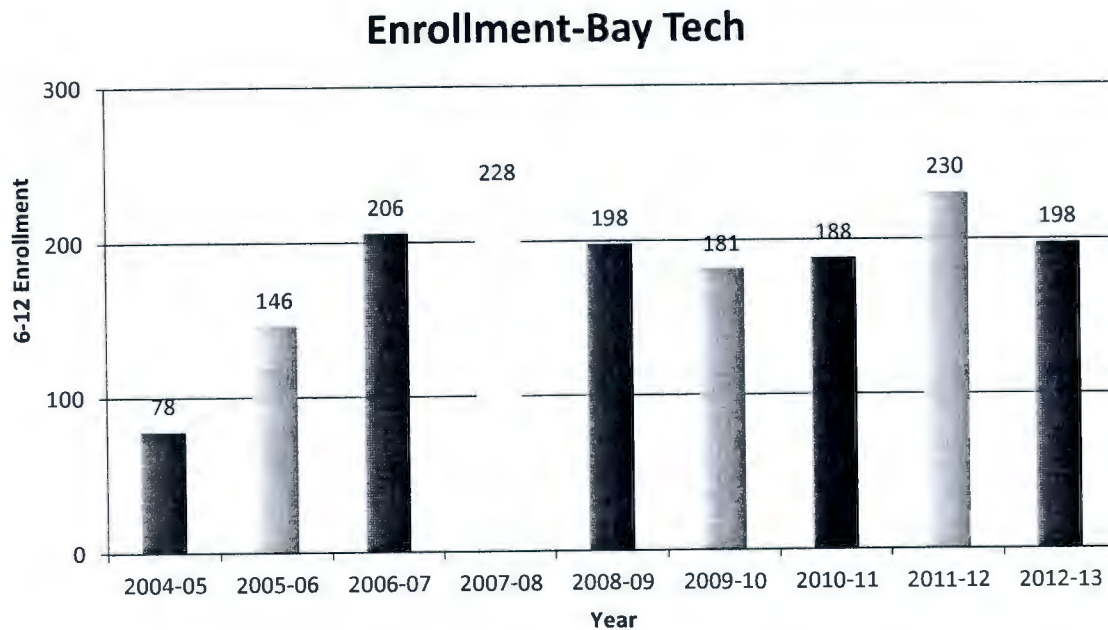


Figure 1: Time series School Enrollment Data for BayTech

BAY AREA TECHNOLOGY SCHOOL: 2012 PERFORMANCE ANALYSIS

ETHNICITY

In 2011-12, Bay Tech student demographics indicate a large African American presence with 57% while Hispanic/Latino is the second most significant group with a distant 20%. African American group is much larger than statewide African American percentage (7%). The Hispanic/Latino percentage has increased to 27.3% in 2012-13.

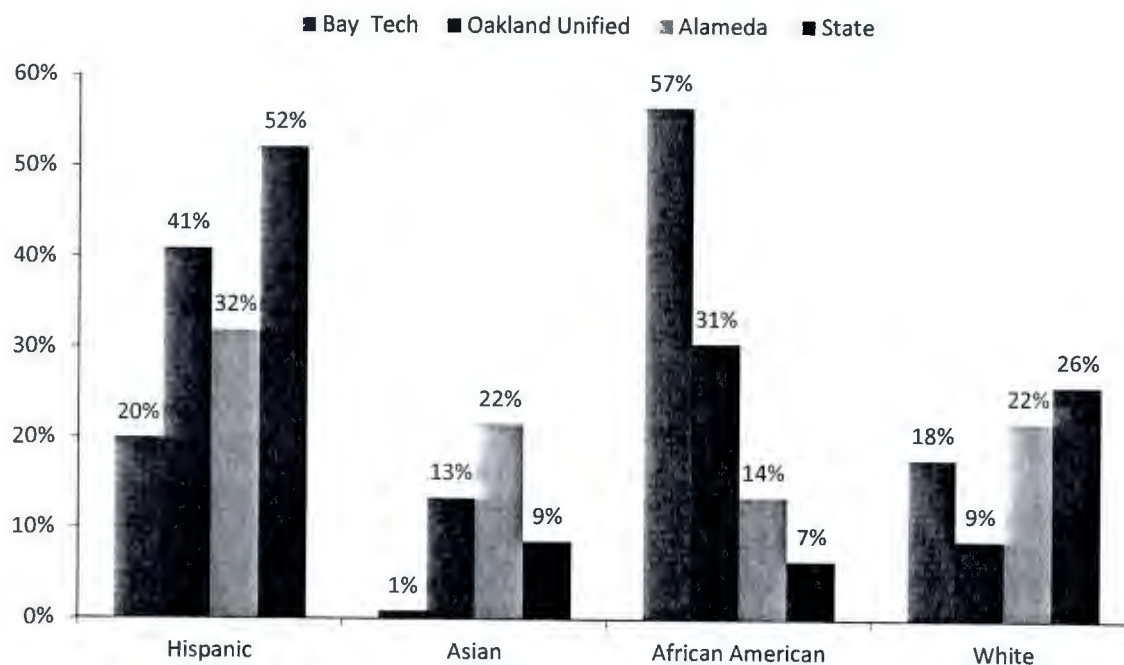
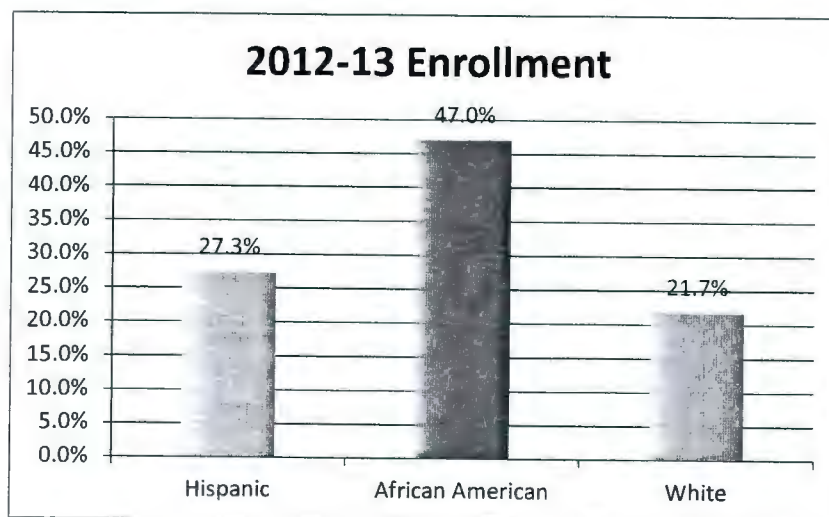


Figure 2: 2011-12 Demographics Comparison of Bay Tech with District and State



Socio-Economically Disadvantaged

The chart below shows a comparison of Socio-Economically Disadvantaged percentage of BayTech compared with Oakland unified, Alameda County and California State for the last five years.

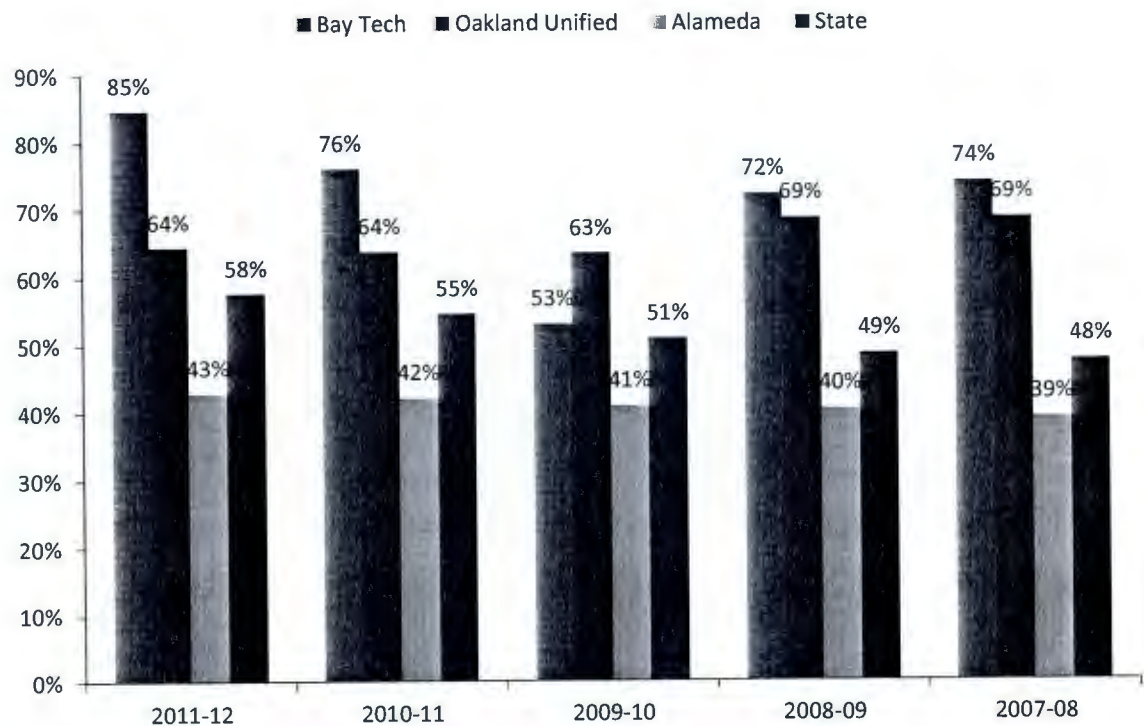
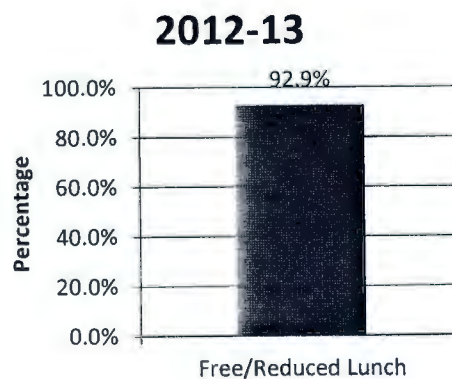


Figure 3:
Time Series Socio-Economic Demographics of Bay Tech comparison with State, County and District

BayTech outreaches to socio-economically disadvantaged populations and maintains a higher percentage of socio-economically disadvantaged students compared with the District, County, and State. BayTech socio-economically disadvantaged students' growth API score in 2012 is 739 points, with a 71-point gain from 2011. BayTech meets the AYP performance criteria for its socio-economically disadvantaged population.



BAY AREA TECHNOLOGY SCHOOL: 2012 PERFORMANCE ANALYSIS

English Language Learners (ELLs)

The chart below demonstrates a comparison of Bay Tech ELL enrollment with Oakland Unified, Alameda County, and California State for the last six years.

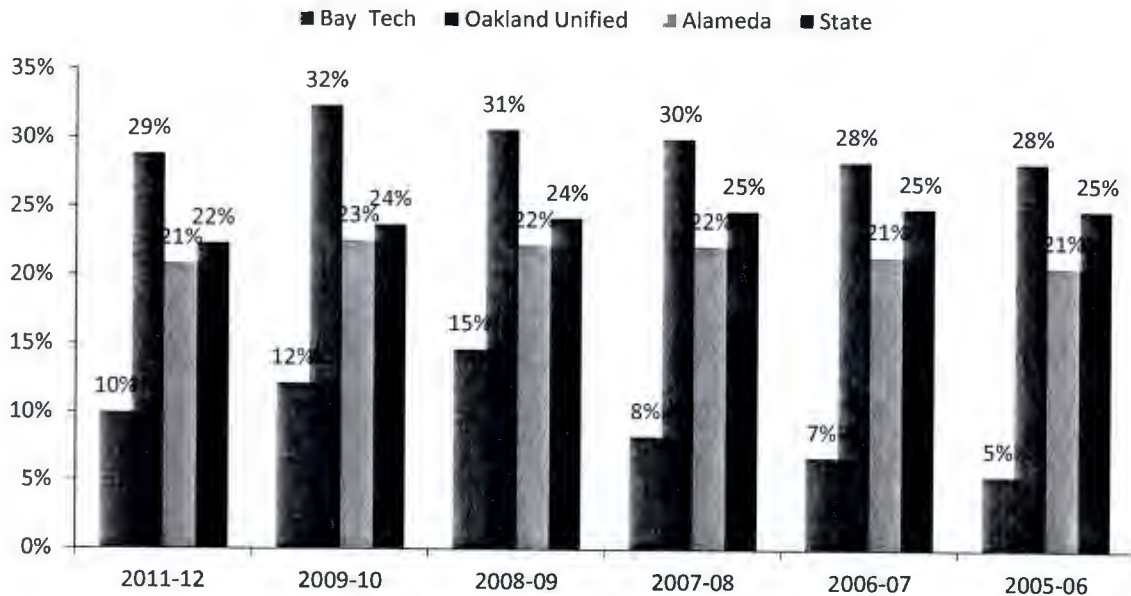
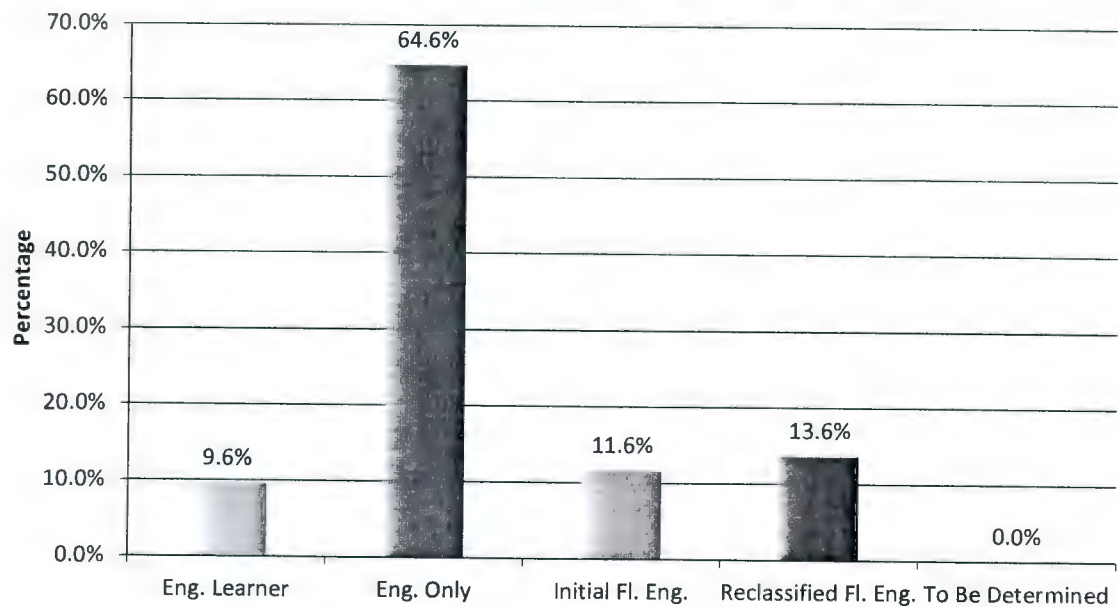


Figure 4: Time Series ELL Demographics of Bay Tech comparison with State, County and District

2012-13 ELL Enrollment-BayTech



Special Education

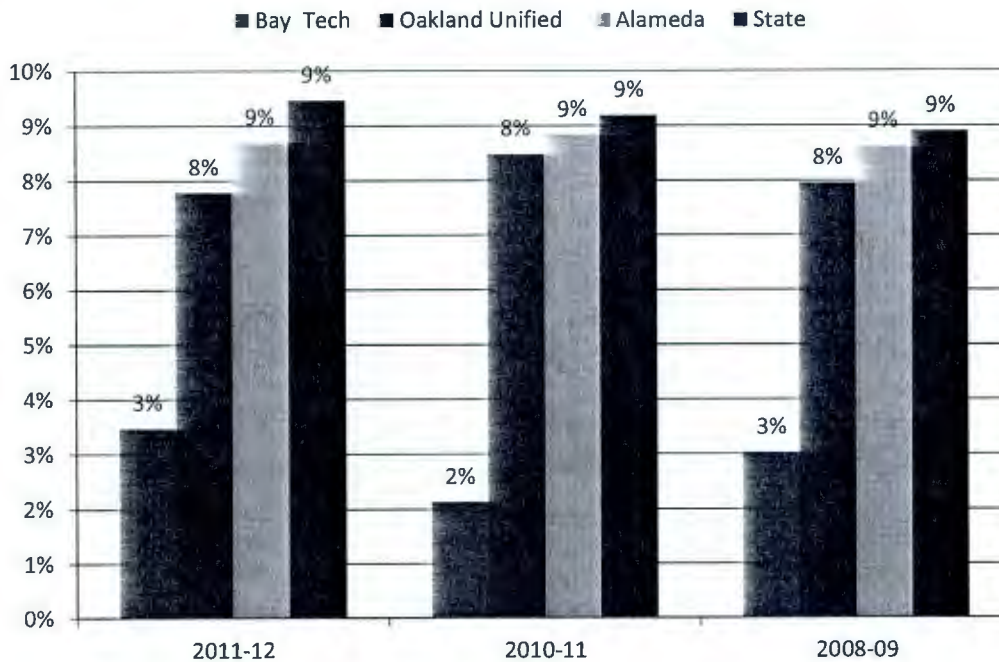


Figure 5: Time Series Special Ed Demographics of Bay Tech comparison with State and District

BayTech does not discriminate against any pupil on the basis of the characteristics listed in Section 220 (actual or perceived disability, gender, nationality, race or ethnicity, religion, sexual orientation, or any other characteristic that is contained in the definition of hate crimes set forth in Section 422.55 of the Penal Code or association with an individual who has any of the aforementioned characteristics). A student's IEP is never required prior to enrollment.

Please see the charter petition for BayTech's plan for English Language Learners and Students with Special Needs. BayTech is well-equipped to meet the needs of a diverse student body with multiple learning styles and different backgrounds. The school implements early intervention programs and monitors student progress. English Learners' growth API score in 2012 is 672 points, with a 24-point gain from 2011.

DROPOUT RATES:

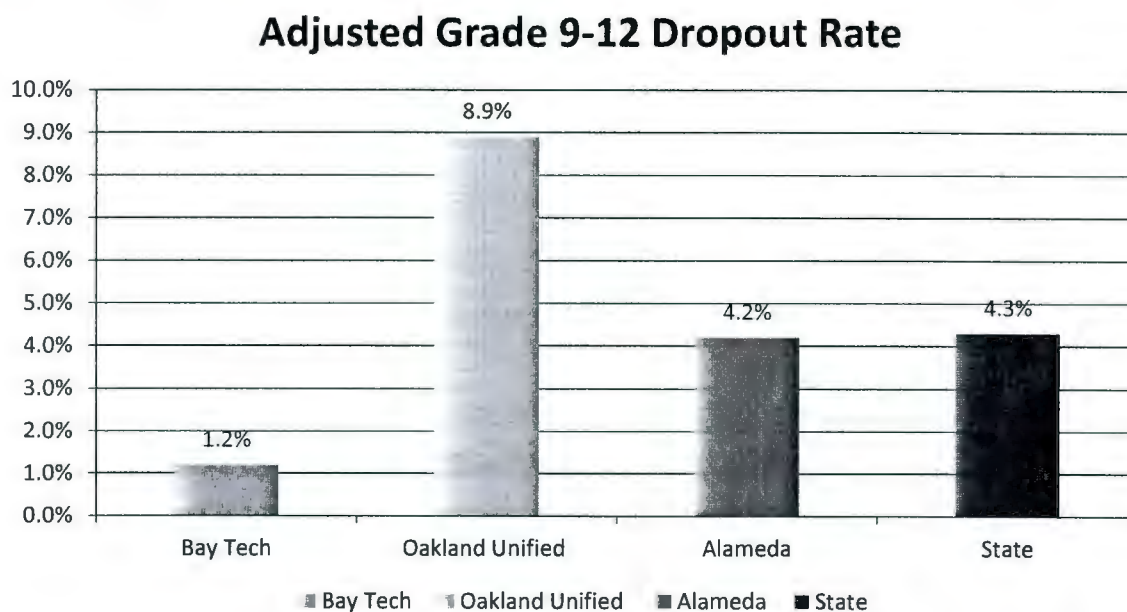


Figure 6: 2009-10 Bay Tech Dropout rates comparison with District and State

It is BayTech's goal to have a dropout rate that is lower than the OUSD average. The school has achieved this goal in 2012. BayTech aims to reduce dropout rates by providing academic and social support in a small school environment. The BayTech program aims to improve students' performance in reading, writing, and math, reduce dropout rates, achieve high student attendance rates, and increase the number of students who pursue careers in STEM areas.

BAY AREA TECHNOLOGY SCHOOL: 2012 PERFORMANCE ANALYSIS

PART II: STATE TEST RESULTS

Annual Performance Index (API)

Table 1: BayTech API

Year	Base API	Target	Growth API	Growth
2005-06	627	9	656	29
2006-07	653	7	633	-20
2007-08	633	8	635	2
2008-09	635	8	658	23
2009-10	658	7	674	16
2010-11	674	6	696	22
2011-12	695	5	759	64
Aggregate Growth		50		136

Groups	Number of Students Included in 2012 API	Numerically Significant in Both Years	2011 Base	2012 Target	2012 Growth
School wide	184		695	700	759
Black or African American	97	Yes	643	651	728
American Indian or Alaska Native	1	No			
Asian	2	No			
Filipino	5	No			
Hispanic or Latino	44	No	709		737
Native Hawaiian or Pacific Islander	0	No			
White	31	No	780		844
Two or More Races	4	No			
Socioeconomically Disadvantaged	159	Yes	668	675	739
English Learners	26	No	648		672
Students with Disabilities	4	No			

*Source: CDE Web Site.

Growth API

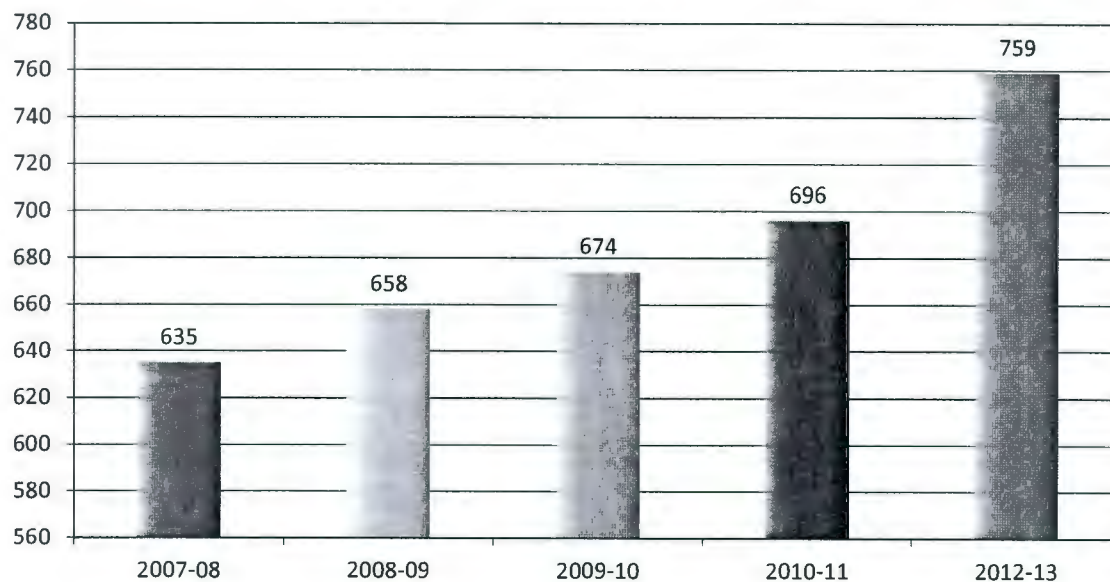


Figure 7: BayTech API growth over the years

With its successful education model and through hard work, BayTech has consistently raised its Academic Performance Index (API) score over the years as shown in the figure above.

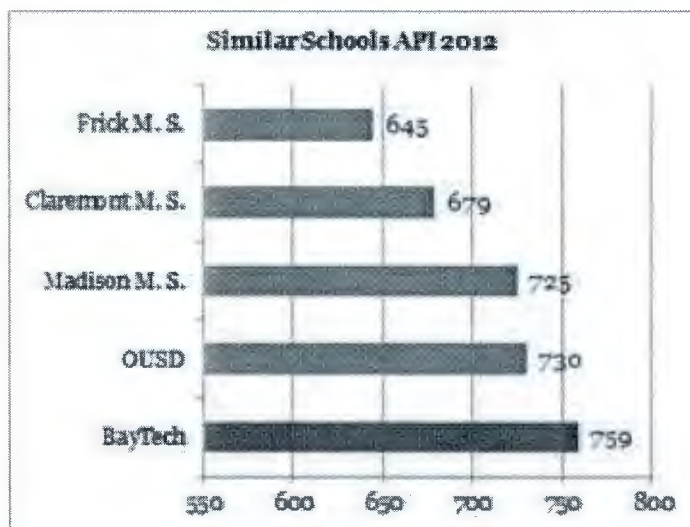
Table 2: Bay Tech API statewide and similar schools ranking

Year	Statewide rank	Similar school rank
2005-06	1	
2006-07	3	5
2007-08	2	7
2008-09	1	5
2009-10	2	1
2010-11	2	2
2011-12	3	2

BayTech has achieved the highest API score of all similar OUSD schools with similar demographics that BayTech students would otherwise attend. The following figure shows the

BAY AREA TECHNOLOGY SCHOOL: 2012 PERFORMANCE ANALYSIS

API score of BayTech as compared to the API growth of the similar schools in Oakland Unified School District in 2012.



Adequate Yearly Progress (AYP)

Table 3: 2012 BayTech AYP

GROUPS	English-Language Arts Target 77.8 %		Mathematics Target 77.4 %	
	Proficient	Met 2012 AYP Criteria	Proficient	Met 2012 AYP Criteria
School wide	47.8%	Yes	43.7%	Yes
Black/African American	40.3%	Yes	37.5%	Yes
American Indian				
Asian				
Filipino				
Hispanic	50.0%		34.4%	
White	52.4%		68.2%	
Socio. Disadvantaged	42.5%	Yes	39.5%	Yes
English Learners				
Students with Disabilities				

*Source: CDE Web site

BayTech has made AYP in 2011-12 by meeting 13 of 13 AYP criteria.

Standardized Testing and Reporting (STAR)

STAR results are important assessment tools to understand how MSA-Santa Clara students are performing in certain subjects including English, math, science, and social science. Teachers and parents can use test results to improve student learning. MSA-Santa Clara analyzes STAR results in several dimensions including but not limited to:

- Longitudinal and cross-sectional by grade
- By subgroups
- By clusters for each subject
- At individual student level

Department, grade and leadership level teams analyze CST results by grade and subgroup through cluster performance analysis in order to develop academic goals for the upcoming school year. In addition, we further disaggregate CST results at student level and offer intervention programs to low performing students. Please see the charter petition for further information.

Longitudinal and Cross-sectional Data Driven from CDE Research Files

Cross-sectional analysis of STAR results includes a closer look into how grades compare over the years. In the following figure, ELA scores of each grade are compared in years 2009 through 2012.

BAY AREA TECHNOLOGY SCHOOL: 2012 PERFORMANCE ANALYSIS

CST English Language Arts Analysis

ELA

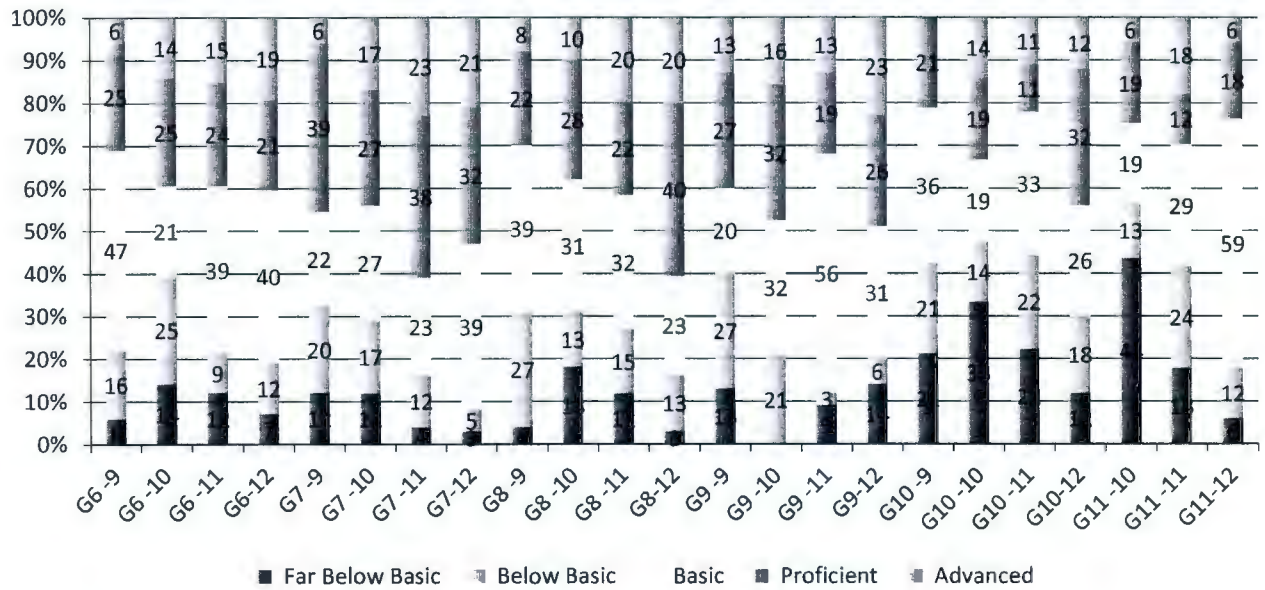


Figure 8: 2009-2012 Bay Tech Cross-sectional ELA Proficiency Percentages

ELA

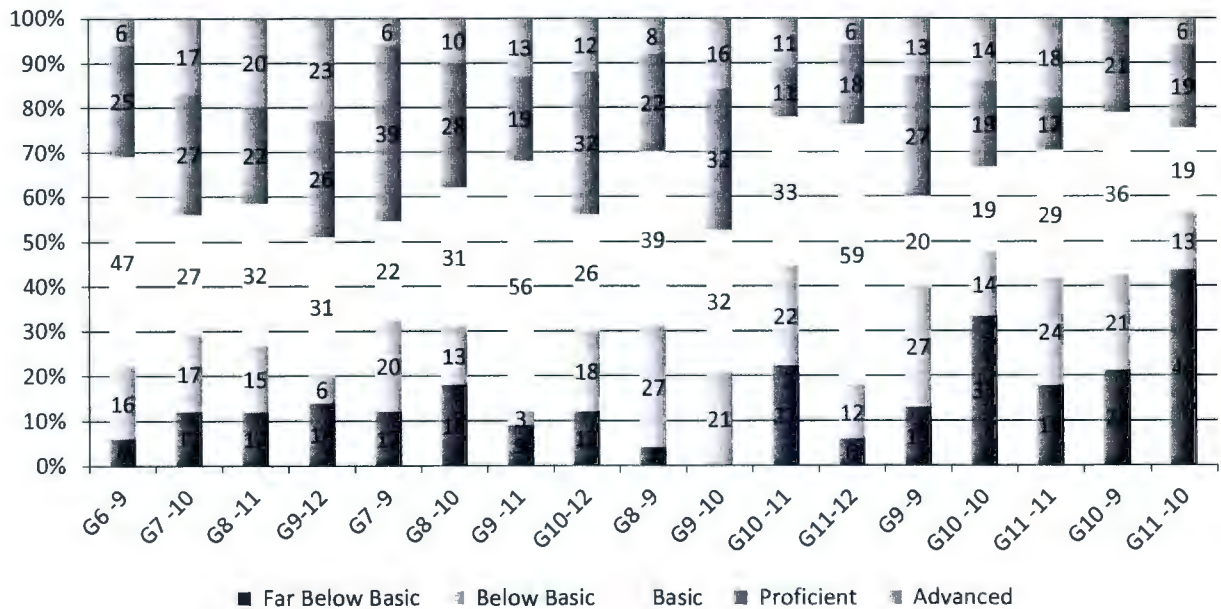


Figure 9: 2009-2012 Bay Tech Longitudinal ELA Proficiency Percentages

ELA Below and Far Below Basic

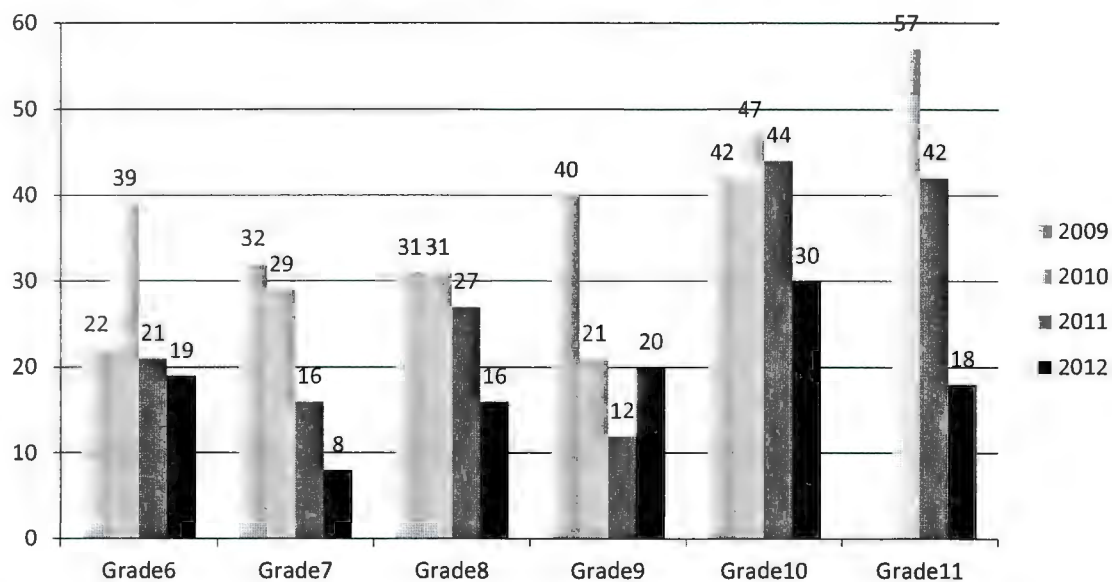


Figure 10: Percent of ELA students scoring Below Basic & Far Below Basic in CST

It is BayTech's goal to keep Far Below Basic rate less than 25%. BayTech has achieved this goal and also kept its Far Below Basic rate lower than the rates of the district, county and state in all grade levels.

ELA Proficient & Above

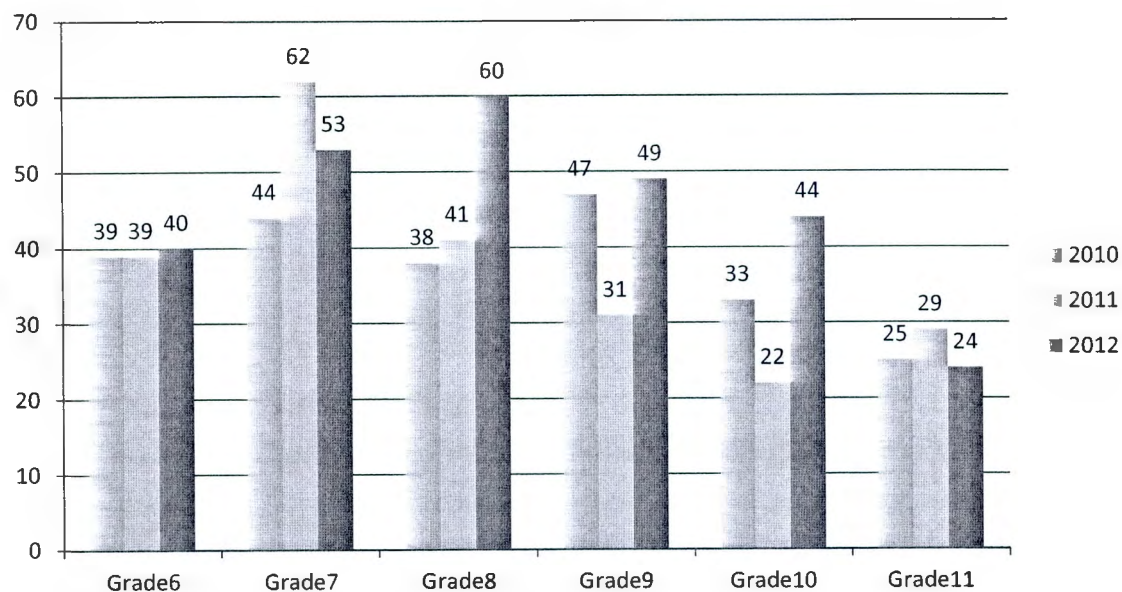


Figure 11: Percent of ELA students scoring Proficient & Advanced in CST

BayTech ELA proficient and advanced rates have increased from 2010 to 2012 in all grades except for Grade 11.

CST Mathematics Analysis

Math

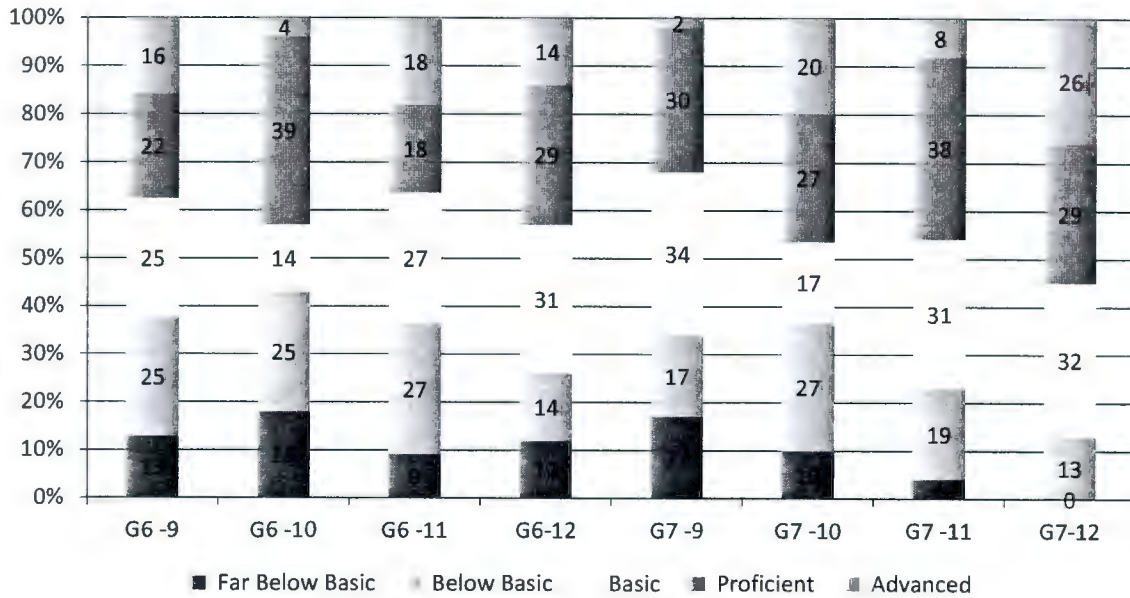


Figure 12: 2009-2012 Bay Tech Cross-sectional Mathematics Proficiency Percentages

Math Below and Far Below Basic

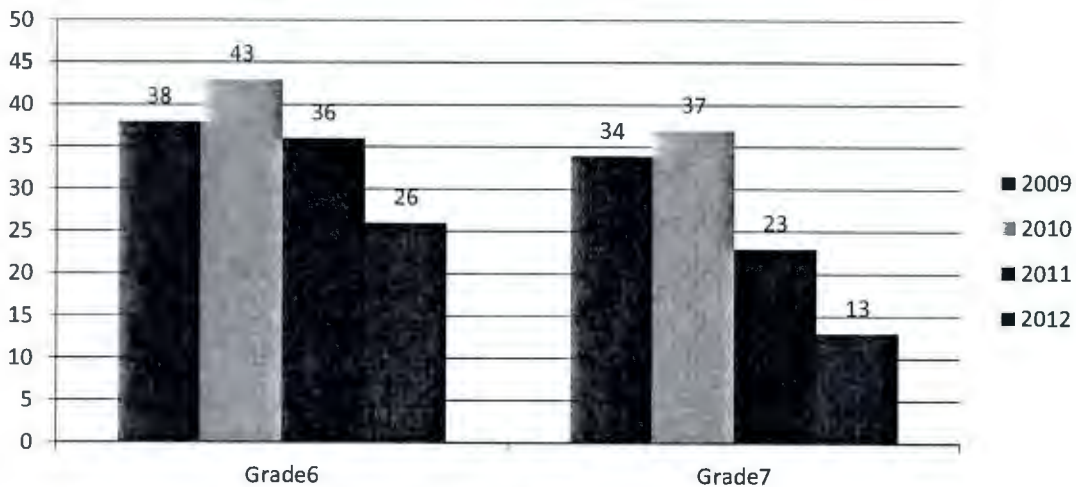


Figure 13: Percent of Math students scoring Below Basic & Far Below Basic in CST

Math Proficient & Above

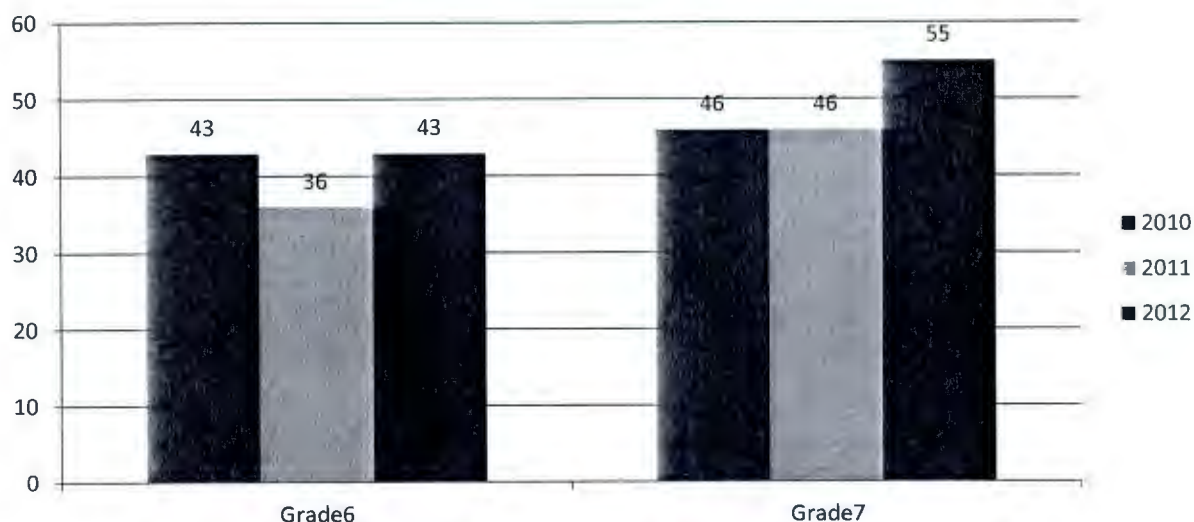
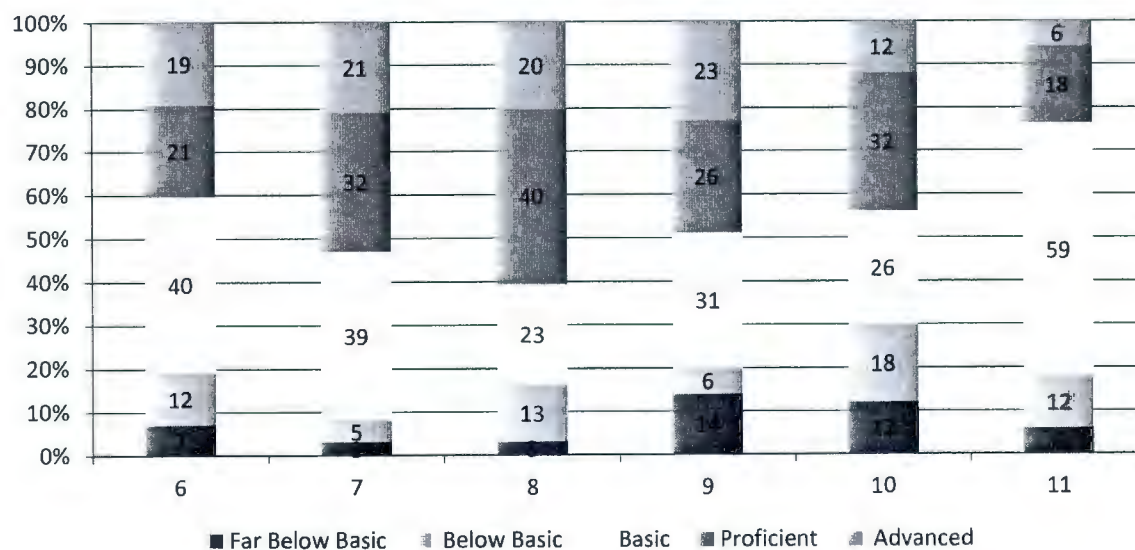


Figure 14: Percent of Math students scoring At or Above Proficient in CST

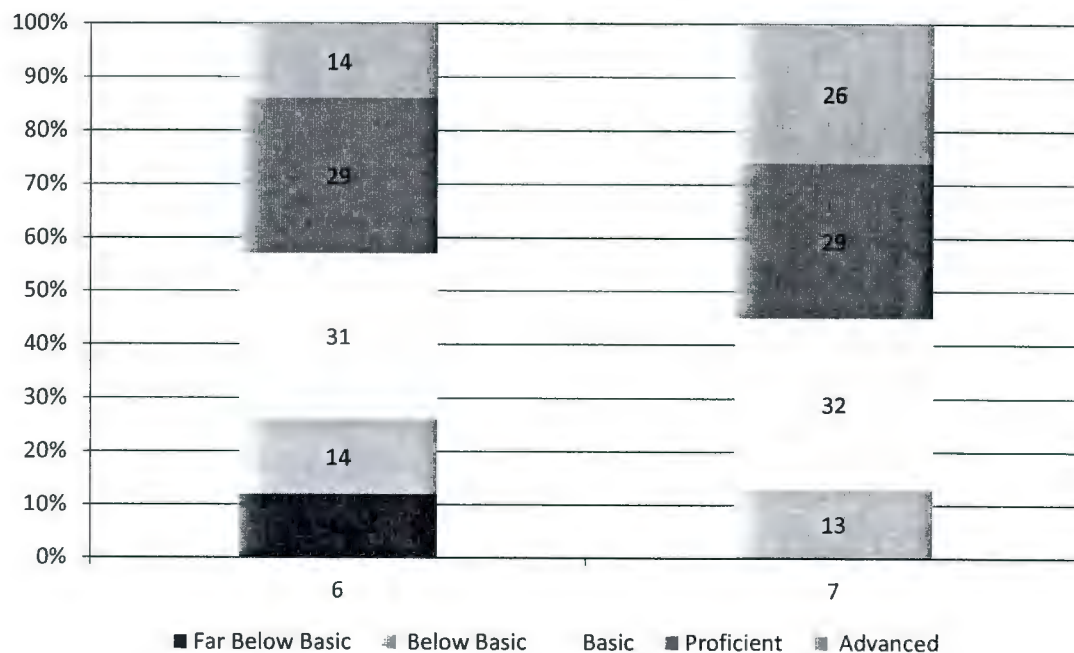
BayTech math proficient and advanced rates have increased from 2010 to 2012 in grades 6 and 7.

CST Results by Grade

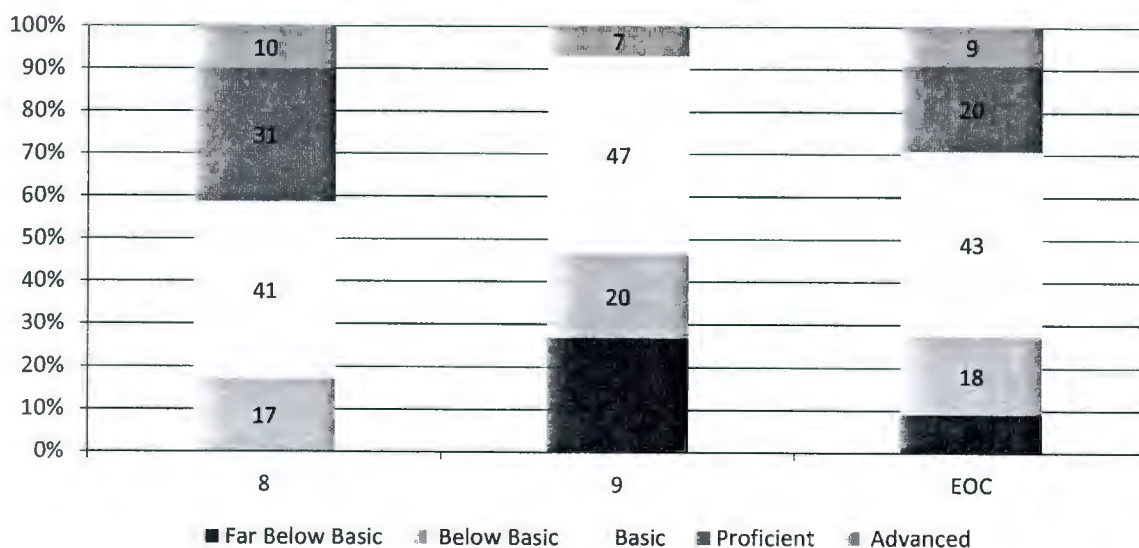
CST 2012 ELA



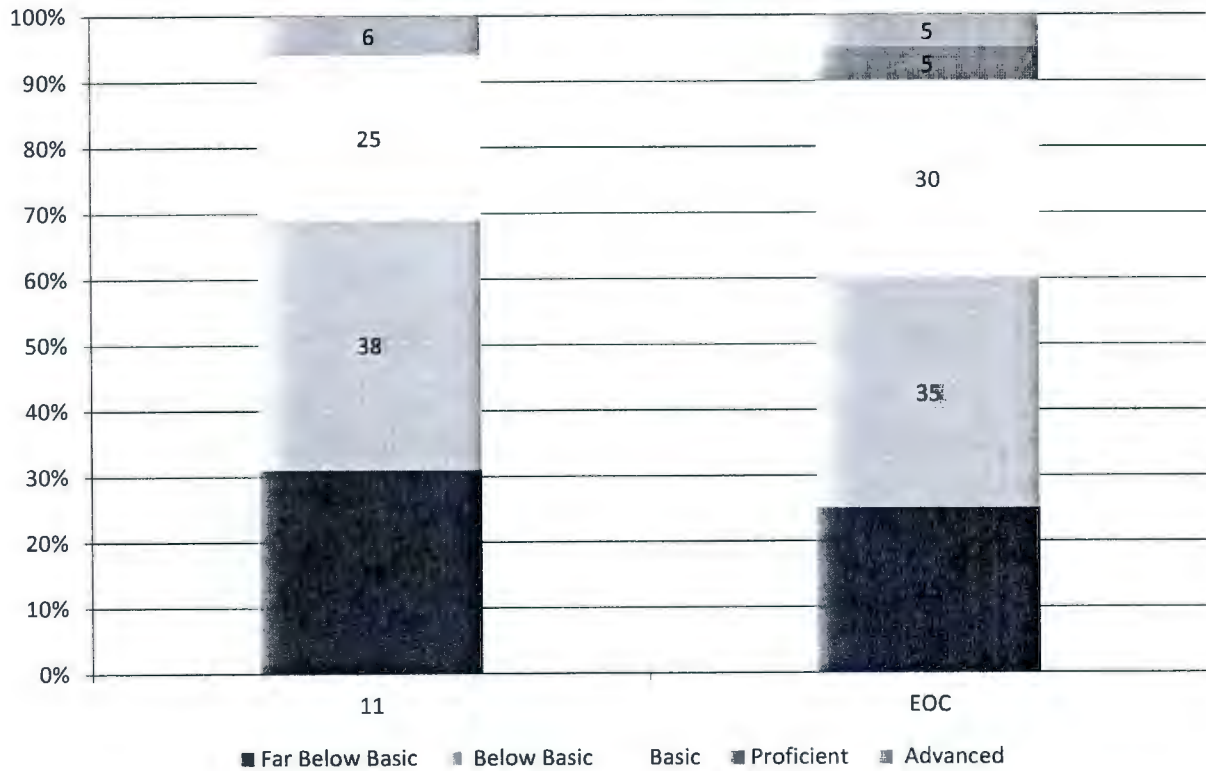
CST 2012 Math



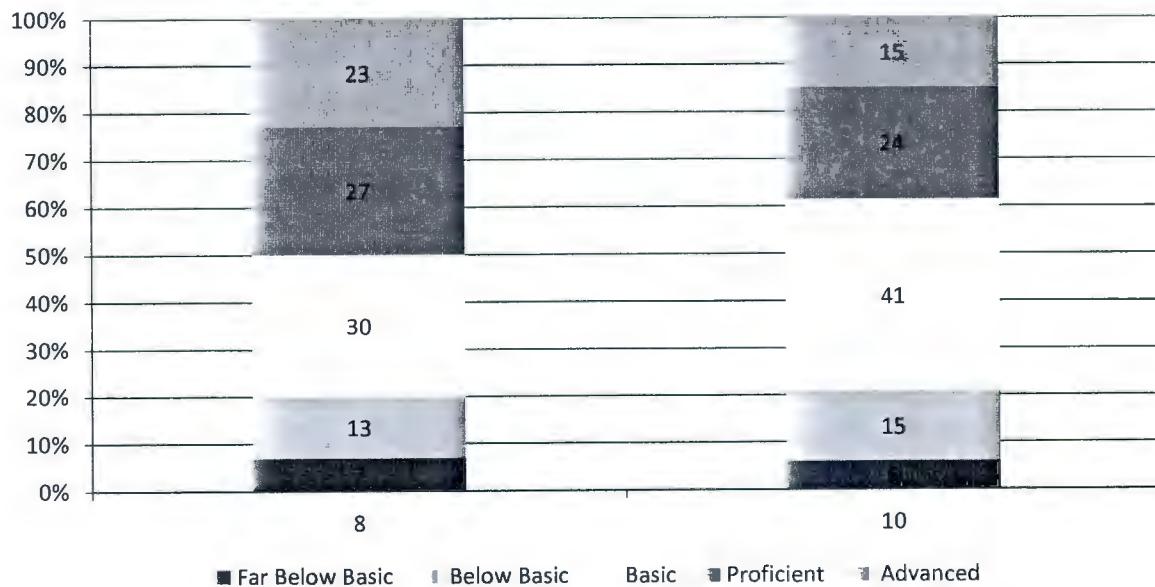
CST 2012 Algebra I



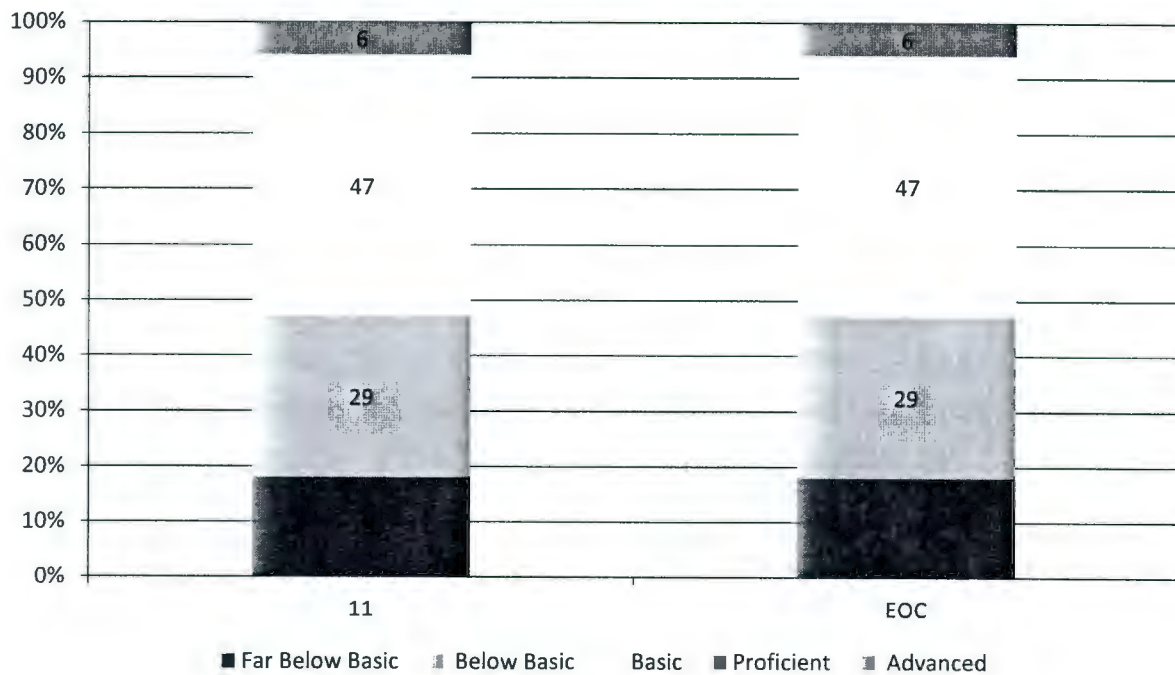
CST 2012 Algebra II



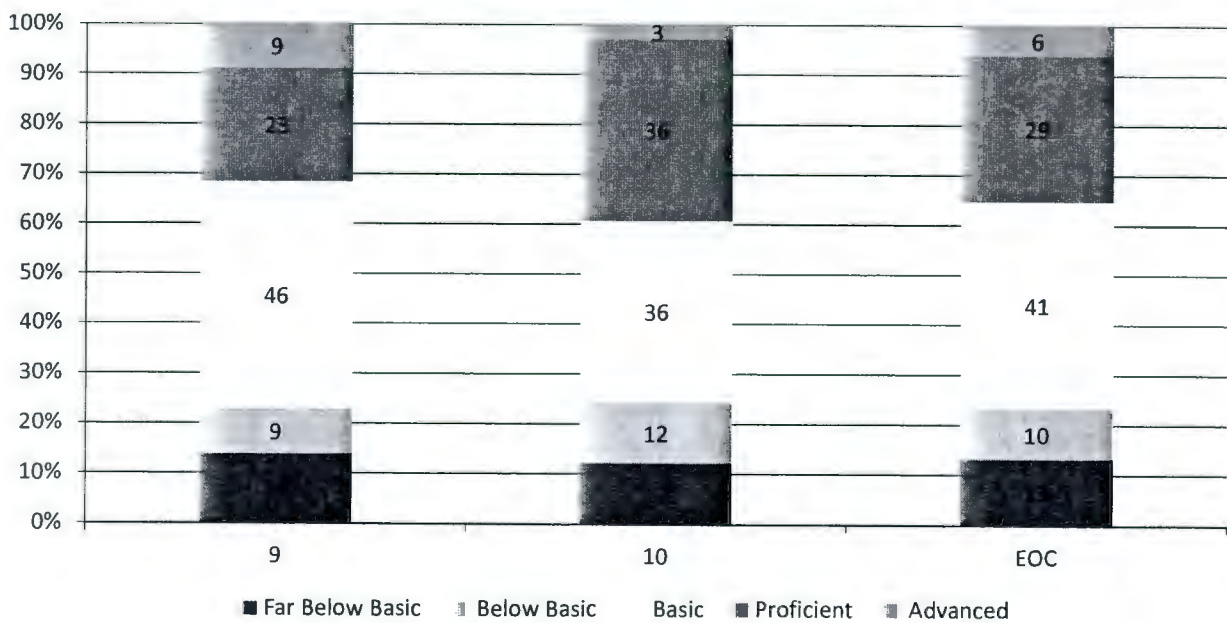
CST 2012 Science



CST 2012 Physics



CST 2012 Biology/Life Sciences

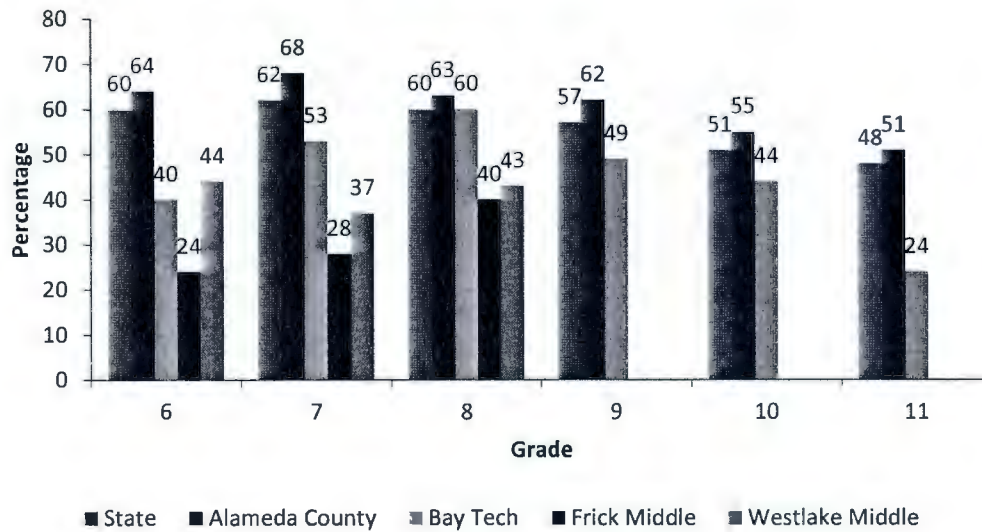


BAY AREA TECHNOLOGY SCHOOL: 2012 PERFORMANCE ANALYSIS

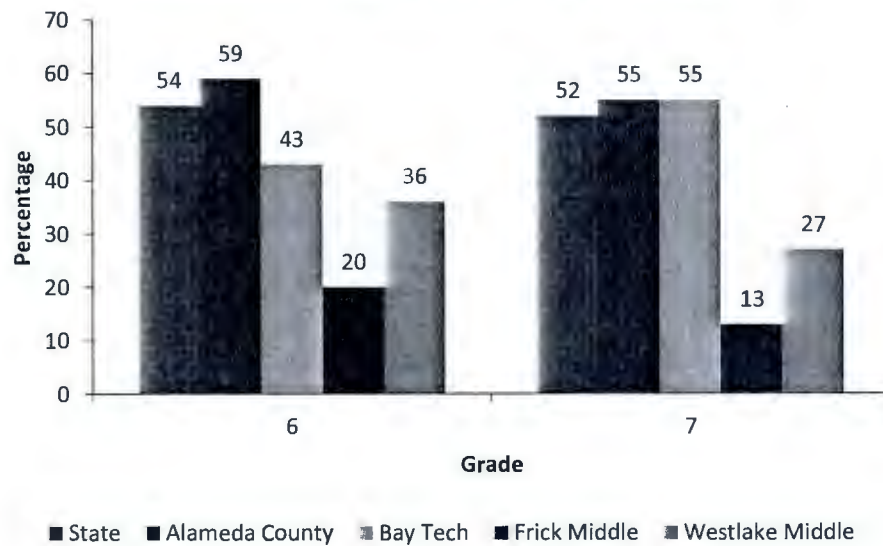
CST 2012 Results Compared with State and County

The following figures will compare BayTech's 2012 CST performance with the state, county and two comparable schools by grade level.

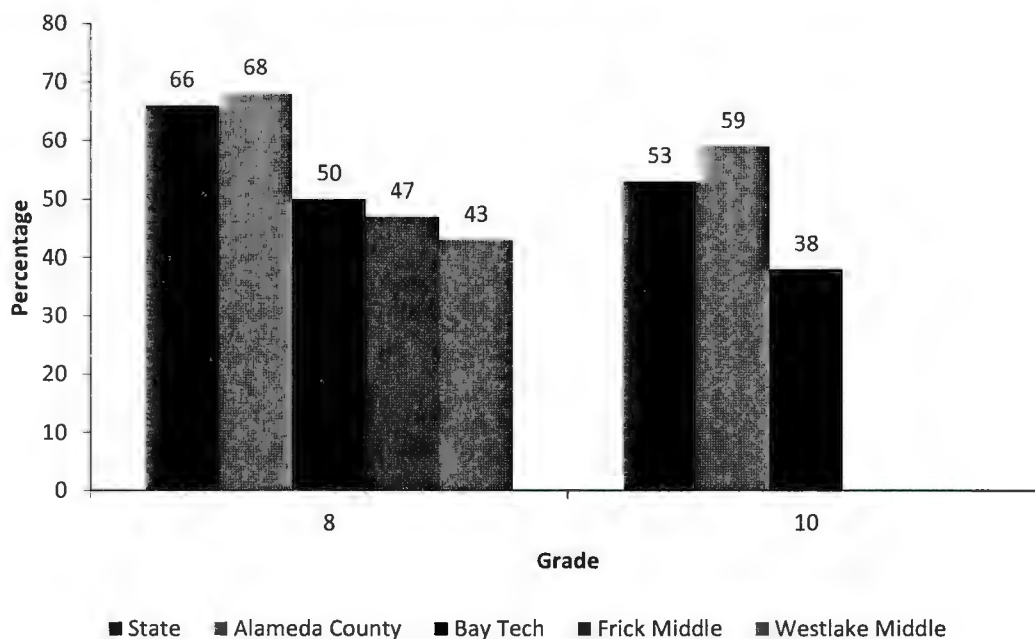
CST 2012 ELA Proficient & Above



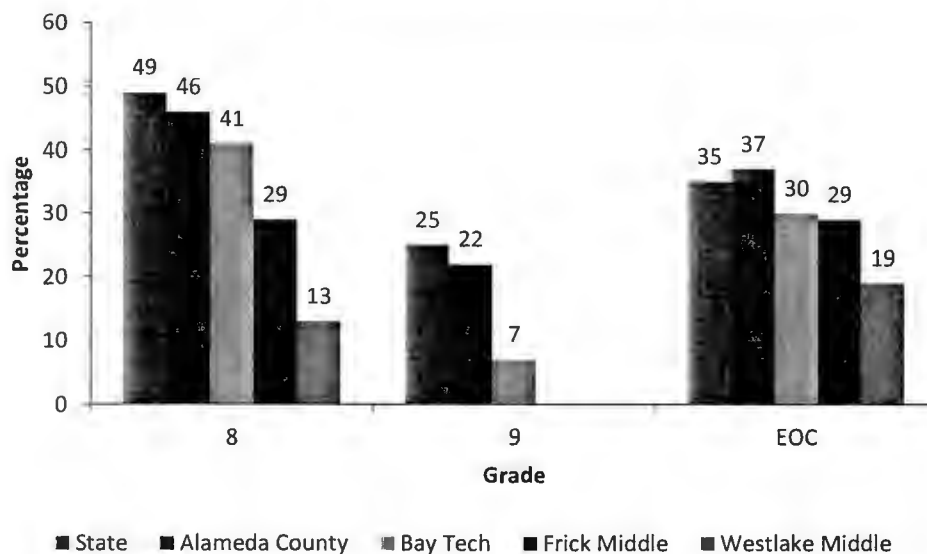
CST 2012 Math Proficient & Above



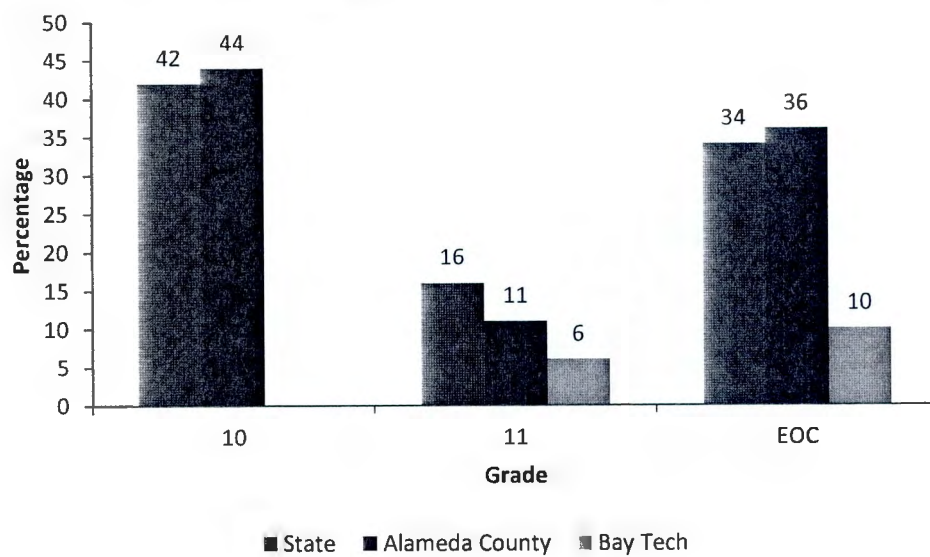
CST 2012 Science Proficient & Above



CST 2012 Algebra I Proficient & Above

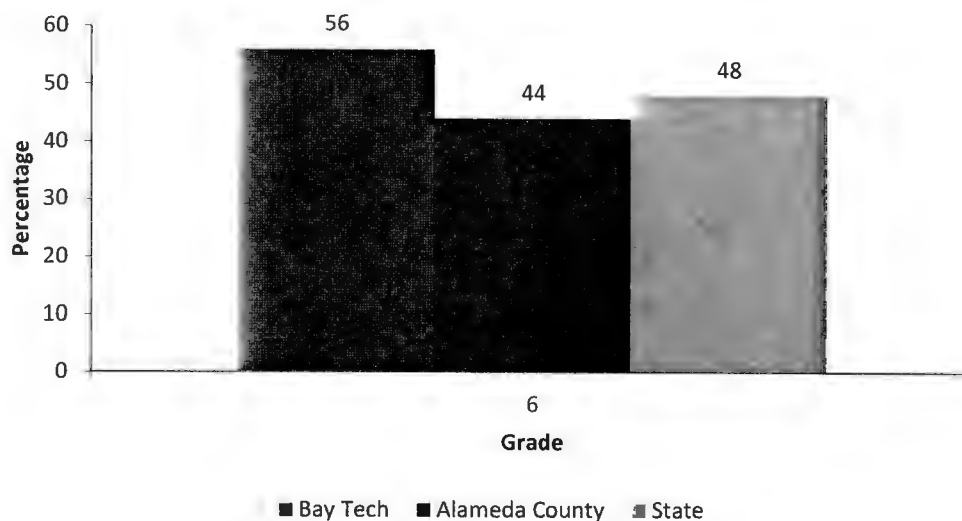


CST 2012 Algebra II Proficient & Above

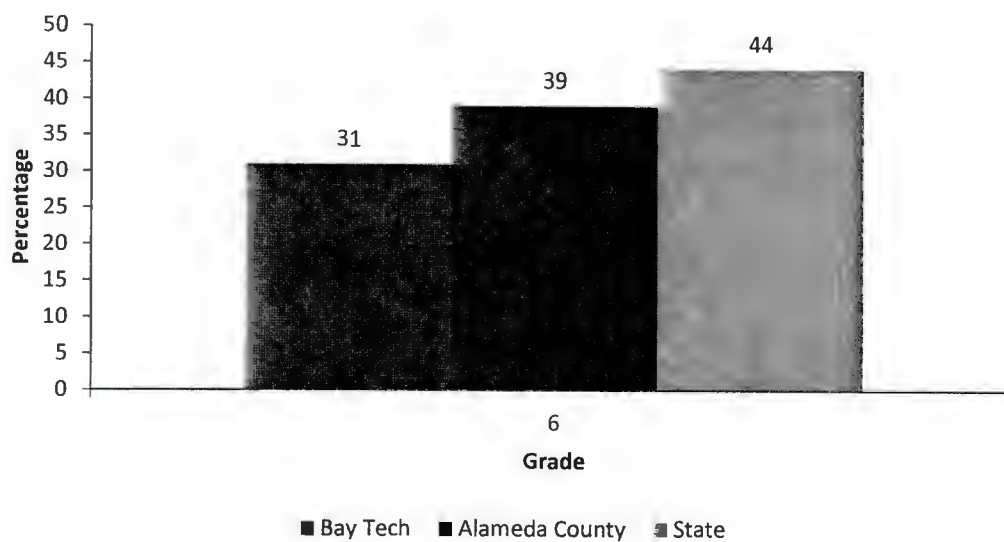


CST 2012 Results of Hispanic-Latino Subgroup Compared by State and County

2012 CST ELA Proficient & Above- Hispanic

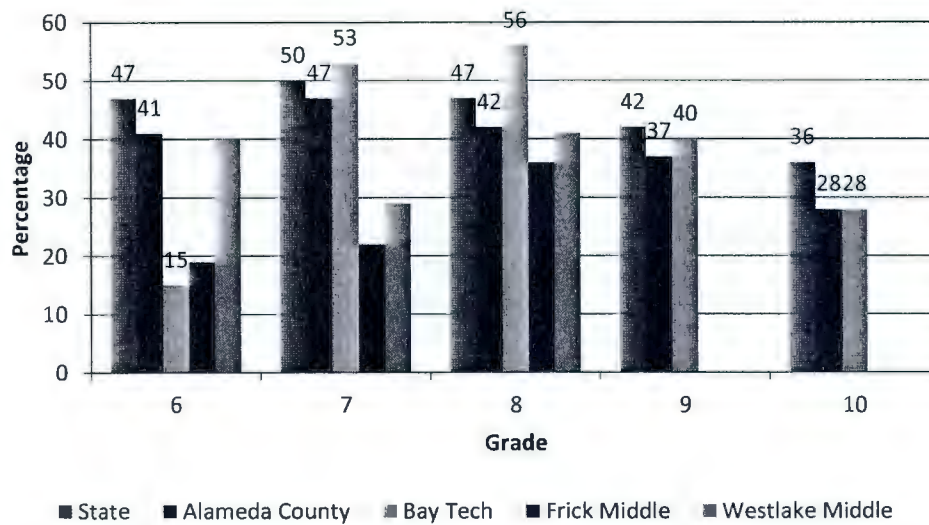


2012 CST Math Proficient & Above- Hispanic

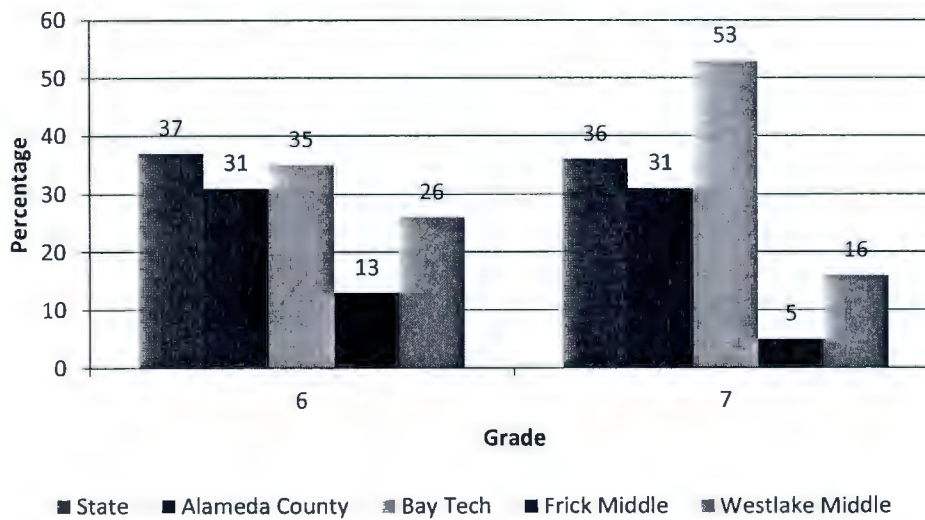


CST 2012 Results of African American Subgroup Compared by State and County

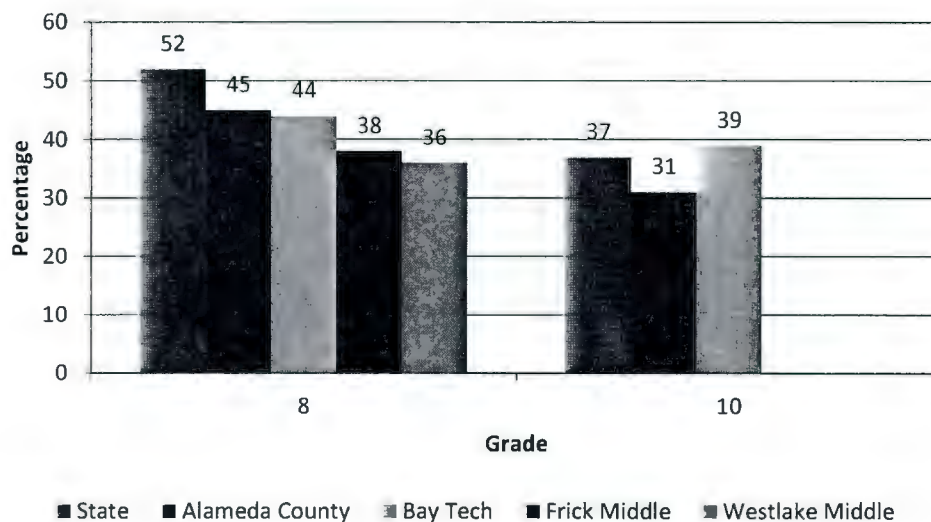
CST 2012 ELA-African American



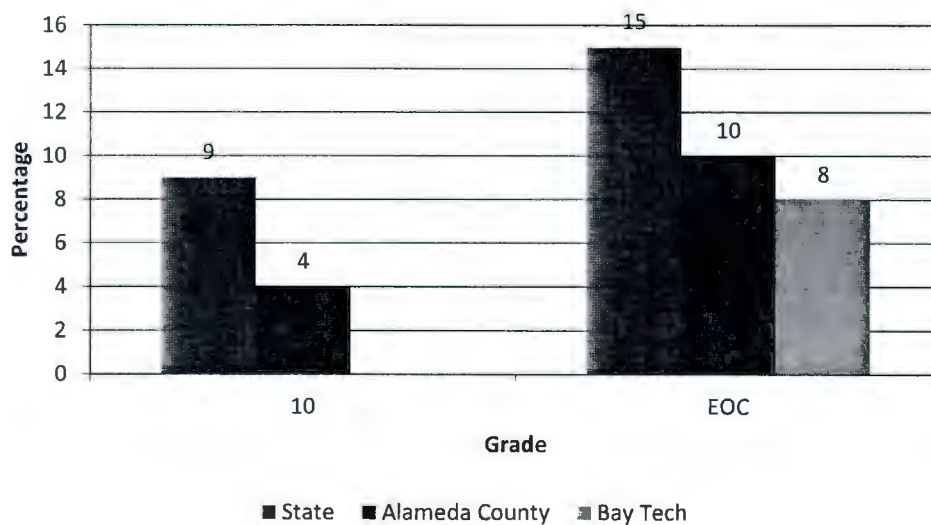
CST 2012 Math-African American



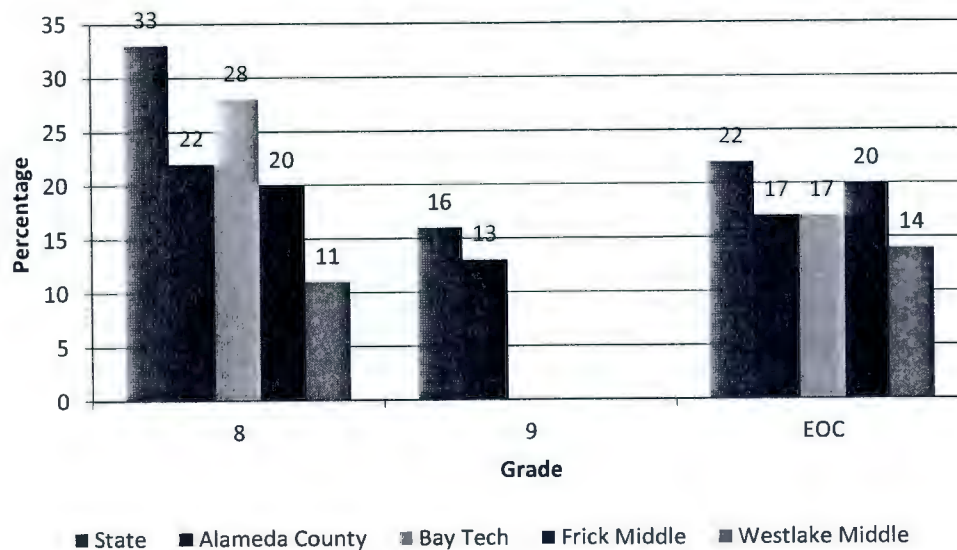
CST 2012 Science-African American



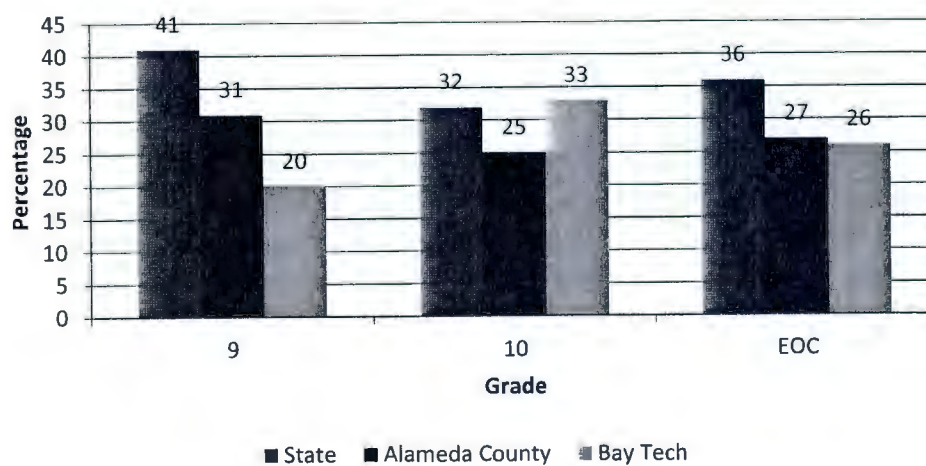
CST 2012 Geometry-African American



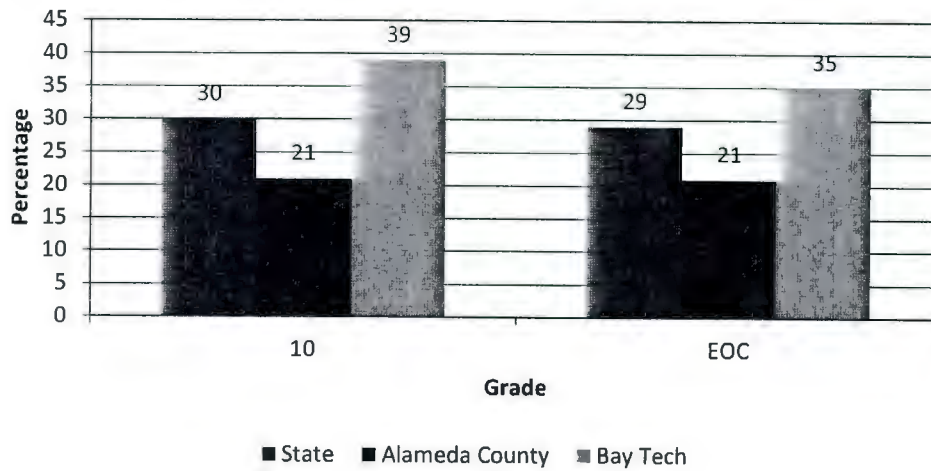
CST 2012 Algebra I-African American



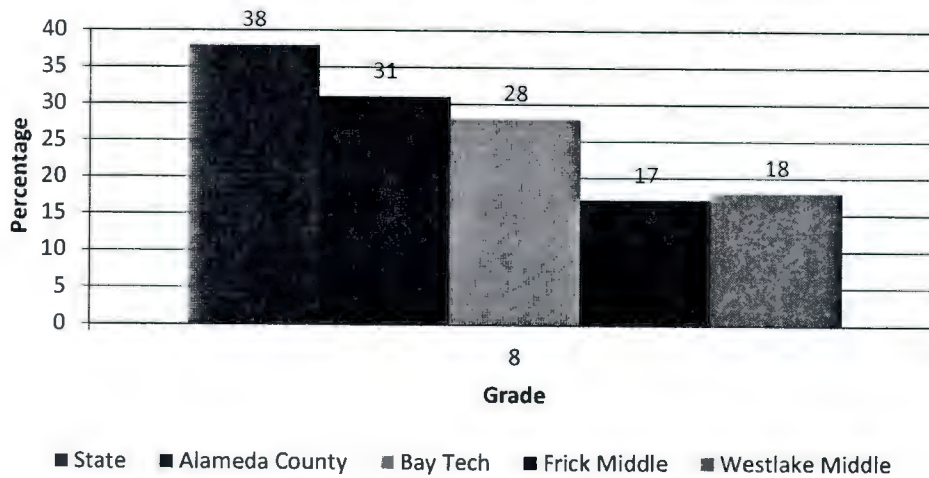
CST 2012 Biology/Life Sciences -African American



CST 2012 World History -African American



CST 2012 History-Social Science -African American



Grade and Subject Cluster Analysis

BayTech also studies each subject for all the courses (Math, Science, English, History, Algebra, EOC, etc.) offered at the school cluster by cluster to understand what specific areas for each course needs focused attention in a bid to improve achievement.

By doing a “deep dive” into the data available through the creation and analysis of cluster reports, our staff are able to further analyze how students performed in each CST content area. Cluster reports provide the following information:

- Number of questions asked for that specific Cluster
- Average number and percent of correct responses by our students
- The average percentage correct statewide categorized by ‘Minimally Proficient’
- Difference between the ‘Statewide Minimally Proficient’ and our students’ average percent correct. (Note that in the figures percentages in red denote the percentage below minimally proficient, while those in green denote the percentage above minimally proficient.)

Just to exemplify, BayTech Grade 7 Math Cluster Analysis is presented in the following figure. The table shows that students have performed above the state’s minimally proficient criteria in “exponents, powers and roots”. An area that needs more attention for students to become advanced is “Statistics, Data Analysis and Probability.”

A separate report, titled “2011 & 2012 STAR Test Reports,” is attached. This report includes BayTech’s cluster analysis for each grade and subject tested.



Bay Area Technology School

2011 and 2012 STAR Test Reports
September 2012

2011 and 2012 CST English Language Arts Test Results

	2011		2012	
	N	%	N	%
Grade 6 All				
Far Below Basic	4	12.1%	3	7%
Below Basic	3	9.1%	5	12%
Basic	13	39.4%	17	40%
Proficient	8	24.2%	9	21%
Advanced	5	15.2%	8	19%
Proficient & Advanced		39%		40%
Grade 8 All				
Far Below Basic	5	12%	1	3%
Below Basic	6	15%	4	13%
Basic	13	32%	7	23%
Proficient	9	22%	12	40%
Advanced	8	20%	6	20%
Proficient & Advanced		41%		60%
Grade 10 All				
Far Below Basic	4	22%	4	12%
Below Basic	4	22%	6	18%
Basic	6	33%	9	26%
Proficient	2	11%	11	32%
Advanced	2	11%	4	12%
Proficient & Advanced		22%		44%

	2011		2012	
	N	%	N	%
Grade 7 All				
Far Below Basic	1	4%	1	3%
Below Basic	3	12%	2	5%
Basic	6	23%	15	39%
Proficient	10	38%	12	32%
Advanced	6	23%	8	21%
Proficient & Advanced		62%		53%
Grade 9 All				
Far Below Basic	3	9%	5	14%
Below Basic	1	3%	2	6%
Basic	18	56%	11	31%
Proficient	6	19%	9	26%
Advanced	4	13%	8	23%
Proficient & Advanced		31%		49%
Grade 11 All				
Far Below Basic	3	18%	1	6%
Below Basic	4	24%	2	12%
Basic	5	29%	10	59%
Proficient	2	12%	3	18%
Advanced	3	18%	1	6%
Proficient & Advanced		29%		24%

2011-2012 CST ELA Test Results

		2011		2012	
Grade 6 Subgroups		N	%	N	%
English learner	Far Below Basic	1	33%	0	0%
	Below Basic	1	33%	1	33%
	Basic	1	33%	2	67%
	Proficient	0	0%	0	0%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic	3	21%	2	10%
	Below Basic	2	14%	2	10%
	Basic	6	43%	13	62%
	Proficient	3	21%	3	14%
	Advanced	0	0%	1	5%
Hispanic or Latino	Far Below Basic	2	22%	1	6%
	Below Basic	1	11%	3	19%
	Basic	3	33%	3	19%
	Proficient	3	33%	6	38%
	Advanced	0	0%	3	19%
Free or Reduced Lunch	Far Below Basic	3	13%	3	9%
	Below Basic	2	9%	5	14%
	Basic	11	48%	14	40%
	Proficient	6	26%	7	20%
	Advanced	1	4%	6	17%

		2011		2012	
Grade 7 Subgroups		N	%	N	%
English learner	Far Below Basic	0	0%	1	17%
	Below Basic	1	100%	1	17%
	Basic	0	0%	3	50%
	Proficient	0	0%	1	17%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic	1	6%	0	0%
	Below Basic	1	6%	1	6%
	Basic	4	25%	8	44%
	Proficient	8	50%	6	33%
	Advanced	2	13%	3	17%
Hispanic or Latino	Far Below Basic	0	0%	1	10%
	Below Basic	0	0%	2	20%
	Basic	1	100%	4	40%
	Proficient	0	0%	3	30%
	Advanced	0	0%	0	0%
Free or Reduced Lunch	Far Below Basic	1	6%	1	3%
	Below Basic	3	18%	2	6%
	Basic	4	24%	14	44%
	Proficient	5	29%	11	34%
	Advanced	4	24%	4	13%

2011-2012 ELA Test Results

		N	%	N	%
Grade 8 Subgroups					
English learner	Far Below Basic	1	50%	0	0%
	Below Basic	0	0%	1	50%
	Basic	1	50%	1	50%
	Proficient	0	0%	0	0%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic	2	8%	1	5%
	Below Basic	4	17%	2	11%
	Basic	9	38%	5	26%
	Proficient	6	25%	9	47%
	Advanced	3	13%	2	11%
Hispanic or Latino	Far Below Basic	1	14%	0	0%
	Below Basic	0	0%	0	0%
	Basic	3	43%	0	0%
	Proficient	1	14%	1	50%
	Advanced	2	29%	1	50%
Free or Reduced Lunch	Far Below Basic	3	11%	1	5%
	Below Basic	5	18%	3	14%
	Basic	10	36%	5	23%
	Proficient	6	21%	10	45%
	Advanced	4	14%	3	14%

		N	%	N	%
Grade 9 Subgroups					
English learner	Far Below Basic	1	50%	0	0%
	Below Basic	0	0%	0	0%
	Basic	1	50%	2	67%
	Proficient	0	0%	1	33%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic	2	10%	4	20%
	Below Basic	1	5%	2	10%
	Basic	11	52%	6	30%
	Proficient	5	24%	5	25%
	Advanced	2	10%	3	15%
Hispanic or Latino	Far Below Basic	0	0%	1	17%
	Below Basic	0	0%	0	0%
	Basic	4	67%	2	33%
	Proficient	1	17%	1	17%
	Advanced	1	17%	2	33%
Free or Reduced Lunch	Far Below Basic	3	14%	5	17%
	Below Basic	1	5%	1	3%
	Basic	11	52%	11	38%
	Proficient	5	24%	7	24%
	Advanced	1	5%	5	17%

2011-2012 ELA Test Results

		2011		2012	
Grade 10 Subgroups		N	%	N	%
English learner	Far Below Basic	1	100%	1	25%
	Below Basic	0	0%	1	25%
	Basic	0	0%	0	0%
	Proficient	0	0%	2	50%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic	2	20%	3	16%
	Below Basic	2	20%	4	21%
	Basic	4	40%	7	37%
	Proficient	1	10%	2	11%
	Advanced	1	10%	3	16%
Hispanic or Latino	Far Below Basic	1	20%	0	0%
	Below Basic	1	20%	2	29%
	Basic	2	40%	0	0%
	Proficient	0	0%	5	71%
	Advanced	1	20%	0	0%
Free or Reduced Lunch	Far Below Basic	3	21%	4	15%
	Below Basic	2	14%	4	15%
	Basic	6	43%	8	30%
	Proficient	2	14%	9	33%
	Advanced	1	7%	2	7%

		2011		2012	
Grade 11 Subgroups		N	%	N	%
English learner	Far Below Basic	0	0%	1	50%
	Below Basic	1	50%	1	50%
	Basic	1	50%	0	0%
	Proficient	0	0%	0	0%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic	3	30%	0	0%
	Below Basic	2	20%	1	13%
	Basic	2	20%	5	63%
	Proficient	1	10%	1	13%
	Advanced	2	20%	1	13%
Hispanic or Latino	Far Below Basic	0	0%	1	14%
	Below Basic	0	0%	1	14%
	Basic	1	100%	4	57%
	Proficient	0	0%	1	14%
	Advanced	0	0%	0	0%
Free or Reduced Lunch	Far Below Basic	1	8%	1	7%
	Below Basic	4	31%	2	13%
	Basic	3	23%	8	53%
	Proficient	2	15%	3	20%
	Advanced	3	23%	1	7%

Bay Area Technology School

CST CLUSTER ANALYSIS

ENGLISH LANGUAGE ARTS

			2012 Avg % Correct Statewide			2011			2012			Difference from % Correct			
ENGLISH LANGUAGE ARTS			No. of Questions	All	Minimally Proficient	Minimally Advanced	Average Correct	n	% Correct	Average Correct	n	% Correct	From Last Year	Minimally Proficient	Minimally Advanced
Grade 6	Word Analysis and Vocabulary Development	13	69%	67%	82%	8.48	33	65%	8.71	42	67%	2%	0%	-15%	
	Reading Comprehension	17	61%	56%	74%	8.94	33	53%	9.40	42	55%	3%	-1%	-19%	
	Literary Response and Analysis	12	66%	64%	79%	7.27	33	61%	7.19	42	60%	-1%	-4%	-19%	
	Written Conventions	16	72%	70%	82%	9.82	33	61%	9.38	42	59%	-3%	-11%	-23%	
	Writing Strategies	17	63%	59%	78%	8.88	33	52%	9.33	42	55%	3%	-4%	-23%	
Grade 7	Word Analysis and Vocabulary Development	11	75%	74%	88%	7.50	26	68%	7.95	38	72%	4%	-2%	-16%	
	Reading Comprehension	18	70%	68%	82%	12.31	26	68%	11.16	38	62%	-6%	-6%	-20%	
	Literary Response and Analysis	13	64%	60%	79%	9.38	26	72%	7.24	38	56%	-17%	-4%	-23%	
	Written Conventions	16	70%	68%	81%	10.62	26	66%	11.87	38	74%	8%	6%	-7%	
	Writing Strategies	17	61%	55%	76%	10.50	26	62%	10.18	38	60%	-2%	5%	-16%	
	Writing Applications Score	8	87%	85%	93%	6.64	25	83%	6.36	38	80%	-3%	-5%	-14%	
Grade 8	Word Analysis and Vocabulary Development	9	69%	67%	79%	5.41	41	60%	5.70	30	63%	3%	-4%	-16%	
	Reading Comprehension	18	69%	68%	80%	11.32	41	63%	11.93	30	66%	3%	-2%	-14%	
	Literary Response and Analysis	15	66%	63%	79%	8.27	41	55%	9.03	30	60%	5%	-3%	-19%	
	Written Conventions	16	68%	66%	80%	8.95	41	56%	10.90	30	68%	12%	2%	-12%	
	Writing Strategies	17	62%	57%	75%	10.17	41	60%	10.10	30	59%	0%	2%	-16%	

ENGLISH LANGUAGE ARTS			2012 Avg % Correct Statewide			2011			2012			Difference from % Correct		
			No. of Questions	All	Minimally Proficient	Minimally Advanced	Average Correct	n	% Correct	Average Correct	n	% Correct	From Last Year	Minimally Proficient
Grade 9	Word Analysis and Vocabulary Development	8	61%	59%	74%	4.53	32	57%	4.43	35	55%	-1%	-4%	-19%
	Reading Comprehension	18	68%	68%	83%	10.56	32	59%	11.57	35	64%	6%	-4%	-19%
	Literary Response and Analysis	16	69%	69%	83%	9.06	32	57%	9.46	35	59%	2%	-10%	-24%
	Written Conventions	13	65%	64%	77%	7.38	32	57%	7.91	35	61%	4%	-3%	-16%
	Writing Strategies	20	61%	58%	74%	10.66	32	53%	11.83	35	59%	6%	1%	-15%
Grade 10	Word Analysis and Vocabulary Development	8	69%	72%	84%	4.61	18	58%	5.44	34	68%	10%	-4%	-16%
	Reading Comprehension	18	68%	73%	85%	9.61	18	53%	10.50	34	58%	5%	-15%	-27%
	Literary Response and Analysis	16	64%	66%	79%	8.89	18	56%	9.62	34	60%	5%	-6%	-19%
	Written Conventions	13	67%	71%	83%	7.28	18	56%	7.59	34	58%	2%	-13%	-25%
	Writing Strategies	20	64%	66%	82%	9.50	18	48%	11.38	34	57%	9%	-9%	-25%
Grade 11	Word Analysis and Vocabulary Development	8	71%	77%	88%	5.06	17	63%	5.94	17	74%	11%	-3%	-14%
	Reading Comprehension	19	65%	71%	83%	11.00	17	58%	11.41	17	60%	2%	-11%	-23%
	Literary Response and Analysis	17	62%	65%	78%	9.94	17	58%	10.24	17	60%	2%	-5%	-18%
	Written Conventions	9	71%	77%	87%	4.82	17	54%	5.94	17	66%	12%	-11%	-21%
	Writing Strategies	22	64%	70%	82%	12.76	17	58%	12.41	17	56%	-2%	-14%	-26%

2011 and 2012 CST Math Test Results

	2011		2012	
	N	%	N	%
Grade 6 All				
Far Below Basic	3	9%	3	3%
Below Basic	9	27%	19	19%
Basic	9	27%	39	39%
Proficient	6	18%	27	27%
Advanced	6	18%	13	13%
Proficient & Advanced		36%		40%
Grade 7 All	N	%	N	%
Far Below Basic	1	4%	1	1%
Below Basic	5	19%	9	10%
Basic	8	31%	10	11%
Proficient	10	38%	37	41%
Advanced	2	8%	34	37%
Proficient & Advanced		46%		78%

2011 and 2012 Algebra-I Test Results

	2011		2012	
	N	%	N	%
Grade 8				
Far Below Basic	0	0%	2	2%
Below Basic	5	23%	24	26%
Basic	7	32%	24	26%
Proficient	6	27%	26	29%
Advanced	4	18%	15	16%
Proficient & Advanced		45%		45%
Grade 9	N	%	N	%
Far Below Basic	6	19%	0	0%
Below Basic	7	23%	7	37%
Basic	12	39%	6	32%
Proficient	6	19%	2	11%
Advanced	0	0%	4	21%
Proficient & Advanced		19%		32%
Grade 10	N	%	N	%
Far Below Basic	1	100%	0	0%
Below Basic	0	0%	7	37%
Basic	0	0%	6	32%
Proficient	0	0%	2	11%
Advanced	0	0%	4	21%
Proficient & Advanced		0%		32%

2011 and 2012 Geometry Test Results

	2011		2012	
	N	%	N	%
Grade 10				
Far Below Basic			0	0%
Below Basic			5	18%
Basic			9	32%
Proficient			10	36%
Advanced			4	14%
Proficient & Advanced				50%
Grade 11	N	%	N	%
Far Below Basic			2	9%
Below Basic			8	36%
Basic			7	32%
Proficient			5	23%
Advanced			0	0%
Proficient & Advanced				23%

2011 and 2012 Algebra-II Test Results

	2011		2012	
	N	%	N	%
Grade 9				
Far Below Basic	0	0%	4	8%
Below Basic	0	0%	8	16%
Basic	1	100%	17	34%
Proficient	0	0%	15	30%
Advanced	0	0%	6	12%
Proficient & Advanced		0%		42%
Grade 10	N	%	N	%
Far Below Basic	7	44%	15	52%
Below Basic	7	44%	11	38%
Basic	2	13%	2	7%
Proficient	0	0%	1	3%
Advanced	0	0%	0	0%
Proficient & Advanced		0%		3%
Grade 11	N	%	N	%
Far Below Basic	6	35%	15	52%
Below Basic	2	12%	11	38%
Basic	6	35%	2	7%
Proficient	2	12%	1	3%
Advanced	1	6%	0	0%
Proficient & Advanced		18%		3%

2011 and 2012 CST Math Test Results

		2011		2012	
Grade 6 Subgroups		N	%	N	%
English learner	Far Below Basic	1	33%	1	33%
	Below Basic	1	33%	1	33%
	Basic	1	33%	1	33%
	Proficient	0	0%	0	0%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			2	10%
	Below Basic			5	24%
	Basic			6	29%
	Proficient			7	33%
	Advanced			1	5%
Hispanic or Latino	Far Below Basic	1	11%	3	19%
	Below Basic	5	56%	1	6%
	Basic	1	11%	7	44%
	Proficient	1	11%	3	19%
	Advanced	1	11%	2	13%
Free or Reduced Lunch	Far Below Basic	3	13%	5	14%
	Below Basic	7	30%	5	14%
	Basic	6	26%	11	31%
	Proficient	5	22%	9	26%
	Advanced	2	9%	5	14%
Grade 8 Algebra I Subgroups					
English learner	Far Below Basic	0	0%	0	0%
	Below Basic	0	0%	0	0%
	Basic	1	0%	1	50%
	Proficient	0	100%	1	50%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			0	0%
	Below Basic			4	21%
	Basic			9	47%
	Proficient			5	26%
	Advanced			1	5%
Hispanic or Latino	Far Below Basic	0	0%	0	0%
	Below Basic	1	20%	1	50%
	Basic	3	60%	0	0%
	Proficient	0	0%	1	50%
	Advanced	1	20%	0	0%
Free or Reduced Lunch	Far Below Basic	0	0%	0	0%
	Below Basic	5	36%	5	23%
	Basic	5	36%	9	41%
	Proficient	4	29%	8	36%
	Advanced	0	0%	0	0%

		2011		2012	
Grade 7 Subgroups		N	%	N	%
English learner	Far Below Basic	0	0%	0	0%
	Below Basic	0	0%	2	33%
	Basic	1	100%	2	33%
	Proficient	0	0%	2	33%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			0	0%
	Below Basic			2	11%
	Basic			7	39%
	Proficient			6	33%
	Advanced			3	17%
Hispanic or Latino	Far Below Basic	0	0%	0	0%
	Below Basic	0	0%	2	20%
	Basic	1	100%	4	40%
	Proficient	0	0%	3	30%
	Advanced	0	0%	1	10%
Free or Reduced Lunch	Far Below Basic	1	6%	0	0%
	Below Basic	5	29%	5	16%
	Basic	3	18%	12	38%
	Proficient	7	41%	9	28%
	Advanced	1	6%	6	19%
Grade 9 Algebra I Subgroups					
English learner	Far Below Basic	0	0%	0	0%
	Below Basic	1	100%	1	100%
	Basic	0	0%	0	0%
	Proficient	1	50%	0	0%
	Advanced	0	0%	0	0%
Hispanic or Latino	Far Below Basic			4	36%
	Below Basic			1	9%
	Basic			6	55%
	Proficient			0	0%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic	1	17%	0	0%
	Below Basic	1	17%	2	67%
	Basic	4	67%	1	33%
	Proficient	0	0%	0	0%
	Advanced	0	0%	0	0%
Free or Reduced Lunch	Far Below Basic	3	14%	4	33%
	Below Basic	4	19%	2	17%
	Basic	11	52%	6	50%
	Proficient	3	14%	0	0%
	Advanced	0	0%	0	0%

2011 and 2012 CST Geometry Test Results

		2011		2012	
Grade 9 Geometry Subgroups		N	%	N	%
English learner	Far Below Basic			0	0%
	Below Basic			0	0%
	Basic			2	100%
	Proficient			0	0%
	Advanced			0	0%
Black or African American	Far Below Basic			0	0%
	Below Basic			1	11%
	Basic			6	67%
	Proficient			2	22%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic			0	0%
	Below Basic			0	0%
	Basic			3	100%
	Proficient			0	0%
	Advanced			0	0%
Free or Reduced Lunch	Far Below Basic			0	0%
	Below Basic			3	18%
	Basic			10	59%
	Proficient			4	24%
	Advanced			0	0%

		2011		2012	
Grade 10 Geometry Subgroup		N	%	N	%
English learner	Far Below Basic			0	0%
	Below Basic			2	67%
	Basic			1	33%
	Proficient			0	0%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic			4	24%
	Below Basic			10	59%
	Basic			3	18%
	Proficient			0	0%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic			0	0%
	Below Basic			6	86%
	Basic			1	14%
	Proficient			0	0%
	Advanced			0	0%
Free or Reduced Lunch	Far Below Basic			3	13%
	Below Basic			15	65%
	Basic			5	22%
	Proficient			0	0%
	Advanced			0	0%

| .0%| 1| 20.0%|

Bay Area Technology School - Oakland

CST CLUSTER ANALYSIS

MATHEMATICS

		Avg % Correct Statewide			2011			2012			Difference from % Correct Statewide			
MATHEMATICS		No. of Questions	All	Minimally Proficient	Minimally Advanced	Average Correct	n	% Correct	Average Correct	n	% Correct	From Last Year	Minimally Proficient	Minimally Advanced
Grade 6	Ratios, Proportions, Percentages, Negative Fractions	15	65%	63%	83%	8.30	33	55%	7.93	42	53%	-2%	-10%	-30%
	Operations and Problem Solving with Fractions	10	68%	68%	85%	6.27	33	63%	6.10	42	61%	-2%	-7%	-24%
	Algebra and Functions	19	70%	72%	88%	11.82	33	62%	12.00	42	63%	1%	-9%	-25%
	Measurement and Geometry	10	61%	58%	79%	5.82	33	58%	5.40	42	54%	-4%	-4%	-25%
	Statistics, Data Analysis, and Probability	11	65%	65%	85%	6.61	33	60%	6.33	42	58%	-2%	-7%	-27%
Grade 7	Rational Numbers	14	63%	63%	85%	7.42	26	53%	8.76	38	63%	10%	0%	-22%
	Exponents, Powers, and Roots	8	55%	54%	79%	3.85	26	48%	5.53	38	69%	21%	15%	-10%
	Quantitative Relationships and Evaluating Expressions	10	62%	63%	82%	5.88	26	59%	6.95	38	69%	11%	6%	-13%
	Multistep Problems, Graphing, and Functions	15	63%	65%	84%	9.00	26	60%	9.66	38	64%	4%	-1%	-20%
	Measurement and Geometry	13	62%	63%	82%	7.35	26	57%	8.50	38	65%	9%	2%	-17%
	Statistics, Data Analysis, and Probability	5	69%	73%	88%	2.96	26	59%	3.53	38	71%	11%	-2%	-17%
Alg. 1 Gr 8	Number Properties, Operations, and Linear Equations	17	59%	70%	84%	12.45	22	73%	10.79	29	63%	-10%	-7%	-21%
	Graphing and Systems of Linear Equations	14	49%	56%	82%	7.59	22	54%	7.55	29	54%	0%	-2%	-28%
	Quadratics and Polynomials	21	50%	60%	83%	11.45	22	55%	11.31	29	54%	-1%	-6%	-29%
	Functions and Rational Expressions	13	40%	43%	68%	6.86	22	53%	6.86	29	53%	0%	10%	-15%
Alg. 1 Gr 9	Number Properties, Operations, and Linear Equations	17	59%	70%	84%	9.10	31	54%	8.53	15	50%	-3%	-20%	-34%
	Graphing and Systems of Linear Equations	14	49%	56%	82%	5.39	31	38%	5.80	15	41%	3%	-15%	-41%
	Quadratics and Polynomials	21	50%	60%	83%	9.45	31	45%	6.93	15	33%	-12%	-27%	-50%
	Functions and Rational Expressions	13	40%	43%	68%	5.16	31	40%	4.87	15	37%	-2%	-6%	-31%

MATHEMATICS

MATHEMATICS		No. of Questions	Avg % Correct Statewide			2011			2012			Difference from % Correct Statewide		
			All	Minimally Proficient	Minimally Advanced	Average Correct	n	% Correct	Average Correct	n	% Correct	From Last Year	Minimally Proficient	Minimally Advanced
Alg. 2 Gr 10	Polynominals and Rational Expressions	17	59%	70%	84%	8.13	16	48%	11.50	4	68%	20%	-2%	-16%
	Quadratics, Conics, and Complex Numbers	14	49%	56%	82%	5.94	16	42%	8.25	4	59%	17%	3%	-23%
	Exponents and Logarithms	21	50%	60%	83%	4.50	16	21%	9.50	4	45%	24%	-15%	-38%
	Series, Combinatorics, Probability and Statistics	13	40%	43%	68%	4.25	16	33%	5.25	4	40%	8%	-3%	-28%
Alg. 2 Gr 11	Polynominals and Rational Expressions	17	59%	70%	84%	9.53	17	56%	8.13	16	48%	-8%	-22%	-36%
	Quadratics, Conics, and Complex Numbers	14	49%	56%	82%	7.24	17	52%	6.75	16	48%	-3%	-8%	-34%
	Exponents and Logarithms	21	50%	60%	83%	6.53	17	31%	6.56	16	31%	0%	-29%	-52%
	Series, Combinatorics, Probability and Statistics	13	40%	43%	68%	5.94	17	46%	5.75	16	44%	-1%	1%	-24%
Geo. Gr 8	Logic and Geometric Proofs	23	57%	68%	86%				9.00	1	39%		-29%	-47%
	Volume and Area Formulas	11	55%	66%	88%				3.00	1	27%		-39%	-61%
	Angle Relationships, Constructions, and Lines	16	55%	65%	84%				6.00	1	38%		-28%	-47%
	Trigonometry	15	57%	70%	88%				5.00	1	33%		-37%	-55%
Geo. Gr 9	Logic and Geometric Proofs	23	57%	68%	86%				15.15	20	66%		-2%	-20%
	Volume and Area Formulas	11	55%	66%	88%				6.45	20	59%		-7%	-29%
	Angle Relationships, Constructions, and Lines	16	55%	65%	84%				8.45	20	53%		-12%	-31%
	Trigonometry	15	57%	70%	88%				9.50	20	63%		-7%	-25%
Geo. Gr 10	Logic and Geometric Proofs	23	57%	68%	86%				10.40	30	45%		-23%	-41%
	Volume and Area Formulas	11	55%	66%	88%				3.53	30	32%		-34%	-56%
	Angle Relationships, Constructions, and Lines	16	55%	65%	84%				5.83	30	36%		-29%	-48%
	Trigonometry	15	57%	70%	88%				6.43	30	43%		-27%	-45%

2011-2012 CST Science Test Results

	2011		2012	
	N	%	N	%
Grade 8 All				
Far Below Basic	9	22%	2	7%
Below Basic	6	15%	4	13%
Basic	11	27%	9	30%
Proficient	4	10%	8	27%
Advanced	11	27%	7	23%
Proficient & Advanced		37%		50%
Grade 10 All				
Far Below Basic	2	11%	2	6%
Below Basic	7	39%	5	15%
Basic	2	11%	14	41%
Proficient	6	33%	8	24%
Advanced	1	6%	5	15%
Proficient & Advanced		39%		38%

2011-2012 CST Chemistry Test Results

	2011		2012	
	N	%	N	%
Grade 10				
Far Below Basic	10	56%		
Below Basic	6	33%		
Basic	2	11%		
Proficient	0	0%		
Advanced	0	0%		
Proficient & Advanced		0%		

2011-2012 CST Biology Test Results

	2011		2012	
	N	%	N	%
Grade 9 All				
Far Below Basic			5	14%
Below Basic			3	9%
Basic			16	46%
Proficient			8	23%
Advanced			3	9%
Proficient & Advanced				31%
Grade 10 All				
Far Below Basic			4	12%
Below Basic			4	12%
Basic			12	36%
Proficient			12	36%
Advanced			1	3%
Proficient & Advanced				39%

2011-2012 CST Physics Test Results

	2011		2012	
	N	%	N	%
Grade 11				
Far Below Basic	5	29%	3	18%
Below Basic	2	12%	5	29%
Basic	9	53%	8	47%
Proficient	1	6%	1	6%
Advanced	0	0%	0	0%
Proficient & Advanced		6%		6%

2011 and 2012 CST Science Test Results

		2011		2012	
Grade 8 Subgroups		N	%	N	%
English learner	Far Below Basic	0	0%	1	50%
	Below Basic	0	0%	0	0%
	Basic	1	50%	1	50%
	Proficient	1	50%	0	0%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			1	5%
	Below Basic			4	21%
	Basic			5	26%
	Proficient			5	26%
	Advanced			4	21%
Hispanic or Latino	Far Below Basic	2	29%	0	0%
	Below Basic	0	0%	0	0%
	Basic	1	14%	0	0%
	Proficient	3	43%	1	50%
	Advanced	1	14%	1	50%
Free or Reduced Lunch	Far Below Basic	6	21%	1	5%
	Below Basic	5	18%	3	14%
	Basic	10	36%	7	32%
	Proficient	4	14%	7	32%
	Advanced	3	11%	4	18%

Grade 10 Chemistry Subgroups

English learner	Far Below Basic	1	100%		
	Below Basic	0	0%		
	Basic	0	0%		
	Proficient	0	0%		
	Advanced	0	0%		
Black or African American	Far Below Basic				
	Below Basic				
	Basic				
	Proficient				
	Advanced				
Hispanic or Latino	Far Below Basic	2	40%		
	Below Basic	2	40%		
	Basic	1	20%		
	Proficient	0	0%		
	Advanced	0	0%		
Free or Reduced Lunch	Far Below Basic	6	43%		
	Below Basic	6	43%		
	Basic	2	14%		
	Proficient	0	0%		

		2011		2012	
Grade 10 Subgroups		N	%	N	%
English learner	Far Below Basic	1	100%	0	0%
	Below Basic	0	0%	1	25%
	Basic	0	0%	2	50%
	Proficient	0	0%	0	0%
	Advanced	0	0%	1	25%
Black or African American	Far Below Basic			2	11%
	Below Basic			4	21%
	Basic			6	32%
	Proficient			5	26%
	Advanced			2	11%
Hispanic or Latino	Far Below Basic	1	20%	0	0%
	Below Basic	1	20%	0	0%
	Basic	0	0%	5	71%
	Proficient	2	40%	2	29%
	Advanced	1	20%	0	0%
Free or Reduced Lunch	Far Below Basic	2	14%	1	4%
	Below Basic	4	29%	5	19%
	Basic	2	14%	13	48%
	Proficient	5	36%	5	19%
	Advanced	1	7%	3	11%

Grade 11 Physics Subgroups

English learner	Far Below Basic	0	0%	2	100%
	Below Basic	0	0%	0	0%
	Basic	2	100%	0	0%
	Proficient	0	0%	0	0%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			2	25%
	Below Basic			2	25%
	Basic			4	50%
	Proficient			0	0%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic	1	100%	1	14%
	Below Basic	0	0%	2	29%
	Basic	0	0%	3	43%
	Proficient	0	0%	1	14%
	Advanced	0	0%	0	0%
Free or Reduced Lunch	Far Below Basic	4	31%	3	20%
	Below Basic	2	15%	4	27%
	Basic	6	46%	7	47%
	Proficient	1	8%	1	7%

Advanced 0 0% Advanced 0 0% 0 0%

2011 and 2012 CST Biology Test Results

		2011		2012	
Grade 9 Biology Subgroups		N	%	N	%
English learner	Far Below Basic			0	0%
	Below Basic			1	33%
	Basic			2	67%
	Proficient			0	0%
	Advanced			0	0%
Black or African American	Far Below Basic			4	20%
	Below Basic			2	10%
	Basic			10	50%
	Proficient			3	15%
	Advanced			1	5%
Hispanic or Latino	Far Below Basic			1	17%
	Below Basic			1	17%
	Basic			3	50%
	Proficient			1	17%
	Advanced			0	0%
Free or Reduced Lunch	Far Below Basic			4	14%
	Below Basic			3	10%
	Basic			13	45%
	Proficient			6	21%
	Advanced			3	10%

		2011		2012	
Grade 10 Biology Subgroups		N	%	N	%
English learner	Far Below Basic			0	0%
	Below Basic			1	33%
	Basic			1	33%
	Proficient			1	33%
	Advanced			0	0%
Black or African American	Far Below Basic			4	21%
	Below Basic			2	11%
	Basic			7	37%
	Proficient			6	32%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic			1	14%
	Below Basic			0	0%
	Basic			3	43%
	Proficient			3	43%
	Advanced			0	0%
Free or Reduced Lunch	Far Below Basic			4	15%
	Below Basic			3	12%
	Basic			10	38%
	Proficient			8	31%
	Advanced			1	4%

SCIENCE

Bay Area Technology School

Avg % Correct
Statewide

2011

2012

Difference from %
Correct Statewide

	No. of Questions	All	Minimally Proficient	Minimally Advanced	Average Correct	n	% Correct	Average Correct	n	% Correct	From Last Year	Minimally Proficient	Minimally Advanced	
Grade 8	Motion	8	68%	61%	71%	4.68	41	58.5%	4.97	30	62.1%	4%	1%	-9%
	Forces, Density, and Buoyancy	13	75%	71%	82%	7.78	41	59.8%	8.57	30	65.9%	6%	-5%	-16%
	Structure of Matter and Periodic Table	16	72%	66%	79%	8.46	41	52.9%	10.40	30	65.0%	12%	-1%	-14%
	Earth in the Solar System	7	74%	70%	80%	4.10	41	58.5%	4.43	30	63.3%	5%	-7%	-17%
	Reactions and the Chemistry of Living Systems	10	68%	61%	74%	4.90	41	49.0%	6.37	30	63.7%	15%	3%	-10%
	Investigation and Experimentation	6	76%	72%	85%	4.29	41	71.5%	4.90	30	81.7%	10%	10%	-3%
Grade 10	Cell Biology	10	57%	53%	71%	4.89	18	48.9%	5.71	34	57.1%	8%	4%	-14%
	Genetics	12	61%	59%	79%	5.50	18	45.8%	6.47	34	53.9%	8%	-5%	-25%
	Physiology	10	69%	71%	84%	6.11	18	61.1%	6.26	34	62.6%	2%	-8%	-21%
	Ecology	11	69%	72%	85%	6.28	18	57.1%	6.79	34	61.8%	5%	-10%	-23%
	Evolution	11	66%	69%	83%	5.83	18	53.0%	6.65	34	60.4%	7%	-9%	-23%
	Investigation and Experimentation	6	75%	83%	94%	2.89	18	48.1%	4.15	34	69.1%	21%	-14%	-25%
Gr 9 Biology	Cell Biology	9	66%	65%	81%				5.49	35	61.0%		-4%	-20%
	Genetics	18	63%	64%	81%				9.26	35	51.4%		-13%	-30%
	Ecology and Evolution	16	63%	66%	81%				8.43	35	52.7%		-13%	-28%
	Physiology	11	68%	72%	84%				7.20	35	65.5%		-7%	-19%
	Investigation and Experimentation	6	65%	70%	84%				3.51	35	58.6%		-11%	-25%
Gr 10 Biology	Cell Biology	9	66%	65%	81%				5.18	33	57.6%		-7%	-23%
	Genetics	18	63%	64%	81%				9.03	33	50.2%		-14%	-31%
	Ecology and Evolution	16	63%	66%	81%				8.70	33	54.4%		-12%	-27%
	Physiology	11	68%	72%	84%				7.45	33	67.8%		-4%	-16%
	Investigation and Experimentation	6	65%	70%	84%				3.48	33	58.1%		-12%	-26%
Gr 11 Physics	Motion and Forces	12	68%	70%	84%				5.76	17	48.0%		-22%	-36%
	Conservation of Energy and Momentum	12	65%	66%	82%				5.41	17	45.1%		-21%	-37%
	Heat and Thermodynamics	9	65%	67%	83%				3.65	17	40.5%		-26%	-42%
	Waves	10	61%	62%	76%				3.41	17	34.1%		-28%	-42%
	Electric and Magnetic Phenomena	11	58%	57%	73%				4.29	17	39.0%		-18%	-34%
	Investigation and Experimentation	6	67%	70%	81%				3.12	17	52.0%		-18%	-29%

2011-2012 CST US History/Social Science Test

	2011		2012	
Grade 8 All	N	%	N	%
Far Below Basic	15	37%	3	10%
Below Basic	6	15%	1	3%
Basic	9	22%	14	47%
Proficient	5	12%	7	23%
Advanced	6	15%	5	17%
Proficient & Advanced		27%		40%
Grade 11 All	N	%	N	%
Far Below Basic	7	41%	3	18%
Below Basic	0	0%	3	18%
Basic	5	29%	6	35%
Proficient	5	29%	5	29%
Advanced	0	0%	0	0%
Proficient & Advanced		29%		29%

2011-2012 World History Test Results

	2011		2012	
Grade 10	N	%	N	%
Far Below Basic	6	33%	8	24%
Below Basic	3	17%	5	15%
Basic	3	17%	9	27%
Proficient	3	17%	10	30%
Advanced	3	17%	1	3%
Proficient & Advanced		33%		33%

2011 and 2012 CST History/ Social Science Test Results

		2011		2012	
Grade 8 Subgroups		N	%	N	%
English learner	Far Below Basic	1	50%	1	50%
	Below Basic	0	0%	0	0%
	Basic	1	50%	0	0%
	Proficient	0	0%	1	50%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			2	11%
	Below Basic			1	5%
	Basic			11	58%
	Proficient			3	16%
	Advanced			2	11%
Hispanic or Latino	Far Below Basic	3	43%	0	0%
	Below Basic	0	0%	0	0%
	Basic	3	43%	0	0%
	Proficient	0	0%	1	50%
	Advanced	1	14%	1	50%
Free or Reduced Lunch	Far Below Basic	12	43%	2	9%
	Below Basic	4	14%	1	5%
	Basic	6	21%	10	45%
	Proficient	3	11%	7	32%
	Advanced	3	11%	2	9%

		2011		2012	
Grade 11 Subgroups		N	%	N	%
English learner	Far Below Basic	1	50%	2	100%
	Below Basic	0	0%	0	0%
	Basic	1	50%	0	0%
	Proficient	0	0%	0	0%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			1	13%
	Below Basic			0	0%
	Basic			5	63%
	Proficient			2	25%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic	0	0%	2	29%
	Below Basic	0	0%	2	29%
	Basic	1	100%	1	14%
	Proficient	0	0%	2	29%
	Advanced	0	0%	0	0%
Free or Reduced Lunch	Far Below Basic	6	46%	2	13%
	Below Basic	0	0%	3	20%
	Basic	3	23%	6	40%
	Proficient	4	31%	4	27%
	Advanced	0	0%	0	0%

2011 and 2012 CST World History Test Results

		2011		2012	
Grade 10 Subgroups		N	%	N	%
English learner	Far Below Basic	0	0%	1	25%
	Below Basic	1	100%	1	25%
	Basic	0	0%	1	25%
	Proficient	0	0%	1	25%
	Advanced	0	0%	0	0%
Black or African American	Far Below Basic			6	32%
	Below Basic			3	16%
	Basic			3	16%
	Proficient			7	37%
	Advanced			0	0%
Hispanic or Latino	Far Below Basic	1	20%	2	29%
	Below Basic	1	20%	0	0%
	Basic	2	40%	3	43%
	Proficient	0	0%	2	29%
	Advanced	1	20%	0	0%
Free or Reduced Lunch	Far Below Basic	4	29%	5	19%
	Below Basic	2	14%	5	19%
	Basic	3	21%	9	35%
	Proficient	2	14%	6	23%
	Advanced	3	21%	1	4%

Bay Area Technology School

CST CLUSTER ANALYSIS
SOCIAL SCIENCES

		Avg % Correct			2011			2012			Difference from % Correct			
		No. of Questions	All	Minimally Proficient	Minimally Advanced	Average Correct	n	% Correct	Average Correct	n	% Correct	From Last Year	Minimally Proficient	Minimally Advanced
Grade 8	World History and Geography: Ancient Civilizations	16	64%	63%	76%	9.20	41	57.5%	9.80	30	61.3%	4%	-2%	-15%
	Late Antiquity and the Middle Ages	14	64%	65%	78%	6.90	41	49.3%	8.70	30	62.1%	13%	-3%	-16%
	Renaissance/Reformation	10	67%	70%	81%	4.56	41	45.6%	6.57	30	65.7%	20%	-4%	-15%
	U.S. Constitution and the Early Republic	22	63%	64%	78%	11.46	41	52.1%	12.77	30	58.0%	6%	-6%	-20%
	Civil War and Its Aftermath	13	65%	67%	83%	6.20	41	47.7%	7.30	30	56.2%	8%	-11%	-27%
Grade 10	Development of Modern Political Thought	13	66%	72%	82%	4.71	17	36.2%	7.39	33	56.9%	21%	-15%	-25%
	Industrial Expansion and Imperialism	10	66%	72%	84%	6.47	17	64.7%	6.18	33	61.8%	-3%	-10%	-22%
	Causes and Effects of the First World War	14	65%	71%	85%	6.12	17	43.7%	7.70	33	55.0%	11%	-16%	-30%
	Causes and Effects of the Second World War	13	64%	68%	84%	6.53	17	50.2%	7.97	33	61.3%	11%	-7%	-23%
	International Developments in the Post-World War II Era	10	62%	67%	82%	6.82	17	68.2%	5.09	33	50.9%	-17%	-16%	-31%
Grade 11	Foundations of American Political and Social Thought	10	62%	64%	79%	6.56	43	65.6%	4.94	17	49.4%	-16%	-15%	-30%
	Industrialization and the U.S. Role as a World Power	13	64%	69%	83%	9.05	43	69.6%	6.65	17	51.1%	-18%	-18%	-32%
	United States Between the World Wars	12	62%	67%	79%	8.40	43	70.0%	7.18	17	59.8%	-10%	-7%	-19%
	World War II and Foreign Affairs	12	62%	66%	80%	8.16	43	68.0%	6.76	17	56.4%	-12%	-10%	-24%
	Post-World War II Domestic Issues	13	62%	66%	79%	8.95	43	68.9%	7.53	17	57.9%	-11%	-8%	-21%

APPENDIX B₁

TECHNOLOGY INTEGRATED EDUCATION

T I E

Technology Integrated Education



Contents

What is TIE?	3
The Need	3
Differences of TIE from the traditional practices.....	4
Cognitive Tools, not Instructional Media.....	5
Benefits of TIE	5
Critical Thinking and Higher Order Learning.....	5
Generative Processing Of Information	6
Student-centered.....	6
Project-based, hands-on learning	6
Differentiated learning	6
Autonomous, life-long learning	7
Higher student motivation.....	7
TIE Curriculum.....	7
MIDDLE SCHOOL	8
6 th grade	8
7 th grade	12
8 th Grade	15
HIGH SCHOOL.....	17
Digital Imaging (Adobe Photoshop or GIMP).....	17
Animation (Macromedia Flash)	19
Vector Graphics (Adobe Illustrator or Inkscape)	20
Introduction to C++	22
AP Computers	23
SAMPLE ANNUAL PLAN.....	24

What is TIE?

Technology Integrated Education (TIE) is a distinguishing program of Magnolia Public Schools provided by Accord Institute, which integrates Math, Science, Social Science and Language Arts classes with technology education in a fun and comprehensive way.

TIE Curriculum is based on the National Educational Technology Standards for Students (NETSS) and International/European Computer Driving License (ICDL/ECDL), California is yet to adopt a set of standards for Technology Education. The ICDL is the world's leading credential to obtain a job, improve job performance and promotion opportunity.

TIE is designed and developed with a constructivist approach that accommodates different learning theories and practices such as project-based learning, student-centered learning, and differentiated instruction.

An effective professional training component is a must for any successful educational program. TIE provides an in-depth professional training program to teachers who will implement it.

The Need

In 2007, National Academies published a report,

Rising Above the Gathering Storm:

Energizing and Employing America for a Brighter Economic Future; identifying the urgent need to increase the number of Science and Technology graduates within the next decade. The report's conclusions are serious, noting that there is a serious risk that the United States may soon and irrevocably lose its lead in science and technology. Among the recommendations of the report is:

"Vastly improve K-12 science and math education"

Technology skills are essential for a college education. Students need to obtain certain technological skills during their secondary education. To name a few; writing reports, preparing/making presentations, online research, collecting and interpreting data, etc.

Most teaching materials that are available today focus on features of technology products and target adults. Although there are some teaching materials that target secondary education, very little is done on the integration side.

Today's educators need teaching materials that;

- require minimum preparation
- easy to use and extend
- student centric and encourages self-learning
- involve technology integration into core class curriculums, and is extensive enough to cover all the necessary technology skills and is rich in core class content
- fun for students to work on,
- make them comprehend the necessity of technological skills.

Differences of TIE from the traditional practices

In our contemporary era of technology, every school has computers and claims to use computers in education. However, the important question is how effectively it is used. As research indicates the use of technology in education will result in "good" learning only through successful implementation¹.

All students complete a multi-year, comprehensive, and detailed technology curriculum based on the International Computer Driving License in TIE. Whereas in the traditional public school setting, only some students in vocational programs pursue a multi-year comprehensive technology curriculum.

Traditionally, technology is used as *conveyors of information, communicators of knowledge, or tutors of students*. In this method, students are supposed to receive the conveyed information and recall it later when asked and provide the expected response. Students use pre-designed and ready-made technology products such as tutoring software, online flash applets and games and online courses. Other than the classes of a few exceptional teachers, integration projects are confined to "writing a report" and "making a presentation", that are usually random and do not require any advanced technological standards in terms of variety, quality or quantity.

¹ Papert, S. & Turkle, S. (1993). Styles and voices. *For the Learning of Learning of Mathematics*, 13, 49 - 52.

Majority of research on the effectiveness of the traditional way of using technology in education, or as we call it here "technology assisted education", have produced "no significant differences" in learning as a result of these interventions².

Technology Integrated Education (TIE) is a significant departure from the traditional way technology in education is used. Technology is employed as cognitive tools in TIE as described by Dr. David H. Jonassen³. Cognitive tools refer to the technologies that enhance the cognitive powers of human beings during thinking, problem solving, and learning.

Cognitive Tools, not Instructional Media

As the famous saying goes, the best way to learn something is to teach it; the only people who significantly benefit from the design and the use of instructional materials are the designers, not the learners⁴. *"Rather than using technologies by educational communications specialists to constrain the learners' learning processes through prescribed communications and interactions, the technologies should be taken away from the specialists and given to the learner".* In TIE, students use technology as cognitive tools to access information, analyze their findings, interpret and organize their personal knowledge, and present what they have learned to others.

Benefits of TIE

Critical Thinking and Higher Order Learning

Technology Integrated Education facilitates critical thinking and higher order learning through assignments and projects in spreadsheets, databases, multimedia/hypermedia construction, and

² Jonassen, D. H. (n.d.). *Technology as Cognitive Tools: Learners as Designers*. Retrieved from <http://itech1.coe.uga.edu/itforum/paper1/paper1.html>

³ <http://itech1.coe.uga.edu/itforum/paper1/paper1.html>

⁴ Perkins, D.N. (1986). *Knowledge as design*. Hillsdale, NJ: Lawrence Erlbaum.

computer programming. Students build knowledge bases, analyze their findings using analytical tools, represent what they understand using mental models, and present them with advanced presentation techniques.

Generative Processing Of Information

TIE engages *generative processing of information*⁵ through online research projects that involve creation of students' own media to present the information processed. While working on these projects, students learn the research topic at a higher order by developing appropriate mental models, using them to interpret new information, *assimilating new information back into those models, updating the models according to the new information, and finally using those updated models to explain, interpret, or infer new knowledge*⁶. When Internet is used as a cognitive tool, online research results in knowledge acquisition and integration as a constructive process that engage learners in knowledge construction rather than knowledge reproduction.

Student-centered

*TIE actively engages learners in creation of knowledge that reflects their comprehension and conception of the information rather than focusing on the presentation of objective knowledge. It is learner controlled, not teacher or technology-driven*⁷.

Project-based, hands-on learning

In project-based learning, students use technology and inquiry to engage with issues and questions that are relevant to them, which is intended to bring deeper learning. TIE naturally provides students with hands-on learning opportunities through its technology integration projects.

Differentiated learning

*Differentiated learning promotes an environment where all students can learn effectively regardless of differences in ability*⁸. TIE makes use of the fact that classrooms that utilize

⁵ Wittrock, M.C. (1974). Learning as a generative activity. *Educational Psychologist*, 11, 87-95.

⁶ Rumelhart, D.E., & Norman, D.A. (1978). Accretion, tuning, and restructuring: Three modes of learning. In J.W. Cotton & R.L. Klatsky (Eds.), *Semantic factors in cognition*. Hillsdale, NJ: Lawrence Erlbaum.

⁷ <http://itech1.coe.uga.edu/itforum/paper1/paper1.html>

technology provide the possibility of assigning differentiated tasks to students based on their individual needs.

Autonomous, life-long learning

Students must be self-motivated, autonomous, life-long learners to keep up with the rapidly advancing technology. TIE activities transform students into autonomous learners with its tutorial-based structure while teachers act as facilitators and provide students with individual assistance.

Higher student motivation

TIE activities have a fun side attracting students into the integrated content, which helps place students back on track, who may otherwise have been lost in core classes.

TIE Curriculum

TIE Curriculum is based on ICDL (International Computer Driving License) curriculum and NETSS (National Educational Technology Standards for Students). Most of the states have not yet adopted a set of curriculum standards for technology classes.

The main topics of NETSS are as follows;

- Basic operations and concepts
- Social, ethical, and human issues
- Technology productivity tools
- Technology communications tools
- Technology research tools
- Technology problem-solving and decision-making tools

⁸ Tomlinson, Carol (2001). *How to Differentiate Instruction in Mixed-Ability Classrooms* (2 ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

TIE Curriculum covers the technology skills that are essential for a 4-year S&E major and the basic skills that lead to various IT related careers. The curriculum not only covers the technology skills but also integrates them with Math, Science, English, and History through hands-on activities.

The set of essential technology skills are derived from the syllabus of International Computer Driving License (ICDL). The ICDL is the world's largest end-user computer skills certification program, with more than 20,000 test centers, 8.5 million candidates in 148 countries including the United States. It is a globally recognized credential that certifies an individual as competent in using computers and covers all the computer skills that students need to have to be successful in college and at work. It provides a superior syllabus that is uniquely validated to ensure that it is always relevant, up-to-date, and meaningful.

Majority of students –especially from minority backgrounds- start 6th grade with almost no significant technology skills. As they progress into 8th grade and high school, they gain autonomy in choosing and advancing in the right tools for their projects.

The 8th grade curriculum briefly introduces the topics that are taught at high school level through entry-level projects.

High school TIE courses include Digital Art, Web Authoring, Desktop Publishing, Introduction to Programming, AP Computer, and Advanced Office, which aims to provide students with perspective to understand the IT careers such as Computer Programmer, Graphic Designer, Web Developer, Computer Scientist, etc.

MIDDLE SCHOOL

6th grade

Introduction

General concepts

- Computer history
- Use of IT in everyday life

- Health, safety, environment
- Ethics, copyright and the law

Computer environment

- Desktop
- Traversing folders
- Create/delete/duplicate files/folders
- File search, backup

Graphics (MS Paint)

- New/save/open image
- Pen, brush, eraser, fill bucket
- Line, rectangle, ellipse
- Color selection

Word processing (MS Word)

Introduction

- New/save/open file
- Insert text
- Changing font name, size, style, color
- Aligning text

Text editing skills

- Select/deselect
- Cut/copy/paste
- Undo/redo

- Enter/Delete/Space keys

Images

- Inserting/resizing images
- Text wrapping of images

Bullets and numbering

- Nested lists

Tables

- Inserting/editing tables
- Formatting tables

Objects

- Autoshapes
- Cliparts
- Text boxes
- Word art

Other

- Find and replace
- Spelling and grammar check
- Autocorrect

Using Internet

Internet Browsing

- Definitions: URL, Website
- Visiting a website

- Following hyperlinks
- Opening URL in a new window
- Citing to websites
- Copying text into word-processor
- Saving pictures from a Web page

Internet Searching

- Google search
- Choosing a good keyword
- Image search
- Advanced image search (specifying size/colors)

Presentation software (MS Powerpoint)

Introduction

- New/Open/Save
- Inserting/formatting text
- Bullets
- Insert/delete slides
- Viewing a presentation
- Slide layouts
- Design templates
- Master slide

Content development

- Working with images
- Line, arrow, rectangle, square, circle, text box, and other available shapes
- Diagrams
- Autoshapes

- Charts

Animations and interactivity

- Preset animation
- Transition effects
- Custom animation
- Animating text and other objects
- Timing slide transitions
- Action buttons
- Adding actions to objects

7th grade

Concepts of IT

Hardware

Software

Networks

Security

Word processing (MS Word)

Review

- New/save/open
- Adding/formatting text
- Bullets
- Working with images
- Working with tables

- Working with text boxes
- Clipart and autoshapes

Styles

- Applying a style
- Creating a custom styles

Paragraph formatting

- Line break
- Indentation
- Line/paragraph spacing
- Tabs
- Adding border/shading to paragraphs

Document formatting

- Page borders
- Paper size
- Document orientation
- Page margins
- Page margins, size and orientation
- Headers and footers
- Page numbering
- Print preview

Other

- Subscript/superscript
- Case changes
- Hyphenation
- Copying formatting

Internet Search

- Advanced search
- Book search
- Product search
- Maps and directions

Web design (Frontpage or NVU)

Bullet lists, tables, images, etc.

Hyperlinks

E-mail links

Bookmarks

Hotspots

Designing page layout using tables

Background picture

Dynamic HTML effects

Shared borders

Spreadsheets (MS Excel)

Introduction

- Idea of spreadsheet
- Starting MS Excel
- New/save/open
- Moving through cells
- Entering data

Formatting

- Background and border
- Merge cells

- Alignment
- Font color/size

Rows and columns

- Insert/Delete Rows/Columns
- Copy/Paste Rows/Columns

Charts

- Types of charts
- Creating a XY chart, pie chart, etc

8th Grade

Spreadsheets (MS Excel)

Insert/rename/duplicate/delete worksheets

Formatting values in cells

Formatting charts

Freeze/Hide Columns/Rows

Sorting columns

Find/Replace

Formulas

- Cell referencing
- Entering formulas
- Autosum
- Autofilling
- Basic functions

Headers and footers

- Inserting text
- Adding date, time, page numbering

Page size and orientation

Print preview

Multimedia

Working with images

- Scanning a picture
- Transferring pictures from a digital camera
- Cropping and resizing images

Working with videos (Windows Movie Maker)

- Capturing/importing/saving a video file
- Splitting a video clip
- Ordering pieces on time line
- Adding transitions
- Adding a sound to a video clip
- Using video effects
- Video compression
- Down-sampling a video clip

Internet - File Transfer Protocol (FileZilla)

Connecting to an FTP server

Uploading files

Downloading files

Databases (MS Access)

Tables

- Column types
- Creating a table and its columns
- Define keys

- Define indexes
- Inserting records
- Defining table relationships

Queries

- Creating a query using query wizard
- Running queries

Forms

- Create forms
- Insert/edit/delete records using forms
- Navigate records using forms

Reports

- Create reports based on a query/table
- Group data under a specific field
- Create sum, min, max, average of fields in a grouped report
- Change page size and orientation
- Print preview

HIGH SCHOOL

Digital Imaging (Adobe Photoshop or GIMP)

Improving Digital Photos

- Rescaling
- Cropping
- Brightening and Darkening
- Rotating
- Sharpening
- Fixing Red-eye

Layers

- The Text tool
- The Move tool
- Simple Effects Using Layers
- Copy/Paste
- Layer Mode
- Opacity
- Operations on Layers
- Making Simple GIF Animations

Drawing

- A New Image
- Using Layers for Drawing
- Drawing Rectangles, Circles, and Other Shapes
- Defining Regions
- Outlining Selections: Stroking
- Free Select with the Lasso
- Filling Regions
- The Bucket Fill Tool
- Patterns
- Gradients

Selections

- Working with Selections
- Marching Ants
- The Select Menu
- Moving Selections
- Select by Color and Fuzzy Select
- The Intelligent Scissors

- Modifying Selections with Selection Modes
- Highlighting Foreground Objects
- Using Channel Masks to Save a Selection
- Layer Masks
- Extracting Foreground Objects

Paths

- Creating paths from selections
- Creating a path using the Bezier tool
- Creating a selection from a path
- Stroking a path with drawing tools

Filters and Effects

- Blur
- Enhance
- Distorts
- Light and Shadow
- Noise Filters
- Edge-Detection Filters
- The Artistic Filters
- The Map Filters

Animation (Macromedia Flash)

Introduction

- How it works, Flash tour, Flash interface, basic principles

Graphic tools

- Creating shapes and text (line, oval, rectangle tools...)

- Modifying shapes and text (selection, lasso, eraser tools...)
- Working with colors

Symbols

- Understanding and using graphic, movie clip and button symbols

Layers

- Understanding and using layers (creating, using, editing...)
- Changing layer options (visibility, locking...)

Animation

- Understanding timeline, frames and key frames
- Creating frame by frame, tweened motion and shape animation
- Adding basic interactivity (play, stop...)

Sound and video

- Sound and video formats
- Working with sounds (importing, editing...), video clips

Vector Graphics (Adobe Illustrator or Inkscape)

Geometric shapes

- Rectangles and Squares
- Ellipses, Circles, and Arcs
- Regular Polygons and Stars
- Spirals

Paths

- Bezier Curves
- Creating Paths
- Editing Paths
- Path Operations

Text

- Creating Text
- Selecting Text
- Editing Text
- Formatting Text
- Kerning, Shifting, and Rotating Characters
- Text on a Path
- Linked Flowed Text

Tracing

- Image Brightness
- Edge Detection

Attributes

- Fill and Stroke Paint
- Stroke Style

Clipping and Masking

Effects

Introduction to C++

Introduction

- What are CPU, Memory, Harddrive, Monitor, and Keyboard?
- What is a program?
- What is input and output?
- What is machine code and what is a compiler?
- What is Dev-C++?
- How can you create a new file in Dev-C++?
- How can you open an existing file?
- How can you save a modified file?
- How can you run the program?

Part 1 - Flow control and loops

- #Include, main (), int, cin, cout
- Commenting on the source code (//, /* */)
- if-else
- Conditionals (>, <, ==, <=, >=, !=, &&, ||)
- Loops (do-while, while, for)
- Operators (+, -, *, /, %, %=)

Part 2 - Embedded loops

- Embedded loops
- break and continue

Part 3 - Arrays, loop-array relation

- Arrays
- Loop-array relation
- Examples on set operations
- #define
- const

Part 4 - Matrices, file input/output

- ifstream, ofstream
- Multi-dimensional arrays

Part 5 - variable types

- Variable types
- String operations
- switch-case
- Arrays with initial values
- {}:

Part 6 - struct and functions

- Variable types
- functions, parameter passing
- local/global declarations

AP Computers

Programming in Java. Fixed content by College Board.

SAMPLE ANNUAL PLAN

6th GRADE

(During the first semester students will practice typing with Typing Instructor in the first 10/15 minutes of the class)

Fall Semester

1. Week: Introduction

(No Assignment)

Motivation

- o About this class
- o Goal and learning outcomes
- o Syllabus, grading
- o What is considered to be cheating?

Introduction to Computers (Hardware and Software Basics)

- o What is a computer
- o Computing history
- o What can computers do?
- o What are the parts of computers?
- o Input/output devices

Computer Use Policies and Ethics

- o What privacy means in computers?
- o What is ethical, what is not?
- o Computer lab rules

2. Week: Introduction to MS Windows

(No Assignment)

- o Logging in/out

- o Changing password
- o What makes a good password
- o How to run/close a program
- o Files, file types, directories, file system
- o How to copy, move, remove, rename a file
- o How to submit Assignment
- o Typing (Typing instructor)

3. Week: MS Paint

(Assignment: image)

- o Starting MS Paint
- o Using pen, brush, eraser
- o New/Save/load image
- o Resizing image
- o How to submit Assignment - revisited

4. Week: MS Paint

(Assignment: image)

- o Drawing lines, rectangles, circles (with/without area)
- o Using colors
- o Using color dialog

5. Week: WordPad – Text formatting

(Assignment: text)

- o Changing font type, size, style, color
- o Creating a new file, saving the file
- o Cut/copy/paste

6. Week: WordPad – Text formatting

(Assignment: text)

- o Bullets and numbering

- o Hierarchy

7. Week: MS Word – Images

(Assignment: text, image)

- o Inserting an image
- o Changing the size of image
- o Text wrapping of image

8. Week: MS Word – Text formatting

(Assignment: text, image (creation with MS Paint), text & image layout in the page)

- o Indentation of a paragraph
- o Set/remove tab stops
- o Alignment of a paragraph
- o Page break

9. Week: Review

(Assignment of your choice)

10. Week: Using internet

(Assignment: visiting certain websites)

- o Definitions: URL, webpage, link
- o How to go to a URL
- o How to follow a link
- o How to copy text/image from a web page and paste in MS Word
- o How to copy a link in a page or a URL from the address bar
- o Copyrights
- o Citation to a website

11. Week: Internet Search

(Assignment: text, text search)

- o Background: How search engines work?

- o Example: Searching in Google
- o How to choose a good keyword
- o What are the uses of search engines

12. Week: Internet Search

(Assignment: text, text search)

- o Advanced search (AND, OR, EXCLUDE)

13. Week: Internet Search

(Assignment: text, image, image search)

- o Image search
- o Advanced image search (Specifying size/colors)

14. Week: Review

(Assignment of your choice)

-----Winter recess (3 weeks)-----

15. Week: Front-page – Introduction

(Assignment: text)

- o Starting FrontPage
- o Creating a web page
- o Adding and formatting text
- o Opening/Saving a web page
- o Previewing web page in the browser

16. Week: Front-page – Adding/formatting content

(Assignment: text, text search)

- o Adding a design theme
- o Adding background picture
- o Adding background music

- o Adding bulleted lists

17. Week: Front-page – Graphics

(Assignment: text, image - image creation with MS Paint)

- o Graphics types and conversion (bmp/jpg/gif)
- o Adding/resizing/formatting graphics

18. Week: Review

(Assignment of your choice)

Spring semester

19. Week: Front-page – Hyperlinks

(Assignment: text, hyperlink)

- o Creating hyperlinks: citing to web sources
- o Adding/Removing hyperlinks

20. Week: Front-page – Tables

(Assignment: text, image, hyperlink)

- o Inserting tables
- o Inserting row/column
- o Merging cells

21. Week: MS Word – Tables

(Assignment: text, table, text search)

- o Creating a table
- o Inserting a row/column
- o Removing a row/column
- o Merging cells

22. Week: Front-page – Tables

(Assignment: text, image search, hyperlink)

- o Formatting tables/cells

23. Week: MS Word – Tables

(Assignment: text, image search, hyperlink)

- o Formatting tables/cells

24. Week: Review

(Assignment of your choice)

-----Spring recess-----

25. Week: MS Word – Text boxes

(Assignment: image, text boxes – creating hierarchical diagrams with text boxes)

26. Week: MS Word – Grouping

(Assignment: image, textbox)

- o Grouping/ungrouping objects

27. Week: MS Word – Page layout

(Assignment of your choice)

- o Text wrapping of image, text box, table
- o Grouping

28. Week: Front-page – Page layout

(Assignment of your choice)

- o Designing page layout with tables
- o Text wrapping of image

29. Week: Review

(Assignment of your choice)

30. Week: PowerPoint - Introduction

(Assignment: text)

- o Starting PowerPoint
- o Creating a new presentation
- o Saving/loading
- o Adding text, bullets
- o Inserting text boxes
- o Inserting slides

31. Week: PowerPoint – Images

(Assignment: text, images)

- o Using design templates
- o Inserting images
- o Rotating/scaling images

32. Week: PowerPoint – Slide show

(Assignment: text, image)

- o Changing the color scheme
- o Timed slide transition
- o Animated transition

33. Week: PowerPoint – Tables

(Assignment: text, table)

- o Adding tables

34. Week: PowerPoint - Multimedia

(Assignment: animation, sound)

- o Adding animation (not customized)
- o Adding sound

35. Week: Review
(Assignment of your choice)

36. Week: Review
(Assignment of your choice)

APPENDIX B2

COMPUTER SCIENCE PROGRAM

1. Accord Computer Science Syllabus
2. Accord Computer Science Curriculum
3. Accord Computer Science Guidelines
4. Computer Literacy 6th Grade Curriculum
5. Computer Literacy 7th Grade Curriculum
6. 8th Grade Curriculum
7. Introduction to Programming Annual Plan
8. Introduction to Programming Guidelines
9. Digital Arts Curriculum
10. Digital Arts Guidelines
11. Web Authoring Curriculum
12. Web Authoring Guidelines
13. Desktop Publishing Model
14. Introduction to Digital Design

Computer Science A

2007 - 2008

Brief Description of Course

AP Computer Science A is a both college-prep course for potential computer science majors and a foundation course for students planning to study in other technical fields such as engineering, physics. Computer Science A emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development and is meant to be the equivalent of a first-semester college-level course in Computer Science. It also includes the study of data structures, design, abstraction. The following plan goes week by week through the school year. Computing Concepts with Java Essentials is a primary source. AP Computer Science Exam in Java is a secondary book we will use for example tests.

Unit Information

Unit Name or Timeframe:

Week 1

Introduction to the concept of objects

Content and/or Skills Taught:

To understand object (class, instance, state , behavior, etc.)

Learn to use an editor Java Creator and how to compile by entering the "Hello World" program.

Major Assignments and/or Assessments:

Reading

Horstmann, Chapter 1;

Review Exercises R1-R14

Unit Name or Timeframe:

Week 2

Introduction to Hardware and Software

Content and/or Skills Taught:

to learn concept of Computer hardware and software

Major Assignments and/or Assessments:

2 pages research paper Computer Hardware and Software

Unit Name or Timeframe:

Week 3

Working Numbers (Primitive types)

Content and/or Skills Taught:

Introduce the primitive types (int , double, and variables, constant and the assignment statement)

Teach students to use meaningful identifiers and lower and upper case letters to distinguish between variables and methods, classes and constants.

Major Assignments and/or Assessments:

Reading
Chapter 3
Do Practice Questions pp 47-54

Unit Name or Timeframe:

Week 4
Decisions (if - else)

Content and/or Skills Taught:

to learn if statement , nested if , equal method == operator.
to learn how to use switch
to learn evaluating boolean expressions

Major Assignments and/or Assessments:

Reading
Chapter 5
Practice questions 65 - 72
pp 222-224 P 5.1 , P 5.2 , P 5.8

Unit Name or Timeframe:

Week 5
Iteration (Loops)

Content and/or Skills Taught:

to use while and for loops.

Major Assignments and/or Assessments:

Reading
Chapter 6
Do exercises pp 273-274

Unit Name or Timeframe:

Week 6
Reading data from users and randomization
Week 7 - 8
Designing classes
Week 9-10
Testing and Debugging

Content and/or Skills Taught:

Student will learn a way to read user input.
Coupling, cohesion, accessor and mutator method, static method and packages.
Introduce the concept of testing and debugging.

Major Assignments and/or Assessments:

Reading
Chapter 6- 7-8
Do exercises pp 275-276
pp 325-326
MBS Quiz Chapter 2

Unit Name or Timeframe:

Week 11
Interfaces and Polymorphism
Week 12 -13
Marine Biology Simulation
Week 14-15
Introduction to inheritance

Content and/or Skills Taught:

Students will learn reusable code , extending a class and defining an interface.
Students will learn dynamic Fish class for Marine Biology Simulation

Major Assignments and/or Assessments:

MBS Chapter 3
Analysis questions
Read Chapter 11 pp 430-449
Test on MBS Chapter 3

Unit Name or Timeframe:

Week 16 -17-18
Introduction to Array
Week 19-20
Recursion
Week 21
MBS

Content and/or Skills Taught:

Students will learn ArrayList class nad simple algorithms for inserting and removing elements.

Major Assignments and/or Assessments:

Reading
Chapter 13-14
pp 549-550
pp 221-227

Unit Name or Timeframe:

Week 22-23
Searching and sorting
Week 24-25
Recursive searches and sorts
Week 26-27
Exceptions

Content and/or Skills Taught:

Introduce the Sequential Search.
to learn selection sort.
to learn binary search and insertion sort
to learn common exception

Major Assignments and/or Assessments:

Reading
Chapter 18
Practice Questions
pp 249 - 261
pp 238-240 , 246-248
TEST

Unit Name or Timeframe:

Week 28-29
System Design
GUI
Week 30
MBS
Week 31-33
Review for Exam
Week 34
Exam Week
Week 35-36
After AP Exam
some projects

Content and/or Skills Taught:

learn design process
familiar with questions and some practice exams.

Major Assignments and/or Assessments:

Chapter 13
pp 207-219

Textbooks

Title:Computing Concepts with Java Essentials

Publisher: Wiley

Published Date: 03 April, 2002

Author: Cay Horstmann

Description:

Other Course Materials

Material Type:Software

Description:

Java Creator

Additional Information

Requirement:Students must take Introduction to Computer Progra

How Course Meets Requirement:

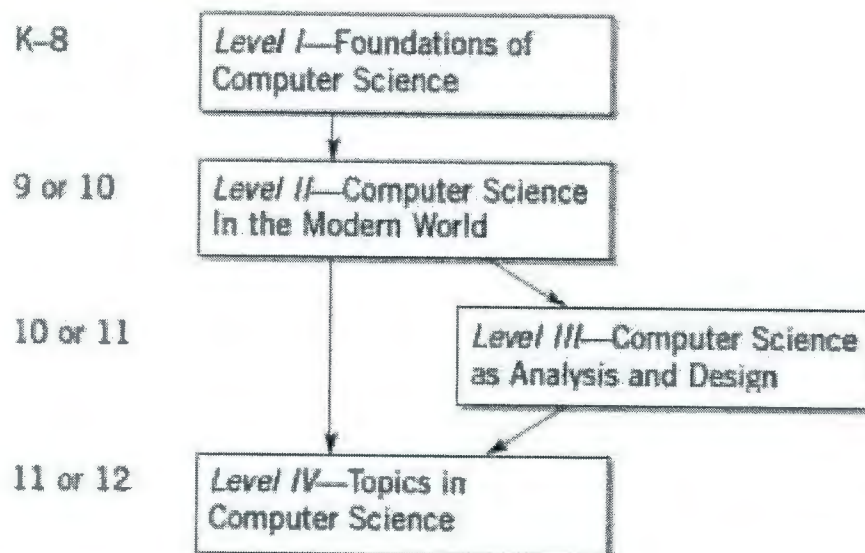
ACCORD K-12 CS CURRICULUM

COMPUTER DEPARTMENT - JUNE 8, 2012

OVERVIEW

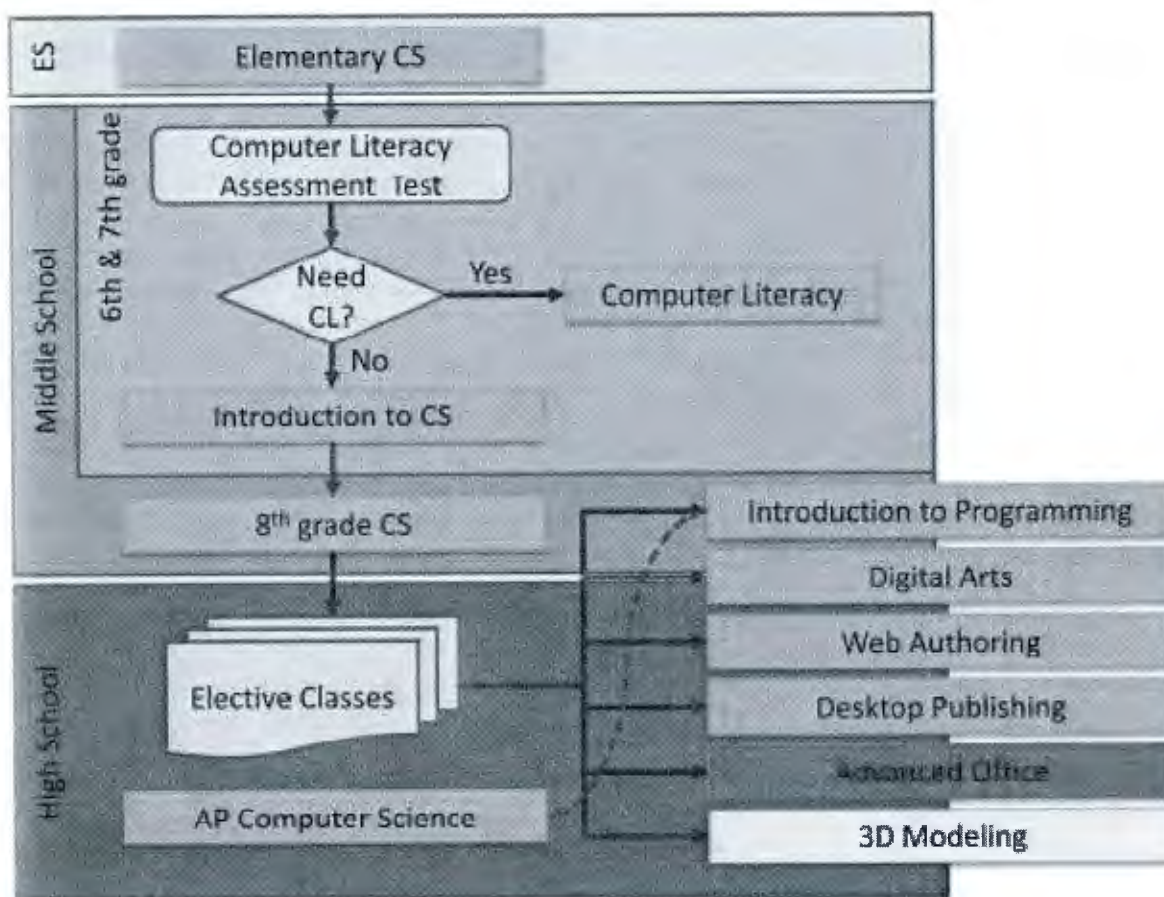
Accord Institute's Computer Science curriculum complies with Computer Science Teacher Association (CSTA)'s *A Model Curriculum for K-12 Computer Science*¹. CSTA's model curriculum has the following levels and structure:

Recommended Grade Level



In fact, Accord CS Curriculum is one step ahead of the above chart. In K-8 part of the curriculum, a big portion of the Level II topics are covered in addition to the Level I topics. Level III and Level IV topics are covered in high school. For the gifted students, Accord provides advanced level problem solving packages as a part of Advanced Math and Science Program (see Middle School Section for details). AMSP CS Curriculum includes topics in Level III, IV and above.

¹ ACM K-12 CS Model Curriculum, 2nd Edition: <http://csta.acm.org/Curriculum/sub/CurrFiles/K-12ModelCurr2ndEd.pdf>.



The chart above summarizes Accord's K-12 CS Curriculum:

- K-5 part focuses on basic computer literacy skills as well as problem solving and creative thinking.
- Middle school part aims to provide strong skills in computer literacy and fundamentals of computational thinking. At the beginning of middle school, students are assessed on their Computer Literacy skills, and Computer Literacy level of the school is identified. Computer Literacy curriculum is compacted aligning to the school level, and Programming and Discrete Math topics are infused into the curriculum. Programming topics will be more intense in the 6th and 7th grades with the higher results in assessment exam.
- 8th grade serves a transition between middle school and high school. Hence, 8th grade topics focus on the conceptual understanding of high school electives.
- High School part has elective courses and AP Computer Science course. AP Computer Science has Introduction to Programming course as the prerequisite.

K-5

In Kindergarten and elementary school, students obtain fluency in computers and learn introductory level computer literacy. The classes are supported with problem solving and creative thinking activities.

MIDDLE SCHOOL

Middle school CS curriculum is a flexible curriculum with respect to the Computer Literacy skills of students in a school. 6th and 7th grade topics are composed of Computer Literacy and Introduction to CS. Full Computer Literacy is designed as a two-year course, 3 hours per week for novice level students. However, the curriculum has acceleration procedures and it is compacted regarding to the Computer Literacy Assessment Exam. When the school starts, all middle school students take the exam and the school's average Computer Literacy level is determined. Then Accord Institute provides an accelerated curriculum customized for the school considering its average Computer Literacy level. The provided accelerated curriculum consists of compacted Computer Literacy topics enriched with Accord Institute's Introduction to CS course package. The students who are below the average should be supported with afterschool tutoring. Accord Institute's CStory Contest² is also a part of the curriculum as a motivator for the students.

Computer Literacy part of curriculum is based on International Computer Driving License (ICDL 5.0)³ which is a renowned worldwide certification program accepted in 148 countries. It is aligned with International Society for Technology in Education's NETS standards⁴.

Introduction to CS part aims to provide strong skills in computational thinking. Hence, the focus is not a structured programming language but problem solving in CS. The curriculum utilizes Scratch⁵ which is the state-of-art programming language for especially K-12 kids developed by MIT Media Lab. In addition, Discrete Math topics are essential in CS education. Hence, a renowned activity based resource, CS Unplugged⁶, is included in the curriculum.

AMSP is an afterschool enrichment program for the gifted students. AMSP Computer Science curriculum is focused on advanced level problem solving in CS, algorithm analysis and design. In the upper grades, USA Computing Olympiad⁷, the most prestigious high school level CS competition in US, is targeted in different levels (Bronze, Silver, Gold divisions).

HIGH SCHOOL

High Schools curriculum is composed of elective courses and AP Computer Science course. Accord Institute currently provides the following elective course packages:

- Introduction to Programming
- Digital Arts
- Web Authoring
- Desktop Publishing

Elective courses can be given in any grade however the recommended sequence is as provided above. Introduction to Programming corresponds to CS Principles⁸ course which is currently a pilot course and is considered as an AP course in the upcoming years. AP Computer Science requires taking Introduction to Programming course.

² CStory Contest website: <http://cstory.accordeducation.org/>

³ ICDL website: <http://www.ecdl.org/>

⁴ ISTE NETS website: <http://www.iste.org/standards/nets-for-students.aspx>

⁵ Scratch website: <http://scratch.mit.edu>

⁶ Website for CS unplugged resources, videos and activities: <http://csunplugged.org/>

⁷ USACO website: <http://usaco.org>

⁸ CS Principles course website: <http://csprinciples.org/>

AP COMPUTER SCIENCE GUIDELINES

OBJECTIVES

The course emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development, and is meant to be the equivalent of a first-semester college-level course in computer science. It also includes the study of data structures, design, and abstraction.

PREREQUISITES

AP course has certain prerequisites:

- Teacher has to give 'Introduction to Programming' elective course before the AP course.
- Teacher must attend 1 week summer AP Computer Science workshop. It has sessions during June, July, and August. In the workshop, the teacher learns how to plan and teach the AP class. The workshop provides sufficient resources and information for the teacher. AP Courses web page is located at: http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/4483.html. The registration can be done at: <http://apcentral.collegeboard.com/apc/Pageflows/InstitutesAndWorkshops/InstitutesAndWorkshopsController.jsp>. Choose the option 'AP Computer Science A'.
- Students must know introductory level programming, i.e., received A or B from 'Introduction to Programming' class.

LESSON PLANS

During the classes, the following style is recommended:

- Self-pace study based course
- Students follow and finish the book
- Teacher gives projects in the book
- Teacher provides previous exams

Teacher is required to prepare his/her own syllabus and submit it to the AP College Board. If it was the same as someone else's then s/he will be notified to send his/her own. Sample syllabus can be found in 'AP Computer Science-Syllabus.pdf'. Sample lesson plan can be found in the excel document '02 APCS Planner 0708.xls'. For further examples, see the folder '00 Syllabus'.

TEXTBOOK

The AP workshop provides around 20 text books and there are many AP Computer Science books available in the market. The following textbook may be used:

- Java Concepts for AP Computer Science, Cay S. Horstmann, 2007.

It is recommended to buy the classroom set of the textbook. Classroom set includes 5-6 student books, and teacher's book including the lecture materials / resources. The teacher should make sure to get the teacher resources (syllabus, slides, previous exams, student projects).

SOFTWARE

There are many different free Java compilers. Java creator is recommended as a compiler. You can download it free from: <http://www.jcreator.org/download.htm>.

LECTURE MATERIALS

The following materials can be found in the AP Computer Science package provided in the workshop:

- Project ideas can be found in the folders '00 Projects', '07 Student Projects'.
- Previous exams can be found in the folder '02 APCS Exams'.

The grading is based on assignments (book assignments), tests (book tests) and projects.

RESOURCES

The following materials are also provided in the AP Computer Science package:

- Quick reference for AP Computer Science necessary classes and information are in the folder '01 APCS Quick References'
- Compiler information, installation, JAR files and JavaDoc documents are in the folder '04 Compiler Info Jars JavaDocs'
- Selected documents for Object Oriented Programming are in the folder '05 Teaching OOP'
- Quality Java presentation slides are in the folder '06 Java PPTs'
- Further selected AP resources are in the folder '03 AP Resources'
- Some miscellaneous stuff including class activities can be found in 'Misc' folder

BUDGET

- AP Computer Science workshop registration: ~\$600
- AP class set: ~\$200-\$300 (per group of 5-6 students, and including teacher edition book and resources).

6TH GRADE COMPUTER LITERACY CURRICULUM

(ALIGNED WITH ICDL CURRICULUM 5.0)

SECTION 1: FUNDAMENTALS (3 WEEKS)

1. Basic Components (ICDL - 1.1 Hardware)
 - 1.1. Basic components of a computer system
 - 1.1.1. Processor, input and output devices, and data storage device
 - 1.2. Differences between digital and analog systems
 - 1.2.1. Advantages and disadvantages
 - 1.3. Input/output devices
 - 1.3.1. Keyboard, mouse (pointer devices), microphone, printer, monitor, scanner
2. Healthy Computing (ICDL - 1.4 ICT in Everyday Life)
 - 2.1. Computer addiction
 - 2.1.1. Mental, physical and social consequences
 - 2.2. Basic ergonomics to use a computer safely
 - 2.2.1. Common Repetitive Motion Injuries (RMI)
 - 2.2.2. Computer use, texting and gaming, how people get RMIs, the symptoms, how to prevent them
3. Online Ethics (ICDL – 1.6 Law)
 - 3.1. Intellectual property and the copyright laws
 - 3.2. Ethical violations
 - 3.2.1. Computer hacking, piracy, intentional virus setting, and invasion of privacy
4. Digital Drawing
 - 4.1. Drawing tools
 - 4.1.1. Pen tool
 - 4.1.2. Eraser tool
 - 4.1.3. Brush tool
 - 4.1.4. Line tool
 - 4.1.5. Shape tools

4.1.6. Paint bucket tool

4.1.7. Text tool

SECTION II: WORD PROCESSING (7 WEEKS)

1. Basic Operations (ICDL - 3.1 Using the Application)
 - 1.1. Basic use of a word processing program
 - 1.1.1. Basic file operations such as open, close, save, and print.
 - 1.2. Select and manipulate text
 - 1.2.1. Cut, copy, paste, bold, italic, and underline text using a variety of methods
 - 1.3. The advantages of digital media over printed media
2. Spelling and Grammar Tools (ICDL - 3.6 Prepare Outputs)
 - 2.1. Proper spacing techniques for digital file formats
 - 2.2. Correct punctuation (em/en dashes, smart quotes) in digital media
 - 2.3. Student learns to add super and subscript text
 - 2.4. Bulleted and numbered lists
 - 2.5. Spell checker and identification of undetected errors
3. Tab, Spacing and Alignment (ICDL - 3.3 Formatting)
 - 3.1. Paragraph formatting
 - 3.1.1. Alignment and spacing settings
 - 3.1.2. Font type, size, and style
 - 3.1.3. Paragraph columns
 - 3.2. Tab and indent spacing
 - 3.3. Table of contents
4. Margins and Layout (ICDL - 3.6 Prepare Outputs)
 - 4.1. Page margins
 - 4.1.1. Margins and indent settings
 - 4.2. Paper size and orientation
 - 4.3. Page borders
 - 4.4. Vertical alignment
5. Report Formatting (ICDL - 3.6 Prepare Outputs)
 - 5.1. Common tools to format a report
 - 5.1.1. Page breaks
 - 5.1.2. Page numbering

- 5.1.3. Foot/endnotes
 - 5.1.4. Headers and footers
 - 5.1.5. Page ruler
 - 5.1.6. Footnotes
- 5.2. Concerning plagiarism and source citation
 - 5.2.1. Cited page or bibliography
- 5.3. Pictures
- 6. Citation
 - 6.1. Concepts of citation
 - 6.1.1. Copyright, fair use, and permissions
 - 6.2. Citing using the APA style
 - 6.3. Citing using the MLA style
- 7. Proofreading and Correcting (ICDL - 3.6 Prepare Outputs)
 - 7.1. Spelling errors in a spell checker
 - 7.1.1. Punctuation errors
 - 7.1.2. Capitalization errors
 - 7.1.3. Homonym errors
- 8. Collaborative Tools
 - 8.1. Accept and reject edits
 - 8.2. Insert/remove comments
 - 8.3. Track changes

SECTION III: PRESENTATION (7 WEEKS)

- 1. Elements and Basic Design (ICDL - 6.1 Using the Application)
 - 1.1. Definition and uses of presentation software
 - 1.2. Components of an electronic presentation
 - 1.2.1. Slides
 - 1.2.1.1. Navigating through slides
 - 1.2.2. Design objects
 - 1.2.2.1. Text editing and formatting
 - 1.2.2.1.1. Add, delete, and format text on slides
 - 1.2.2.2. Images
 - 1.2.2.2.1. Add pictures to a presentation and modify them

- 1.2.2.3. Slide view
 - 1.2.2.3.1. Add backgrounds to a presentation
 - 1.2.2.3.2. Color palette
- 2. Lines, Lists, and Structure (ICDL – 6.2 Developing a Presentation, 6.3 Text, 6.5 Graphical Objects)
 - 2.1. Shapes
 - 2.1.1. Add and modify
 - 2.2. Bullet lists
 - 2.2.1. Format text into bulleted or numbered lists
 - 2.3. Slides
 - 2.3.1. Insert and duplicate slides
 - 2.3.2. Copy and paste elements in between slides
- 3. Effects and views (ICDL - 6.5 Graphical Objects, 6.6 Prepare Outputs)
 - 3.1. Animation
 - 3.1.1. Animation effects
 - 3.1.1.1. Adding effects to text, pictures, and other objects
 - 3.1.2. Sound effects
 - 3.1.2.1. Adding sound effects in conjunction with animation effects
 - 3.1.3. Animation order and timing
 - 3.2. Transition effects
 - 3.3. Presentation views
 - 3.3.1. Concept of layers and object grouping
- 4. Hyperlinks
 - 4.1. Linear and non-linear presentations
 - 4.2. Focus of a slide
 - 4.3. Hyperlinks within a single presentation

SECTION IV: WEB BROWSING (2 WEEKS)

- 1. Browsing Basics (ICDL - 7.1 The Internet, 7.2 Using the Browser, 7.4 Web Outputs)
 - 1.1. Characteristics of web pages and websites
 - 1.1.1. URL
 - 1.1.2. Links and navigation
 - 1.2. Browsers

- 1.2.1. Printing a web page
- 1.2.2. Download files and software from the World Wide Web
- 2. URLs (ICDL - 7.2 Using the Browser, 7.3 Using the Web)
 - 2.1. Browser-server communication
 - 2.2. HTML and browsers
 - 2.3. Components of a URL
 - 2.4. Basic web page error messages
 - 2.5. Bookmarks
- 3. Web Searches (ICDL – 7.3.2 Searching)
 - 3.1. Database for storing, sorting, and organizing information
 - 3.2. Search engines
 - 3.2.1. Search strategies
 - 3.2.1.1. Keyword, phrase, multi-item, and truncation search strategies
- 4. Validity and Sourcing (7.1.2 Security Considerations)
 - 4.1. Privacy issues
 - 4.1.1. Username and passwords
 - 4.2. Validity of online information
 - 4.2.1. Site purpose, author credentials, date of publication, and design
 - 4.3. Fair-use and copyright laws
 - 4.3.1. Citation

SECTION V: SPREADSHEETS (9 WEEKS)

- 1. Parts and Navigation (ICDL - 4.1 Using the Application, 4.2 Cells, 4.3 Managing Worksheets)
 - 1.1. Definition of spreadsheet software
 - 1.1.1. A tool for organizing data
 - 1.2. Components of a spreadsheet
 - 1.2.1. Rows, columns, and cells
 - 1.2.1.1. Insert, size, and delete rows and columns
 - 1.2.1.2. Entering data in individual cells
 - 1.2.1.3. Selecting groups of cells and entire rows and columns
 - 1.3. Navigate through a spreadsheet
- 2. Basic Formatting (ICDL – 4.4 Formulas and Functions, 4.5 Formatting)

- 2.1. Cell formatting
 - 2.1.1. Format cell data as currency.
 - 2.1.2. Borders and shading to a cell or group of cells.
 - 2.1.3. Student learns to perform cell justification and merges.
- 2.2. Basic functions
 - 2.2.1. Student learns to use the alphabetical and numerical sort functions.
 - 2.2.2. Student learns to use the summation function.
- 3. Charts and Graphs (ICDL – 4.6 Graphs)
 - 3.1. Spreadsheet templates
 - 3.2. Data reading and interpreting on charts and graphs
 - 3.3. Labeling charts and graphs
 - 3.3.1. Labeling the axes on graphs
 - 3.4. Modifying data and updating pre-created graphs
 - 3.5. Graphing multiple sets of data simultaneously
- 4. Formulas (ICDL – 4.4 Formulas and Functions)
 - 4.1. Identifying cells by their location
 - 4.2. Summation command
 - 4.3. Correlation between what is typed into a cell and what appears on the screen
 - 4.4. Entering formulas in cells
 - 4.5. Cell names in a formula to perform mathematical calculations
 - 4.6. Copying and pasting formulas
 - 4.6.1. Concept of relativity of copying and pasting formulas
 - 4.6.2. Absolute reference
- 5. Functions, Copy, and Paste (ICDL – 4.4 Formulas and Functions)
 - 5.1. Relativity concept of copying and pasting formulas
 - 5.2. Functions
 - 5.2.1. Cell ranges in functions
 - 5.2.2. Numerical formulas
 - 5.2.2.1. Functions for mathematical mean, minimum, and maximum
- 6. Layout (ICDL – 4.7 Prepare Outputs)
 - 6.1. Page orientation and margins
 - 6.2. Page numbers and header/footer
 - 6.3. Printing with gridlines
 - 6.4. Text wrapping

6.5. Navigation using scroll bars

6.6. Locking table, column, and row titles

7TH GRADE COMPUTER LITERACY CURRICULUM

(BASED ON ICDL CURRICULUM 5.0)

SECTION I: FUNDAMENTALS (2 WEEKS)

1. CONCEPTS OF INFORMATION AND COMMUNICATION TECHNOLOGY

1.1. Hardware

1.1.1. Concepts

- 1.1.1.1. Understand the term hardware.
- 1.1.1.2. Understand what a personal computer is. Distinguish between desktop, laptop (notebook), tablet PC in terms of typical users.
- 1.1.1.4. Know the main parts of a computer like: central processing unit (CPU), types of memory, hard disk, common input and output devices.

1.1.2. Computer Performance

- 1.1.2.1. Know some of the factors that impact on a computer's performance like: CPU speed, RAM size, graphics card processor and memory, the number of applications running.

1.1.4. Input, Output Devices

- 1.1.4.1. Identify some of the main input devices like: mouse, keyboard, trackball, scanner, touchpad, stylus, joystick, web camera (webcam), digital camera, microphone.
- 1.1.4.2. Know some of the main output devices like: screens/monitors, printers, speakers, headphones.
- 1.1.4.3. Understand some devices are both input and output devices like: touchscreens.

1.2. Software

1.2.1. Concepts

- 1.2.1.1. Understand the term software.
- 1.2.1.2. Understand what an operating system is and name some common operating systems.
- 1.2.1.3. Identify and know the uses of some common software applications: word processing, spreadsheet, database, presentation, e-mail, web browsing, photo editing, computer games.
- 1.2.1.4. Distinguish between operating systems software and applications software.

1.4. ICT in Everyday Life

1.4.4. Health

- 1.4.4.1. Understand the term ergonomics.
- 1.4.4.2. Recognize that lighting is a health factor in computer use. Be aware that use of artificial light, amount of light, direction of light are all important considerations.
- 1.4.4.3. Understand that correct positioning of the computer, desk and seat can help maintain a good posture.

1.5. Security

1.5.1. Identity/Authentication

- 1.5.1.1. Understand that for security reasons a user name (ID) and password are needed for users to identify themselves when logging on to a computer.

1.5.3. Viruses

- 1.5.3.1. Understand the term computer virus.
- 1.5.3.2. Be aware how viruses can enter a computer system.
- 1.5.3.3. Know how to protect against viruses and the importance of updating antivirus software regularly.

2. USING THE COMPUTER AND MANAGING FILES

2.1. Operating System

2.1.1. First Steps

- 2.1.1.1. Start the computer and log on securely using a user name and password.
- 2.1.1.3. Shut down a non-responding application.
- 2.1.1.5. Use available Help functions.

2.1.2. Setup

- 2.1.2.2. Change the computer's desktop configuration: date & time, volume settings, desktop display options (colour settings, desktop background, screen pixel resolution, screen saver options).
- 2.1.2.5. Use keyboard print screen facility to capture a full screen, active window.

2.1.4. Using Windows

- 2.1.4.1. Identify the different parts of a window: title bar, menu bar, toolbar or ribbon, status bar, scroll bar.
- 2.1.4.2. Collapse, expand, restore, resize, move, close a window.
- 2.1.4.3. Switch between open windows.

2.2. File Management

2.2.1. Main Concepts

- 2.2.1.1. Understand how an operating system organizes drives, folders, files in a hierarchical structure.
- 2.2.1.2. Know devices used by an operating system to store files and folders like: hard disk, network drives, USB flash drive, CD-RW, DVD-RW.

2.2.2. Files and Folders

- 2.2.2.1. Open a window to display folder name, size, location on a drive.
- 2.2.2.3. Navigate to a folder, file on a drive.
- 2.2.2.4. Create a folder and a further subfolder.

2.2.3. Working with Files

- 2.2.3.6. Rename files, folders.

2.2.4. Copy, Move

- 2.2.4.1. Select a file, folder individually or as a group of adjacent, non-adjacent files, folders.
- 2.2.4.2. Copy files, folders between folders and between drives.
- 2.2.4.3. Move files, folders between folders and between drives.

2.2.5. Delete, Restore

- 2.2.5.1. Delete files, folders to the recycle bin/wastebasket/trash.

2.2.6. Searching

- 2.2.6.1. Use the Find tool to locate a file, folder.

- 2.2.6.2. Search for files by all or part of file name, by content.
- 2.2.6.3. Search for files by date modified, by date created, by size.
- 2.2.6.4. Search for files by using wildcards: file type, first letter of file name.

2.3. Utilities

2.3.1. File Compression

- 2.3.1.1. Understand what file compression means.
- 2.3.1.2. Compress files in a folder on a drive.
- 2.3.1.3. Extract compressed files from a location on a drive.

SECTION II: WORD PROCESSING (8 WEEKS)

3. WORD PROCESSING

3.1. Using the Application

3.1.1. Working with Documents

- 3.1.1.1. Open, close a word processing application. Open, close documents.
- 3.1.1.2. Create a new document based on default template, other available template like: memo, fax, agenda.
- 3.1.1.3. Save a document to a location on a drive. Save a document under another name to a location on a drive.
- 3.1.1.5. Switch between open documents.

3.2. Document Creation

3.2.1. Enter Text

- 3.2.1.2. Enter text into a document.

3.2.2. Select, Edit

- 3.2.2.2. Select character, word, line, sentence, paragraph, entire body text.
- 3.2.2.3. Edit content by entering, removing characters, words within existing text, by over typing to replace existing text.
- 3.2.2.4. Use a simple search command for a specific word, phrase.
- 3.2.2.5. Use a simple replace command for a specific word, phrase.
- 3.2.2.6. Copy, move text within a document, between open documents.
- 3.2.2.7. Delete text.
- 3.2.2.8. Use the undo, redo command.

3.3. Formatting

3.3.1. Text

- 3.3.1.1. Change text formatting: font sizes, font types.
- 3.3.1.2. Apply text formatting: bold, italic, underline.
- 3.3.1.4. Apply different colours to text.

3.3.2. Paragraphs

- 3.3.2.1. Create, merge paragraph(s).
- 3.3.2.2. Insert, remove soft carriage return (line break).
- 3.3.2.4. Align text left, centre, right, justified.
- 3.3.2.5. Indent paragraphs: left, right, first line.
- 3.3.2.8. Apply spacing above, below paragraphs. Apply single, 1.5 lines, double line spacing within paragraphs.
- 3.3.2.9. Add, remove bullets, numbers in a single level list. Switch between different standard bullet, number styles in a single level list.
- 3.3.2.10. Add a box border and shading/background colour to a paragraph.

3.4. Objects

3.4.1. Table Creation

- 3.4.1.1. Create a table ready for data insertion.
- 3.4.1.2. Insert, edit data in a table.
- 3.4.1.3. Select rows, columns, cells, entire table.
- 3.4.1.4. Insert, delete, rows and columns.

3.4.2. Table Formatting

- 3.4.2.1. Modify column width, row height.
- 3.4.2.2. Modify cell border line style, width, colour.
- 3.4.2.3. Add shading/background colour to cells.

3.4.3. Graphical Objects

- 3.4.3.1. Insert an object (picture, image, chart, drawn object) to a specified location in a document.
- 3.4.3.2. Select an object.
- 3.4.3.3. Copy, move an object within a document, between open documents.
- 3.4.3.4. Resize, delete an object.

3.6. Prepare Outputs

3.6.1. Setup

- 3.6.1.1. Change document orientation: portrait, landscape. Change paper size.
- 3.6.1.2. Change margins of entire document, top, bottom, left, right.
- 3.6.1.4. Insert, delete a page break in a document.
- 3.6.1.5. Add, edit text in headers, footers.
- 3.6.1.6. Add fields in headers, footers: date, page number information, file name.
- 3.6.1.7. Apply automatic page numbering to a document.

3.6.2. Check and Print

- 3.6.2.1. Spell check a document and make changes like: correcting spelling errors, deleting repeated words.
- 3.6.2.2. Add words to a built-in custom dictionary using a spell checker.
- 3.6.2.3. Preview a document.

SECTION III: PRESENTATION (8 WEEKS)

6. PRESENTATION

6.1. Using the Application

6.1.1. Working with Presentations

- 6.1.1.1. Open, close a presentation application. Open, close presentations.
- 6.1.1.2. Create a new presentation based on default template.
- 6.1.1.3. Save a presentation to a location on a drive. Save a presentation under another name.

6.2. Developing a Presentation

6.2.1. Presentation Views

- 6.2.1.1. Understand the uses of different presentation view modes: normal view, slide sorter view, outline view, slide show view.
- 6.2.1.3. Change between presentation view modes: normal view, slide sorter view, slide show view.

6.2.2. Slides

- 6.2.2.1. Choose a different built-in slide layout for a slide.
- 6.2.2.2. Apply an available design template to a presentation.

- 6.2.2.3. Change background colour on specific slide(s), all slides.
- 6.2.2.4. Add a new slide with a specific slide layout like: title slide, chart and text, bulleted list, table/spreadsheet.
- 6.2.3.Master Slide
 - 6.2.3.1. Insert a graphical object (picture, image, drawn object) into a master slide.
 - Remove a graphical object from a master slide.
- 6.3. Text
 - 6.3.1.Handling Text
 - 6.3.1.2. Enter text into a placeholder in standard, outline view.
 - 6.3.2.Formatting
 - 6.3.2.1. Change text formatting: font sizes, font types.
 - 6.3.2.2. Apply text formatting: bold, italic, underline, shadow.
 - 6.3.2.3. Apply different colours to text.
 - 6.3.2.5. Align text: left, centre, right in a text frame.
 - 6.3.3.Lists
 - 6.3.3.3. Switch between the different standard bullet, number styles in a list.
- 6.4. Charts
 - 6.4.1.Using Charts
 - 6.4.1.1. Input data to create built-in charts in a presentation: column, bar, line, pie.
 - 6.4.1.3. Change the chart type.
 - 6.4.1.6. Change the background colour of a chart.
 - 6.4.1.7. Change the column, bar, line, pie slice colours in a chart.
 - 6.4.2.Organization Charts
 - 6.4.2.1. Create an organization chart with a labelled hierarchy by using a built-in organization chart feature.
 - 6.4.2.2. Change the hierarchical structure of an organization chart.
 - 6.4.2.3. Add, remove co-workers, subordinates in an organization chart.
- 6.5. Graphical Objects
 - 6.5.1.Insert, Manipulate
 - 6.5.1.1. Insert a graphical object (picture, image, drawn object) into a slide.
 - 6.5.1.3. Copy, move graphical objects, charts within the presentation, between open presentations.
 - 6.5.1.4. Resize, delete graphical objects, charts in a presentation.
 - 6.5.1.5. Rotate, flip a graphical object.
 - 6.5.1.6. Align a graphical object relative to a slide: left, centre, right, top, bottom.
 - 6.5.2.Drawing
 - 6.5.2.1. Add different types of drawn object to a slide: line, arrow, block arrow, rectangle, square, oval, circle, text box.
 - 6.5.2.3. Change drawn object background colour, line colour, line weight, line style.
 - 6.5.2.4. Change arrow start style, arrow finish style.
 - 6.5.2.5. Apply a shadow to a drawn object.
 - 6.5.2.7. Bring a drawn object one level forward, one level backward, to the front, to the back of other drawn objects.
- 6.6. Prepare Outputs
 - 6.6.1.Preparation
 - 6.6.1.1. Add, remove transition effects between slides.
 - 6.6.1.2. Add, remove preset animation effects for different slide elements.

6.6.2. Check and Deliver

- 6.6.2.4. Start a slide show from first slide, from current slide.

SECTION IV: WEB BROWSING (2 WEEKS)

7. WEB BROWSING AND COMMUNICATION

7.2. Using the Browser

7.2.1. Navigation

- 7.2.1.2. Navigate backwards and forwards between previously visited web pages.

7.2.2. Bookmarks

- 7.2.2.1. Bookmark a web page. Delete a bookmark.
7.2.2.2. Display a bookmarked web page.
7.2.2.3. Create, delete a bookmark folder.
7.2.2.4. Add web pages to a bookmark folder.

7.3. Using the Web

7.3.2. Searching

- 7.3.2.1. Select a specific search engine.
7.3.2.2. Carry out a search for specific information using a keyword, phrase.
7.3.2.3. Use advanced search features to refine a search: by exact phrase, by excluding words, by date, by file format.

7.4. Web Outputs

7.4.1. Saving Files

- 7.4.1.1. Save a web page to a location on a drive.
7.4.1.2. Download files from a web page to a location on a drive.
7.4.1.3. Copy text, image, URL from a web page to a document.

SECTION V: SPREADSHEETS (8 WEEKS)

4. SPREADSHEETS

4.1. Using the Application

4.1.1. Working with Spreadsheets

- 4.1.1.1. Open, close a spreadsheet application. Open, close spreadsheets.
4.1.1.2. Create a new spreadsheet based on default template.
4.1.1.3. Save a spreadsheet to a location on a drive. Save a spreadsheet under another name to a location on a drive.
4.1.1.4. Save a spreadsheet as another file type like: template, text file, software specific file extension, version number.
4.1.1.5. Switch between open spreadsheets.

4.2. Cells

4.2.1. Insert, Select

- 4.2.1.3. Enter a number, date, text in a cell.
- 4.2.1.4. Select a cell, range of adjacent cells, range of non-adjacent cells, entire worksheet.
- 4.2.2. Edit, Sort
 - 4.2.2.1. Edit cell content, modify existing cell content.
 - 4.2.2.2. Use the undo, redo command.
 - 4.2.2.3. Use the search command for specific content in a worksheet.
 - 4.2.2.4. Use the replace command for specific content in a worksheet.
 - 4.2.2.5. Sort a cell range by one criterion in ascending, descending numeric order, ascending, descending alphabetic order.
- 4.2.3. Copy, Move, Delete
 - 4.2.3.1. Copy the content of a cell, cell range within a worksheet, between worksheets, between open spreadsheets.
 - 4.2.3.2. Use the autofill tool/copy handle tool to copy, increment data entries.
 - 4.2.3.3. Move the content of a cell, cell range within a worksheet, between worksheets, between open spreadsheets.
 - 4.2.3.4. Delete cell contents.
- 4.3. Managing Worksheets
 - 4.3.1. Rows and Columns
 - 4.3.1.1. Select a row, range of adjacent rows, range of non-adjacent rows.
 - 4.3.1.2. Select a column, range of adjacent columns, range of non-adjacent columns.
 - 4.3.1.3. Insert, delete rows and columns.
 - 4.3.1.4. Modify column widths, row heights to a specified value, to optimal width or height.
 - 4.3.1.5. Freeze, unfreeze row and/or column titles.
- 4.4. Formulas and Functions
 - 4.4.1. Arithmetic Formulas
 - 4.4.1.1. Recognize good practice in formula creation: refer to cell references rather than type numbers into formulas.
 - 4.4.1.2. Create formulas using cell references and arithmetic operators (addition, subtraction, multiplication, division).
 - 4.4.1.3. Identify and understand standard error values associated with using formulas: #NAME?, #DIV/0!, #REF!.
 - 4.4.1.4. Understand and use relative, absolute cell referencing in formulas.
 - 4.4.2. Functions
 - 4.4.2.1. Use sum, average, minimum, maximum, count, counta, round functions.
 - 4.4.2.2. Use the logical function if (yielding one of two specific values) with comparison operator: =, >, <.
- 4.5. Formatting
 - 4.5.1. Numbers/Dates
 - 4.5.1.1. Format cells to display numbers to a specific number of decimal places, to display numbers with, without a separator to indicate thousands.
 - 4.5.1.2. Format cells to display a date style, to display a currency symbol.
 - 4.5.1.3. Format cells to display numbers as percentages.
 - 4.5.2. Contents
 - 4.5.2.1. Change cell content appearance: font sizes, font types.
 - 4.5.2.2. Apply formatting to cell contents: bold, italic, underline, double underline.
 - 4.5.2.3. Apply different colours to cell content, cell background.

- 4.5.2.4. Copy the formatting from a cell, cell range to another cell, cell range.
- 4.5.3.Alignment, Border Effects
 - 4.5.3.1. Apply text wrapping to contents within a cell, cell range.
 - 4.5.3.2. Align cell contents: horizontally, vertically. Adjust cell content orientation.
 - 4.5.3.3. Merge cells and center a title in a merged cell.
 - 4.5.3.4. Add border effects to a cell, cell range: lines, colours.

4.6. Charts

4.6.1.Create

- 4.6.1.1. Create different types of charts from spreadsheet data: column chart, bar chart, line chart, pie chart.
- 4.6.1.3. Change the chart type.
- 4.6.1.4. Move, resize, delete a chart.

4.6.2.Edit

- 4.6.2.1. Add, remove, edit a chart title.
- 4.6.2.2. Add data labels to a chart: values/numbers, percentages.
- 4.6.2.3. Change chart area background colour, legend fill colour.
- 4.6.2.4. Change the column, bar, line, pie slice colours in the chart.

8TH GRADE COMPUTER CURRICULUM

SECTION I: CONCEPTS OF INFORMATION TECHNOLOGY (2 WEEKS)

(Based on ICDL v4.0 – Module 1)

1. General Concepts
 - 1.1. Hardware, Software, Information Technology
 - 1.2. Types of Computer
 - 1.3. Main Parts of a Personal Computer
 - 1.4. Computer Performance
2. Hardware
 - 2.1. Central Processing Unit
 - 2.2. Memory
 - 2.3. Input Devices
 - 2.4. Output Devices
 - 2.5. Input/Output Devices
 - 2.6. Storage Devices
3. Software
 - 3.1. Types of Software
 - 3.2. Operating System Software
 - 3.3. Applications Software
 - 3.4. Graphical User Interface
 - 3.5. Systems Development
4. Information Networks (ICDL 1.4.4 omitted)
 - 4.1. LAN, WAN
 - 4.2. Intranet, Extranet
 - 4.3. The Internet
 - 4.4. Internet connection types: Dial-up, DSL, Cable
5. The Use of IT in Everyday Life
 - 5.1. Computers at Work
 - 5.2. Electronic World
6. Health and Safety, Environment
 - 6.1. Ergonomics
 - 6.2. Health Issues
 - 6.3. Precautions
 - 6.4. The Environment
7. Security
 - 7.1. Information Security
 - 7.2. Computer Viruses
8. Copyright and the Law
 - 8.1. Copyright

8.2. Data Protection Legislation

SECTION II: SPREADSHEETS (3 WEEKS)

(Based on ICDL v4.0)

1. Review
 - 1.1. Using the Application (ICDL 4.1)
 - 1.1.1. First Steps with Spreadsheets
 - 1.1.2. Adjust Settings
 - 1.2. Cells (ICDL 4.2)
 - 1.2.1. Insert Data
 - 1.2.2. Select Cells
 - 1.2.3. Rows and Columns
 - 1.2.4. Edit Data
 - 1.2.5. Duplicate, Move, Delete
(Includes using AutoFill handle)
 - 1.2.6. Search and Replace
 - 1.3. Formatting (ICDL 4.5)
 - 1.3.1. Numbers/Dates
 - 1.3.2. Contents
 - 1.3.3. Alignment, Border Effects
 - 1.4. Charts/ Graphs (ICDL 4.6)
2. Cells
 - 2.1. Sort Data (ICDL 4.2.7)
3. Worksheets (ICDL 4.3)
4. Formulas and Functions (ICDL 4.4)
 - 4.1. Arithmetic Formulas
 - 4.2. Cell Referencing
 - 4.3. Working with Functions
5. Prepare Outputs (ICDL 4.7)
 - 5.1. Worksheet Setup
 - 5.1.1. Margins
 - 5.1.2. Orientation
 - 5.1.3. Scale
 - 5.1.4. Header, Footer
 - 5.1.5. Page numbers, etc
 - 5.2. Preparation (Preview, etc)

SECTION III: INTRODUCTION TO MULTIMEDIA (6 WEEKS)

1. Working with images
 - 1.1. Image formats
 - 1.2. Acquiring images
 - 1.3. Cropping and resizing images
 - 1.4. Red-eye removal
2. Working with videos

- 2.1. Importing/saving videos
- 2.2. Editing videos
 - 2.2.1. Ordering pieces on time line
 - 2.2.2. Splitting videos
 - 2.2.3. Trimming videos
 - 2.2.4. Merging videos
- 2.3. Enhancing videos
 - 2.3.1. Adding title and credits
 - 2.3.2. Adding transitions
 - 2.3.3. Adding sound to videos
 - 2.3.4. Using video effects

SECTION IV: INTRODUCTION TO 3D MODELING (6 WEEKS)

- 1. Create 2D shapes / surfaces (in a 3D environment)
 - 1.1. Create surfaces from lines, circles, freehand curves
 - 1.2. Generate surfaces from polygons, arcs
 - 1.3. Maintain coplanar geometry
- 2. Adding 3D objects
- 3. View / navigate models in 3D
 - 3.1. Rotate
 - 3.2. Pan
 - 3.3. Zoom
- 4. Create 3D objects
 - 4.1. 3D axis
 - 4.2. Components
 - 4.3. Adding text
- 5. Controlling 3D objects
 - 5.1. Select
 - 5.2. Move
 - 5.3. Scale

SECTION V: INTRODUCTION TO WEB DESIGN (6 WEEKS)

- 1. What is a webpage?
 - 1.1. The explanation of a web page
 - 1.2. Web page vs. website
 - 1.3. WYSIWYG
 - 1.3.1. WYSIWYG VS HTML code
- 2. Design Issues
 - 2.1. Design Principles (C.R.A.P.)
- 3. Preparing your website
 - 3.1. Project Proposal
 - 3.2. Simple plan of your web site
 - 3.3. Collecting/storing materials
 - 3.4. Layout

- 4. Developing your website
 - 4.1. Create a new site
 - 4.1.1. Site name
 - 4.1.2. Site description
 - 4.1.3. Share with
 - 4.1.4. Site theme
 - 4.2. Create a Page
 - 4.2.1. Template
 - 4.2.2. Location
 - 4.3. Edit Mode
 - 4.3.1. Insert layout
 - 4.3.2. Text Formatting
 - 4.3.3. Insert Image
 - 4.3.4. Insert a text box
 - 4.3.5. Insert attachments
 - 4.3.6. Insert video
 - 4.3.7. Create links
 - 4.4. Change the Appearance of your site
 - 4.4.1. Site elements (e.g. navigation)
 - 4.4.2. Color and fonts
 - 4.4.3. Theme

SECTION VI: INTRODUCTION TO PROGRAMMING (7 WEEKS)

- 1. **Scratch 1:** Getting Started: an Introductory Course
http://learnscratch.org/sc/LP_Scratch1.pdf
- 2. **Scratch 2:** Step by Step: A Course in Scratch Programming
http://learnscratch.org/sc/LP_Scratch2.pdf

INTRODUCTION TO PROGRAMMING ANNUAL PLAN

SECTION I: PROGRAMMING WITH SCRATCH

WEEK 1

- *Video:* Introduction to Scratch
 - MP4: <http://ilk.media.mit.edu/projects/scratch/videos/ScratchIntro.mp4>
 - WMV: <http://ilk.media.mit.edu/projects/scratch/videos/ScratchIntro.wmv>
- *Activity:* Getting Started with Scratch
 - <http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/files/file/ScratchGettingStartedv14.pdf>
- Scratch 1 (<http://learnscratch.org/video-courses/scratch-1>)
 - Lesson 1 (<http://learnscratch.org/sc1-l1>)
 - Lesson 2 (<http://learnscratch.org/sc1-l2>)
 - Lesson 3 (<http://learnscratch.org/sc1-l3>)
- *Homework:* Scratch Cards-1
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/01_changecolor_v14.pdf)
- *Homework:* Scratch Cards-2
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/02_movetoabear_v14.pdf)
- *Homework:* Scratch Cards-3
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/03_keymoves_v14.pdf)

WEEK 2

- Scratch 1 (<http://learnscratch.org/video-courses/scratch-1>)
 - Lesson 4 (<http://learnscratch.org/sc1-l4>)
 - Lesson 5 (<http://learnscratch.org/sc1-l5>)
 - Lesson 6 (<http://learnscratch.org/sc1-l6>)
 - Lesson 7 (<http://learnscratch.org/sc1-l7>)
 - Lesson 8 (<http://learnscratch.org/sc1-l8>)
- *Homework:* Scratch Cards-4
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/04_saysomething_v14.pdf)
- *Homework:* Scratch Cards-5
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/05_glide_v14.pdf)
- *Homework:* Scratch Cards-6
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/06_followthemouse_v14.pdf)
- *Homework:* Scratch Cards-7
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/07_dancetwist_v14.pdf)
- *Homework:* Scratch Cards-8
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/08_interactivewhirl_v14.pdf)

WEEK 3

- Scratch 2 (<http://learnscratch.org/video-courses/scratch-2>)
 - Unit 1 (<http://learnscratch.org/sc2-u1/sc2-u1i>) – Lesson 1, 2, 3, 4, 5, 6
- Homework: Scratch Cards-11
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/11_surprisebutton_v14.pdf)
- Homework: Scratch Cards-12
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/12_keepscore_v14.pdf)
- Homework: Scratch Cards-9
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/09_animateit_v14.pdf)
- Homework: Scratch Cards-10
(http://info.scratch.mit.edu/sites/infoscratch.media.mit.edu/docs/10_movinganimation_v14.pdf)

WEEK 4

- Scratch 2 (<http://learnscratch.org/video-courses/scratch-2>)
 - Unit 2 (<http://learnscratch.org/unit-2>) – Lesson 7, 8, 9, 10, 11

WEEK 5

- Scratch 2 (<http://learnscratch.org/video-courses/scratch-2>)
 - Unit 3 (<http://learnscratch.org/sc2-u3/sc2-u3i>) – Lesson 12, 13, 14, 15, 16

WEEK 6

- Scratch 2 (<http://learnscratch.org/video-courses/scratch-2>)
 - Unit 4 (<http://learnscratch.org/sc2-u4/sc2-u4i>) – Lesson 17, 18, 19, 20

WEEK 7

- Scratch 2 (<http://learnscratch.org/video-courses/scratch-2>)
 - Unit 5 (<http://learnscratch.org/sc2-u5>) – Lesson 21, 22, 23, 24

WEEK 8

- Scratch 3 (<http://learnscratch.org/video-courses/scratch-3>)
 - Unit 1 (<http://learnscratch.org/sc3-u1/sc3-u1i>) – Lesson 1, 2, 3, 4, 5

WEEK 9

- Scratch 3 (<http://learnscratch.org/video-courses/scratch-3>)
 - Unit 2 (<http://learnscratch.org/sc3-u2>) – Lesson 6, 7, 8, 9, 10

WEEK 10

- Scratch 3 (<http://learnscratch.org/video-courses/scratch-3>)
 - Unit 3 (<http://learnscratch.org/sc3-u3>) – Lesson 11, 12, 13, 14

WEEK 11

- Scratch 3 (<http://learnscratch.org/video-courses/scratch-3>)
 - Unit 4 (<http://learnscratch.org/sc3-u4>) – Lesson 15, 16, 17, 18, 19

WEEK 12

- Scratch 3 (<http://learnscratch.org/video-courses/scratch-3>)
 - Unit 5 (<http://learnscratch.org/sc3-u5>) – Lesson 20, 21, 22, 23

WEEK 13

- Scratch 3 (<http://learnscratch.org/video-courses/scratch-3>)
 - Unit 6 (<http://learnscratch.org/sc3-u6>) – Lesson 24, 25, 26, 27, 28, 29

WEEK 14

- Scratch 3 (<http://learnscratch.org/video-courses/scratch-3>)
 - Unit 7 (<http://learnscratch.org/sc3-u7>) – Lesson 30, 31, 32

WEEK 15-18

- Scratch Projects (Game, story, animation etc.)
 - Sample storytelling:
 - Evaluation (<http://wiki.classroom20.com/file/view/storytelling+self+eval.doc>)
 - Rubric (<http://wiki.classroom20.com/file/view/storytelling+rubric.doc>)
- Scratch activities can be used ([http://wiki.classroom20.com/file/view/Scratch Activities by Richard Wiktorowicz.pdf](http://wiki.classroom20.com/file/view/Scratch%20Activities%20by%20Richard%20Wiktorowicz.pdf))

SECTION II: PROGRAMMING LANGUAGE CONCEPTS

Lecture material locations:

- Lecture notes are in the 'Lecture Notes' folder.
- Slides, homework assignments and quizzes are located in the folder of the corresponding weeks.
- Programming assignment of practice sessions are in the 'Programming Assignments' folder. Main programming assignment documents are:
 - 'Programming Assignments-CPP.pdf' in C++
 - 'Programming Assignments-Scratch.pdf' in Scratch
 - Exercise numbers indicated in the parenthesis specify the questions in these documents
 - All source codes are in 'codes-assignments' folder
- Supplemental documents are:
 - Problem set for Unit 4: '4-Looping-ProblemSet.pdf'
 - Problem set for Unit 6: '6-Variables_Char String-ProblemSet.pdf'
 - Question pool for C++: 'Question Pool-CPP-questions.pdf'
 - Source codes of the question pool are in 'codes-question pool' folder

WEEK 19

- *Warm up:* Scratch review & exercises
- *Lecture:* 1-Introduction (1-Introduction-teacher.pdf)
- *Slides* (1-Introduction-1.ppsx)
- *Slides* (1-Introduction-2.ppsx)
- *Homework* (1-Introduction-hw1.pdf)
- *Quiz* (1-Introduction-q1.pdf)
- *Practice:* 1-Introduction (All questions)

WEEK 20

- *Lecture: 2-Variables – Integer Float (2-Variables_Integer Float-teacher.pdf)*
- *Slides (2-Variables_Integer Float-1.ppsx)*
- *Homework (2-Variables_Integer Float-hw1.pdf)*
- *Quiz (2-Variables_Integer Float-q1.pdf)*
- *Slides (2-Variables_Integer Float-2.ppsx)*
- *Homework (2-Variables_Integer Float-hw2.pdf)*
- *Quiz (2-Variables_Integer Float-q2.pdf)*
- *Slides (2-Variables_Integer Float-3.ppsx)*
- *Homework (2-Variables_Integer Float-hw3.pdf)*
- *Quiz (2-Variables_Integer Float-q3.pdf)*
- *Practice: 2-Variables – Integer Float (All questions)*

WEEK 21

- *Review: Chapter 1 & 2 (Review-1_2-teacher.pdf)*
- *Slides (Review-1_2.ppsx)*
- *Homework (Review-1_2-hw.pdf)*
- *Quiz (Review-1_2-q.pdf)*
- *Lecture: 3-Conditionals (3-Conditionals-teacher.pdf)*
 - 1. If statement
 - 2. If-else
 - 3. Relational operators
- *Slides (3-Conditionals-1.ppsx)*
- *Homework (3-Conditionals-hw1.pdf)*
- *Quiz (3-Conditionals-q1.pdf)*
- *Practice: 3-Conditionals (3.1)*

WEEK 22

- *Lecture: 3-Conditionals (3-Conditionals-teacher.pdf)*
 - 4. Logical operators
 - 5. If-else if-else
- *Slides (3-Conditionals-2.ppsx)*
- *Homework (3-Conditionals-hw2.pdf)*
- *Quiz (3-Conditionals-q2.pdf)*
- *Practice: 3-Conditionals (3.2)*

WEEK 23

- *Lecture: 4-Looping (4-Looping-teacher.pdf)*
 - 1. Do-while loop
- *Slides (4-Looping-1.ppsx)*
- *Slides (4-Looping-2.ppsx)*
- *Homework (4-Looping-hw1.pdf)*
- *Quiz (4-Looping-q1.pdf)*
- *Practice: 4-Looping (4.1)*

WEEK 24

- *Lecture: 4-Looping (4-Looping-teacher.pdf)*
 - 2. While and For loops
- *Practice: 4-Looping (4-Looping-ProblemSet.pdf)*

WEEK 25

- *Lecture: 4-Looping (4-Looping-teacher.pdf)*
 - 3. Infinite loops
- *Slides (4-Looping-2.ppsx)*
- *Homework (4-Looping-hw2.pdf)*
- *Quiz (4-Looping-q2.pdf)*
- *Practice: 4-Looping (4.2)*

WEEK 26

- *Lecture: 5-Arrays (5-Arrays-teacher.pdf)*
- *Slides (5-Arrays.ppsx)*
- *Homework (5-Arrays-hw1.pdf)*
- *Practice: 5-Arrays (5.1)*

WEEK 27

- *Quiz (5-Arrays-q1.pdf)*

WEEK 28

- *Lecture: 6-Variables – Char and String (6-Variables_Char String-teacher.pdf)*
 - 1. Introduction
 - 2. String operations
- *Practice: 6-Variables – Char and String (6-Variables_Char String-ProblemSet.pdf)*

WEEK 29

- *Lecture: 6-Variables – Char and String (6-Variables_Char String-teacher.pdf)*
 - 3. Single character variables
 - 4. Strings as character arrays
- *Practice: 6-Variables – Char and String (6-Variables_Char String-ProblemSet.pdf)*

WEEK 30

- *Lecture: 6-Variables – Char and String (6-Variables_Char String-teacher.pdf)*
 - 5. String functions
- *Practice: 6-Variables – Char and String (6-Variables_Char String-ProblemSet.pdf)*

WEEK 31

- *Lecture: 6-Variables – Char and String (6-Variables_Char String-teacher.pdf)*
 - 5. String functions

WEEK 32

- *Lecture: 6-Variables – Char and String (6-Variables_Char String-teacher.pdf)*
 - 6. Array of strings

WEEK 33-36

- *Practice: 6-Variables – Char and String (6-Variables_Char String-ProblemSet.pdf)*
- *Practice: Question pool (Question Pool-CPP-questions.pdf)*

INTRODUCTION TO PROGRAMMING GUIDELINES

OBJECTIVES

Introduction to programming is intended for high school students as an elective class. The objective is to teach basic skills of programming and problem solving.

LESSON PLANS

The curriculum is given in 'Introduction to Programming-Curriculum.pdf' and the lesson plans are provided in 'Introduction to Programming-Annual plan.pdf'. Introduction to programming is one year course and composed in two sections. Annual plan is prepared with respect to five class hours a week. The classes are

SCRATCH PROGRAMMING

The class content assumes that students have no programming language experience. The curriculum does not assume that mathematical background beyond middle school math. Lesson Plans are divided in three sections:

- **Scratch 1:** Getting Started: An Introductory Course
- **Scratch 2:** Step by Step: A course in Scratch Programming
- **Scratch 3:** Scratch Projects: A Comprehensive Course

PROGRAMMING LANGUAGE CONCEPTS

In this section, students learn the basics of a state-of-art programming language such as C++, C#, or Java. Students will adapt the concept easily since they understand the concepts during their lessons with Scratch. Currently, lecture material includes C++.

Please read the following notes about classes:

- This course has strong emphasis on hand-on programming practice during the class. Students should write codes of all examples, exercises, and programming assignments during the classes.
- During the class, teachers are recommended to relate C++ topics with the topics in Scratch.
- If the classes of the week including homework, quizzes and programming assignments are finished, teacher can use supplemental C++ programming assignments in the 'Programming Assignments' folder during the practice class.
- Lecture material doesn't cover some of the examples and challenge questions provided in the curriculum. They also can be used.
- Slides cover most of the curriculum.

SOFTWARE

- Scratch programming language is free and can be downloaded from: <http://scratch.mit.edu/download>
- Code::Blocks is a free C++ editor and can be downloaded from: <http://www.codeblocks.org/downloads>

LECTURE MATERIAL

The website <http://learnscratch.org/> has all the necessary documents for Scratch:

- Teacher's lesson plans and lecture material of Scratch can be downloaded from: http://learnscratch.org/index.php?option=com_content&task=view&id=252&Itemid=346.
- Each lesson has tutorial videos, and activities. Corresponding lesson material can be reached at the navigation bar on the left side in the 'Video Courses' section. Annual plan contains necessary links.

C++ material is composed of the following documents:

- Lecture notes are in the 'Lecture Notes' folder.
- Slides, homework assignments and quizzes are located in the folder of the corresponding weeks.
- Programming assignment of practice sessions are in the 'Programming Assignments' folder. Main programming assignment documents are:
 - 'Programming Assignments-CPP.pdf' in C++
 - 'Programming Assignments-Scratch.pdf' in Scratch
 - Exercise numbers indicated in the parenthesis specify the questions in these documents
 - All source codes are in 'codes-assignments' folder
- Supplemental documents are:
 - Problem set for Unit 4: '4-Looping-ProblemSet.pdf'
 - Problem set for Unit 6: '6-Variables_Char String-ProblemSet.pdf'
 - Question pool for C++: 'Question Pool-CPP-questions.pdf'
- Source codes of the question pool are in 'codes-question pool' folder

RESOURCES

The following textbook can be used as a supplemental material:

- Scratch Programming for Teens, J. L. Ford, Course Technology PTR, 2008.

BUDGET

Zero cost estimated.

DIGITAL ARTS CURRICULUM

SECTION I: DIGITAL ARTS CONCEPTS

1. Introduction to Digital Arts
 - 1.1. Elements of design
 - 1.1.1. Line
 - 1.1.2. Shape
 - 1.1.3. Size
 - 1.1.4. Space
 - 1.1.5. Color
 - 1.1.6. Texture
 - 1.1.7. Value
 - 1.2. Principles of design
 - 1.2.1. Balance
 - 1.2.2. Contrast
 - 1.2.3. Emphasis
 - 1.2.4. Proportion
 - 1.2.5. Pattern
 - 1.2.6. Gradation
2. Proportion and Scale
3. Color Theory
4. Typography
5. Digital Photography

SECTION II: RASTER GRAPHIC IMAGES

1. Improving Digital Photos
 - 1.1. Rescaling
 - 1.2. Cropping
 - 1.3. Brightening and Darkening
 - 1.3.1. Brightness-Contrast
 - 1.3.2. Levels
 - 1.3.3. Curves
 - 1.4. Rotating
 - 1.4.1. Rotation by Multiples of 90 Degrees
 - 1.4.2. Free rotation
 - 1.5. Sharpening
 - 1.6. Fixing Red-eye
2. Introduction to Layers
 - 2.1. The Text tool
 - 2.2. The Move tool

- 2.3. Simple Effects Using Layers
 - 2.3.1. Drop Shadows
- 2.4. Copy/Paste
 - 2.4.1. Select only the Part You Want to Paste
- 2.5. Layer Mode
- 2.6. Opacity
- 2.7. Operations on Layers
 - 2.7.1. New
 - 2.7.2. Duplicate
 - 2.7.3. Merge
 - 2.7.4. Delete
- 2.8. Making Simple GIF Animations
- 3. Drawing
 - 3.1. A New Image
 - 3.2. Using Layers for Drawing
 - 3.3. Drawing Rectangles, Circles, and Other Shapes
 - 3.3.1. Defining Regions
 - 3.3.2. Outlining Selections: Stroking
 - 3.3.3. Free Select with the Lasso
 - 3.3.4. Filling Regions
 - 3.3.5. The Bucket Fill Tool
 - 3.3.6. Patterns
 - 3.3.7. Gradients
 - 3.4. A Drawing Project
 - 3.4.1. Drawing a Tree
 - 3.4.2. Making a Box Using Perspective Transformation
 - 3.4.3. Preparing the Planter Box
 - 3.4.4. Increasing Canvas Size
 - 3.4.5. Plant the Tree
 - 3.4.6. Final Touch-Ups
- 4. Selection
 - 4.1. Working with Selections
 - 4.1.1. Marching Ants
 - 4.1.2. The Select Menu
 - 4.1.3. Moving Selections
 - 4.2. Select by Color and Fuzzy Select
 - 4.2.1. Select Contiguous Regions
 - 4.3. Bezier Paths
 - 4.3.1. Defining a Path
 - 4.3.2. The Paths Dialog
 - 4.3.3. Curved Paths
 - 4.3.4. Adding Nodes or Segments and Moving Paths
 - 4.3.5. Moving or Modifying an Existing Path
 - 4.4. The Intelligent Scissors
 - 4.5. Modifying Selections with Selection Modes
 - 4.6. The QuickMask

- 4.7. Highlighting Foreground Objects
- 4.8. Using Channel Masks to Save a Selection
 - 4.8.1. Layer Masks
- 4.9. Extracting Foreground Objects with SIOX
- 5. Erasing and Touching Up
 - 5.1. Dimming Highlights with Dodge and Burn
 - 5.1.1. Dodging
 - 5.1.2. Burning
 - 5.2. Smudging Blemishes Away
 - 5.2.1. The Clone Tool, For More Difficult Jobs
 - 5.2.2. Setting the Clone Source
 - 5.2.3. Fine-tuning a Clone Job
 - 5.2.4. Clone Tool Options
 - 5.3. Copying Small Regions
 - 5.4. Sharpening or Blurring Specific Regions: The Convolve Tool
 - 5.4.1. Sharpening with the Convolve Tool
 - 5.4.2. Blurring with the Convolve Tool
 - 5.5. Blurring Backgrounds with Gaussian Blur
 - 5.6. Correcting Color Balance
 - 5.6.1. Hue-Saturation
 - 5.6.2. Color Balance
 - 5.6.3. Using Curves or Levels for Balancing Colors
- 6. Filters and Effects
 - 6.1. Filters for Images
 - 6.1.1. Tools vs. Plug-Ins
 - 6.1.2. The Filters Menu
 - 6.1.3. Blur
 - 6.1.4. Enhance
 - 6.1.5. Distorts
 - 6.1.6. Light and Shadow
 - 6.1.7. Noise Filters
 - 6.1.8. Edge-Detection Filters
 - 6.1.9. "Generic" Filters
 - 6.1.10. Combine
 - 6.1.11. The Artistic Filters
 - 6.1.12. The Map Filters
 - 6.1.13. Adding Patterns to a Layer
 - 6.1.14. Filters to Help Make Web Pages
 - 6.1.15. Animation Helpers
 - 6.1.16. Alpha to Logo
 - 6.1.17. Décor
 - 6.2. Scripts to Make New Images: The Xtns Menu
- 7. Color Manipulation, Channels, and Layer Modes
 - 7.1. Working with Grayscale or Black and White
 - 7.1.1. Methods of Measuring Brightness
 - 7.1.2. Grayscale Mode

- 7.1.3. De-saturate
 - 7.1.4. Hue-Saturation
 - 7.1.5. Decompose
 - 7.1.6. Channel Mixer
- 7.2. Coloring Monochrome Images and Making Sepia Photos
 - 7.2.1. Automatic Conversion with the "Old Photo" Filter
 - 7.2.2. Manual Conversion for Fine Control
- 7.3. Using Threshold to Clean Up Scans
- 7.4. Pick Colors from the Image
- 8. Advanced Drawing
 - 8.1. Useful Mask Tricks
 - 8.1.1. Making Text "Fade Out"
 - 8.1.2. Making a Fuzzy Border
 - 8.1.3. Even Bigger Fuzzy Borders
 - 8.1.4. Interpreting the Mask Border Color
 - 8.2. Layer Modes
 - 8.2.1. Addition, Subtract, and Difference
 - 8.2.2. Multiply and Divide
 - 8.2.3. Dodge and Burn, Screen and Overlay
 - 8.2.4. Hard and Soft Lights
 - 8.2.5. Darken or Lighten Only
 - 8.2.6. Grain Extract and Grain Merge
 - 8.2.7. Hue, Color, Saturation, and Value
 - 8.2.8. Creating Depth: Drawing with Layer Modes
 - 8.3. Combining Layer Modes: Making 3-D Letters
 - 8.4. Drawing Realistic Shadows
 - 8.4.1. Using an Object to Cast Its Own Shadow
 - 8.4.2. Transparency: Add the Final Tweak
 - 8.5. Realism and Multipoint Perspective
 - 8.5.1. Single-Point Perspective
 - 8.5.2. Two-Point Perspective
 - 8.6. Adding Reflections and Shading
 - 8.7. Making Brushes, Patterns, and Gradients
 - 8.7.1. Making Brushes
 - 8.7.2. Making Patterns
 - 8.7.3. Making Gradients
- 9. Advanced Compositing
 - 9.1. Colorizing Images
 - 9.2. Improving Photos by Self-Compositing with Layer Modes
 - 9.2.1. Using Screen Mode for Dark Images
 - 9.2.2. Using Overlay or Hard Light When Light is Flat
 - 9.2.3. Using Overlay or Burn to Cut Through Haze
 - 9.3. Making Photos into Art: Self-Compositing with Modifications
 - 9.3.1. Making "Drawings" and Other Effects Using Layer Offset
 - 9.3.2. Adding Blurs and Other Tricks for Artistic Effects
 - 9.4. Compositing Unrelated Images

- 9.4.1. Using Soft Light for Combining Images
- 9.4.2. Using Overlay for Dark Images
- 9.4.3. Using Screen to Get a Lighter Effect
- 9.4.4. Using Addition to Complement Light and Dark
- 9.4.5. Using Subtract to Make a Cut-out Mask
- 9.4.6. Making Eerie Colors with Burn
- 9.4.7. Using Grain Merge to Add Texture
- 9.5. Stacking Images
 - 9.5.1. Reducing Noise
 - 9.5.2. Loading All the Images as Layers
 - 9.5.3. Registering the Images Using Difference Mode
 - 9.5.4. Increasing Light by Additive Stacking
 - 9.5.5. Increasing Contrast by Multiplicative Stacking
 - 9.5.6. Increasing Resolution by Averaging
- 9.6. Stitching Panoramas

SECTION III: VECTOR GRAPHIC IMAGES

- 1. Introduction
 - 1.1. Raster vs. Vector Graphics
- 2. Basic Shapes
 - 2.1. Circle
 - 2.2. Rectangle
 - 2.3. Star
 - 2.4. Spiral
 - 2.5. Etc.
- 3. Editing Shapes
 - 3.1. Move
 - 3.2. Resize
 - 3.3. Skew
 - 3.4. Rotate
 - 3.5. Duplicate
- 4. Coloring Shapes
 - 4.1. Stroke Paint
 - 4.2. Stroke Style
 - 4.3. Color Fill
 - 4.4. Gradient Fill
 - 4.5. Pattern Fill
 - 4.6. Transparency
- 5. Path Operations
 - 5.1. Combine
 - 5.2. Intersect
 - 5.3. Trim
- 6. Text Formatting
 - 6.1. Adding text
 - 6.2. Modifying text

- 6.3. Aligning text
- 6.4. Attaching text to path
- 6.5. Flow text in a shape
- 6.6. Applying text style and filter
- 6.7. Text properties (font, size)
- 7. Paths
 - 7.1. Freehand drawing
 - 7.2. Bezier Curves
 - 7.3. Convert shapes into paths
 - 7.4. Editing paths
- 8. Organizing objects.
 - 8.1. Grouping and Ungrouping objects
 - 8.2. Align & distribute
 - 8.3. Layer Concept
- 9. Applying style and filter
 - 9.1. Blur
 - 9.2. Shadow
 - 9.3. Emboss
 - 9.4. Glow
- 10. Bitmaps
 - 10.1. Color Contrast
 - 10.2. Bitmap Tracing

DIGITAL ARTS GUIDELINES

OBJECTIVES

This course is designed for high school students as an elective class. The objective is to teach the basics of Digital Arts Concept and picture manipulation.

LESSON PLANS

Digital Arts course is composed of three sections:

- Digital Arts Concepts
- Raster Graphic Images
- Vector Graphic Images

The course is a one year course. The curriculum is given in 'Digital Arts-Curriculum.pdf'. The course materials are aligned to GIMP and Inkscape software. GIMP assignments can be adapted to Photoshop or any other software if needed.

TEXTBOOK

No text book is needed.

SOFTWARE

Required software is GIMP and Inkscape. Both programs can be downloaded for free. Photoshop can be used instead of GIMP if already purchased.

LECTURE MATERIAL

The following tutorial is for 'Introduction to Digital Design' section:

- Inkscape tutorial: Elements - <http://www.inkscape.org/doc/elements/tutorial-elements.html>.

All information can be found in the 'GIMP' and 'Inkscape' folders. There are assignments, videos and necessary information for the teacher. GIMP assignments can be uploaded to Web, and can be easily navigated by clicking the file 'assignment.htm'.

During the classes, it is recommended to:

- Inform the students about the concepts in each chapter along with practice works. Give the students time to understand the concept before the assignments.
- At the end of each chapter, teachers may give projects that are covering the entire chapter. Tests or quizzes can be given after each chapter, too.

RESOURCES

1. www.gimp.org
2. www.gimp-tutorials.net
3. www.inkscape.org

BUDGET

- Zero budget

WEB AUTHORIZING CURRICULUM

SECTION I: IMAGE EDITING BASICS

1. Introduction to Digital Arts
 - 1.1. Elements of design
 - 1.1.1. Line
 - 1.1.2. Shape
 - 1.1.3. Size
 - 1.1.4. Space
 - 1.1.5. Color
 - 1.1.6. Texture
 - 1.1.7. Value
 - 1.2. Principles of design
 - 1.2.1. Balance
 - 1.2.2. Contrast
 - 1.2.3. Emphasis
 - 1.2.4. Proportion
 - 1.2.5. Pattern
 - 1.2.6. Gradation
2. Proportion and Scale
3. Color Theory
4. Typography
5. Digital Photography

SECTION II: ANIMATION

1. Introduction
 - 1.1 Understand Flash Environment
 - 1.2 Working with layers
 - 1.3 Working on Timeline
 - 1.3.1 Frames
 - 1.3.2 Frame Rate
 - 1.3.3 KeyFrame
 - 1.3.4 Playhead
2. Drawing
 - 2.1 Using drawing tools
 - 2.2 Editing
 - 2.3 Working with text
3. Working with Symbols and Interactivity
 - 3.1 Work with symbols and instances
 - 3.1.1 Graphic

- 3.1.2 Button
 - 3.1.3 Movie Clip
 - 3.2 Work with libraries
 - 3.2.1 Organizing libraries
 - 3.3 Assign actions
 - 3.3.1 Button
 - 3.3.2 Movie Clip
 - 3.3.3 Layer
- 4. Creating Animation
 - 4.1 Create frame by frame animation
 - 4.2 Create Motion-Tween and Shape Tween
 - 4.2.1 Motion guide
 - 4.2.2 Tween properties
 - 4.2.3 Changing color option
 - 4.3 Animate text
 - 4.4 Mask
 - 4.5 Add scene
 - 4.6 Add Filter

SECTION III: CREATING WEB SITE

- 1. Introduction
 - 1.1 Citation, Copyright and privacy
 - 1.2 How to plan a web site
 - 1.3 Evaluating and analyzing a web site
 - 1.4 Plan and define a web site
- 2. Developing a web page
 - 2.1 HTML basics
 - 2.2 Tags and attributes
 - 2.3 Background color and image
 - 2.4 Paragraph Styles
 - 2.5 Text formatting
 - 2.6 Hyper-Links
 - 2.7 Using images
 - 2.8 Text alignment
 - 2.9 Tables
 - 2.9.1 Rows and Columns
 - 2.10 Create head contents and set page properties
 - 2.10.1 Using meta text

VISUAL WEB DESIGN

- 3. Working with text and graphics
 - 3.1 Introduction to Web development application.
 - 3.2 Code and design views
 - 3.3 Menus and Toolbars

- 3.4 Page properties
- 3.5 Design interface
- 3.6 Editing modifying and formatting text
- 3.7 Inserting, modifying images
- 3.8 Paragraph and page formatting
- 3.9 Hyperlinks
 - 3.9.1 Define targets
 - 3.9.2 Hyperlink to web address, e-mail, tags and images
- 3.10 Tables
 - 3.10.1 Rows
 - 3.10.2 Columns
 - 3.10.3 Alignment
 - 3.10.4 Cell alignment
 - 3.10.5 Merge and splits cells
- 3.11 Layers (Div)
- 3.12 Simple forms
 - 3.12.1 Using forms

WEB AUTHORIZING GUIDELINES

OBJECTIVES

This course is intended for high school students as an elective class. The objective is to teach the basics of preparing quality websites.

LESSON PLANS

Web authoring course offered here is a one year course composed of three sections:

- Image Editing Basics
- Animation
- Creating Web Page

The course can be also provided a half year course by removing the first part: 'Image Editing Basics' and requiring 'Digital Arts' as the prerequisite class.

The curriculum is given in 'Web Authoring-Curriculum.docx'. The course material below is aligned to 'Adobe Creative Suite 8: Fireworks / Flash / Dreamweaver'. It can be adapted to the other software such as 'Microsoft Silverlight' if needed.

TEXTBOOK

- The Web Collection, Revealed: Macromedia Dreamweaver 8, Flash 8, and Fireworks 8, Deluxe Education Edition, J.E. Shuman, S. Bishop, B.M. Waxer, 2005.

Instead of purchasing individual book, it is recommended to buy the Class Set as used from bookstores or online shopping sites such as Amazon.

SOFTWARE

Required software is Adobe Creative Suite 8. Site license or education version is much cheaper (for non-profit organizations).

LECTURE MATERIAL

The following tutorial is for 'Image Editing Basics' section:

- Inkscape tutorial: Elements - <http://www.inkscape.org/doc/elements/tutorial-elements.html>.

All information can be found in the 'Web Authoring-Web' folder including the computer lab rules, lecture notes, assignments, and necessary information for the teacher. This folder can be uploaded to Web, and can be easily navigated by clicking the file 'Web_Authoring.htm'.

During the classes it is recommended to:

- Inform the students about the topics in each chapter using PowerPoint slides. Use Chapter Power Point to introduce chapter objective (you should get teacher resources, i.e. book).
- Skill review – Teacher show it on projector while students will do it on their computer.
- Assign Project builder and extra projects
- Give test

Grading is based on assignments (Book assignments), test and creativity.

RESOURCES

Teacher is recommend to register to textbook's website <http://www.course.com> hence can use the material in the webpage provided by the 'Companion Site' link. The 'Companion Site' consists of lecture slides, syllabus, student files, exams and solutions.

In addition, teachers can check the following resources:

- Lynda training CDs for teachers: <http://store.lynda.com/>.
- <http://www.tutorialized.com/>

BUDGET

- **Textbook:** ~\$300-\$400 (Class set for 25 students)
- **Site license:** \$8,000
- For district license, reseller needs to be called

DESKTOP PUBLISHING CURRICULUM THEORETICAL MODEL FOR DEVELOPMENT

DILEK ARISOYLU

Desktop Publishing curriculum was designed and developed based on **ADDIE Model**. The ADDIE Model is a systematic instructional design model and provides a step-by-step process that helps instructional designers plan and develop educational products. It consists of five phases: Analysis, Design, Development, Implementation, and Evaluation (ADDIE Model at Learning-Theories, 2010). The following paragraphs explain how each phase was practiced while creating Desktop Publishing curriculum.

Analysis:

Analysis typically means figuring out what to do, examining the learner and the content, finding out gaps/needs, establishing goals, and determining a plan for a solution system (Marshall, 2005).

In the first phase of the ADDIE model, a performance analysis was conducted. Phone interview was used for gathering information during the analysis. In addition, regular meetings with the client were held via phone during the development of the curriculum.

1. Performance Analysis

Performance Analysis is an initial study for partnering with clients to find out their needs and help them achieve their goals. It defines whether it is an opportunity/problem/need and what to do about it (Rossett, 1999).

a. Define the actual (opportunity/problem/development/strategic planning)

The client stated that there is a need for an elective course on Desktop Publishing in member high schools. According to the client, member high schools are willing to open this course because Desktop Publishing is a very popular topic and complements with other courses such as Digital Arts and Web Authoring. To be able to open a course, a curriculum, teachers' guideline, and annual plan were needed to be developed for teachers.

Besides, the client had a sample curriculum developed by a computer teacher who works in one of their member schools and has taught the course with respect to this curriculum.

Actual/Current situation:

- Desktop Publishing course is needed
- For this course, a curriculum and teachers' guideline are needed
- There was a Desktop Publishing course created by a teacher, but the teacher did not partner with the client when developing the course. Therefore the client did not disseminate the curriculum to the other member schools without examining the quality of the course.

The request asked by the client was analyzed if it was a roll-out (opportunity) or a performance problem. Based on the current situation described on the above paragraph, it was decided that the need was a roll-out, therefore cause analysis was not conducted.

b. Define Optimal

Having looked at the sample curriculum that the client had, we realized that the curriculum was designed mainly to teach specific Desktop Publishing software (i.e. Microsoft Office Publisher 2007) rather than Desktop Publishing concept/principles.

Therefore, the client indicated two requirements on the Desktop Publishing course to be designed.

- The topics in the new curriculum should not depend on any Desktop Publishing software, in other words, the new curriculum shall be software agnostic. Thus the teachers can choose any Desktop Publishing software in their classes.
- The focus of this course will be Desktop Publishing concepts/principles. Teaching software is a secondary goal. The client stated that if students understand the Desktop Publishing concepts/principles thoroughly, they are able to use any Desktop Publishing software.

2. Audience Analysis

It is important to determine the characteristics of an audience in order to choose the best format and information when developing an instructional material (Pregent, 2000).

This course is designed for high school students who have prior knowledge about Microsoft Office programs such as Word/Excel/PowerPoint. It is assumed that competency levels of the students are similar. Their motivation for enrolling in this course is to improve their technological skills.

3. Goal Analysis

With the client, first, the goal of the course was defined to provide direction, which was

- Students will be knowledgeable about Desktop Publishing

Since goals are broad intent and are not measurable, goal analysis is needed to make fuzzy terms to be more tangible. In that way, it will be easy to see if the goals are achieved (Mager, 1997).

After the goal analysis, general objectives of the course were decided. Students will be able to

- Identify design principles when they see publications
- design and develop publications both from scratch and by using templates
- apply design principles when they create publications
- use a Desktop Publishing software to design publications

4. Content Analysis

Before developing the new curriculum, the subject of Desktop Publishing was researched in order to decide which topics would be covered in the curriculum. Online materials such as sample high school Desktop Publishing curriculums, articles, lesson plans and activities, and the text books on the market were examined.

As a topic, design principles and Microsoft Office Publisher 2007 were the focus of the research. Even though the software choice was optional, Microsoft Office Publisher 2007 was being suggested to teachers, so the research was done mainly in Publisher 2007.

To determine the course content in the new curriculum, all of the themes that seem relevant to the content were identified. Then the topics that constitute each theme were listed. With the client, the themes and the topics of the content were discussed and which ones were appropriate for the Desktop Publishing course was decided (Pregent, 2000).

Meeting with the computer teacher

It was crucial to hear the computer teacher's experiences regarding Desktop Publishing course, so another Performance analysis was conducted with him. Due to the long distance, phone interview was preferred to do performance analysis. The focus of the analysis was the textbook because the textbook that he chose to use in the class was same as the book that we decided. Basically, he explained the advantages of using that book, how he was using it in the class, the projects, how to assess the students, and how to improve the Desktop Publishing course (See the file PA_computerteacher.doc).

5. Solution System

A new curriculum, a teachers' guideline, a job aid for students and rubrics for the projects were decided to be developed. The online article (about.com) regarding Elements of design and some online lesson activities were decided to be modified according to high school students' level.

Design

In the Design phase;

- Storyboard is created (if applicable)
- The project's instructional design strategy is planned
- Outcomes (objectives of the course) are specified
- How these outcomes will be measured is defined (evaluation)
The important thing here is that evaluation items are matched with the objectives (Marshall, 2005).

Before working on the objectives and evaluation, the anatomy of a lesson was built. The anatomy of a lesson explains a high-level structure for developing of all lessons and has four major sections (Clark, 1999):

- **Introduction**
Why the lesson skills are important, content overview, the lesson objectives are explained.
- **Knowledge needed**
According to topic, concepts, facts, or processes are shown
- **Major task(s) of the lesson**
Procedure or principle task with practice are displayed
- **Summary**

In the content analysis, the topics were decided. In this section, the topics were examined whether they are fact, concept, process, procedure or principle based on the **Content Performance Matrix** (Clark, 1999).

The Content Performance Matrix are made up of the content (horizontal axis) and the outcomes(vertical axis) shown in the table.

Performance Outcomes	Apply					
	Remember					
		Fact	Concept	Process	Procedure	Principle
		Content				

In the Desktop Publishing curriculum, it was decided that there were concepts, procedures and principles in the content. These are;

- The major lesson is procedure: How to develop a publication
- Concepts: Each publication has own concepts (See the file teachers guideline.pdf)
- Principles: Design principles and design elements

Performance outcomes are written at a remember level or/and application level except facts (facts are written only remember level). Therefore, objectives in the curriculum were prepared;

- Concepts-----remember level
- Procedure----apply level
- Principle-----both remember and apply level

To be able to measure the objectives effectively, evaluation items were matched and designed with the objectives level.

Formative Evaluation

With the client, the objectives and the evaluation items were checked.

Development

Development phase consists of

- Building of prototype
- Piloting the prototype with users
- Revising
- Creating products (Marshall, 2005)

In the development phase, the new curriculum, teachers' guideline including weekly plan, a job aid, rubric/assessments for the projects and hands-on activities were developed.

Formative Evaluation

The content in the new curriculum was discussed with the computer teacher who designed the previous curriculum. He agreed on the new curriculum and gave us suggestions to be added into the teachers' guideline.

How learning models/ theories/principles were applied into the teachers' guideline?

The following table demonstrates how the teaching methods and materials were prepared based on various models, theories and principles. The reason that we used these techniques was to make the course more enjoyable rather than boring for the students. The more variety in the class means the more engaged, participated students.

Teaching methods and materials	Model/Theory/Principle		
	Gagne's 9 instructional events	ARCS' Motivational model	Learning Theories
<ol style="list-style-type: none">1. The topics that are taught on the first weeks such as the meaning of Desktop Publishing, how it is used, who is using, and why it is important, etc.2. Speaker invitation (Desktop Publishing field)3. Teachers use PowerPoint slides while teaching the content.4. Students play game to reinforce the concepts and knowledge.5. Students work on different types of projects.6. There are some group working studies.7. In addition to the textbook, students work on the online tutorials for the design principles.	<ol style="list-style-type: none">1. Gain attention	<p>Attention</p> <ul style="list-style-type: none">• Perceptual Arousal• Inquiry Arousal• Variability <p>Relevance</p> <ul style="list-style-type: none">• Goal Orientation	
The objectives are defined both in the textbook and in the teachers' guideline. Teachers are informed in	<ol style="list-style-type: none">2. Inform of Objectives	<p>Confidence</p> <ul style="list-style-type: none">• Learning	Cognitivism Objectives

the guideline that they are supposed to talk about the objectives.		Requirements - Objectives	are defined.
<p>Microsoft Publisher 2007 windows screen is similar to the other Microsoft products.</p> <p>Students when they were in 8th grade they studied some of the design principles such as CRAP.</p> <p>In other elective classes such as Digital Arts and Web Authoring, students learn the topics of design elements and image editing.</p>	3. Recall for prior learning		Cognitivism New content is attached to the old content.
<p>Students study the examples and non-examples of design principles in the online tutorials.</p> <p>Students have PowerPoint slides while studying the procedures.</p>	4. Present Materials		
Students learn the topics (procedures and principles) by doing.			<p>Cognitivism Knowing and understanding rather than memorizing.</p> <p>Project-based learning and critical thinking</p>
Teachers help students if they have a problem with completing the procedures.	5. Provide Guidance		
The course is full of hands-on activities and projects.	6. Elicit Performance		
Teachers give feedback whether they are on the right track when students work on their projects	7. Provide Feedback	<p>Confidence</p> <ul style="list-style-type: none"> Feedback immediately after, just prior 	Cognitivism
After each chapter, students are assessed on the specific project that teachers chose. Their projects are graded.	8. Assess Performance Doing it alone	<p>Satisfaction</p> <ul style="list-style-type: none"> Knowledge of results 	
A job aid, "How to do Desktop Publishing Guideline", was prepared for students. (Bear, Learning How to Do Desktop Publishing, 2010)	9. Enhance Transfer and Retention		
The difficulty level of the projects increase through		Confidence	

the course or as the course progress.		<ul style="list-style-type: none"> • Success opportunities Easy, then harder 	
Projects in the book were designed in a context that reflects the real world.			Contextual learning- Cognitivism New content is attached to the real-life content.

Implementation

Teachers will deliver Desktop Publishing course in high schools.

Summative Evaluation

Kirkpatrick Level 2 was applied. Students are evaluated through the projects given on the textbook. Evaluation items were prepared to measure whether students were able to apply the procedures and principles learned in the class.

Future direction

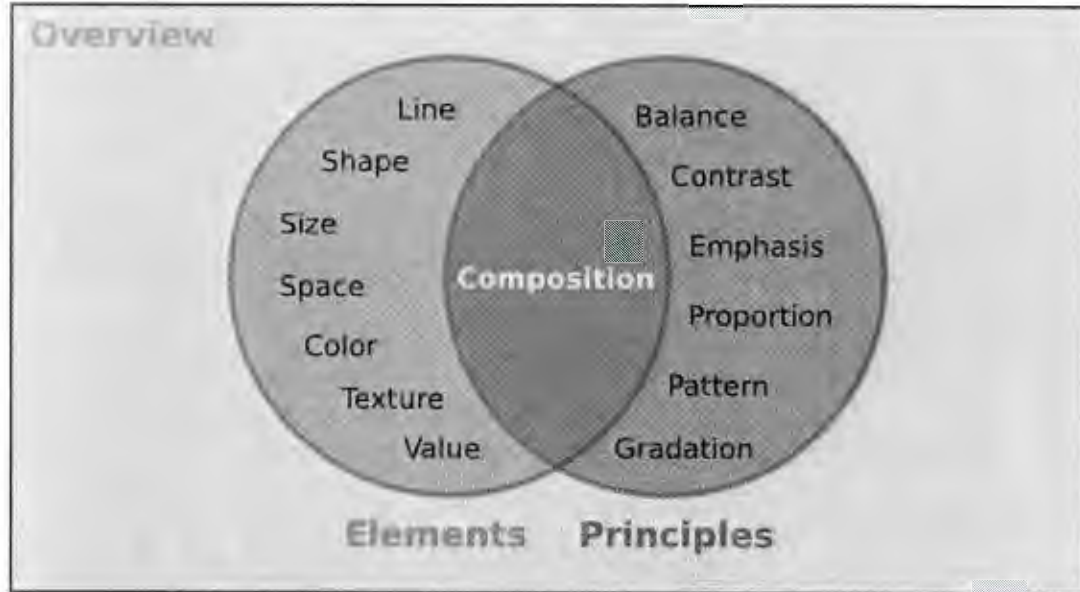
1. For Summative Evaluation, Kirkpatrick Level 1 can be applied to students to find out what they think about the course in general. Survey can be used as a method and the questions are prepared to learn the textbook, hands-on activities, projects, online tutorials, games, teachers, and overall course.

REFERENCES

- ADDIE Model at Learning-Theories. (2010, November 19). Retrieved from LearningTheoriesKnowledgebase: <http://www.learning-theories.com/addie-model.html>
- Bear, J. H. (2010). Learning How to Do Desktop Publishing. Retrieved 2010, from about.com: <http://desktoppub.about.com/cs/basic/a/desktopdocument.htm>
- Bear, J. H. (2010). Principles of Design. Retrieved 2010, from about.com: <http://desktoppub.about.com/cs/designprinciples/a/principlesintro.htm>
- Clark, R. C. (1999). Developing Technical Training. Silver Spring MD: International Society for Performance Improvement.
- Mager, R. F. (1997). Goal Analysis. Atlanta,GA: The Center for Effective Performance Inc.
- Marshall, J. (2005, October). Meet ADDIE SDSU Edtec 540 Class notes. San diego, CA.
- Pregent, R. (2000). Charting Your Course. Madison : Atwood Publishing.
- Rossett, A. (1999). First Things Fast A Handbook for Performance Analysis. San Francisco: Jossey-Bass/Pfeiffer.

Introduction to Digital Arts

This tutorial will demonstrate the elements and principles of design which are normally taught to early art students in order to understand various properties used in art making. This is not an exhaustive list, so please add, subtract, and combine to make this tutorial more comprehensive.

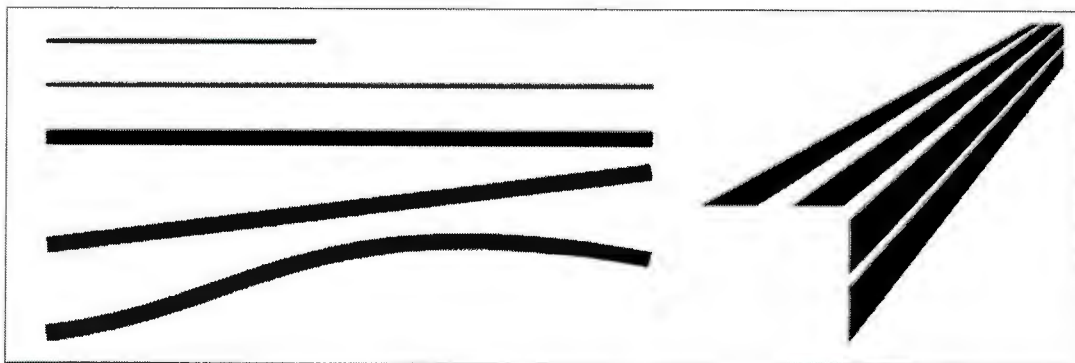


1 Elements of Design

The following elements are the building blocks of design.

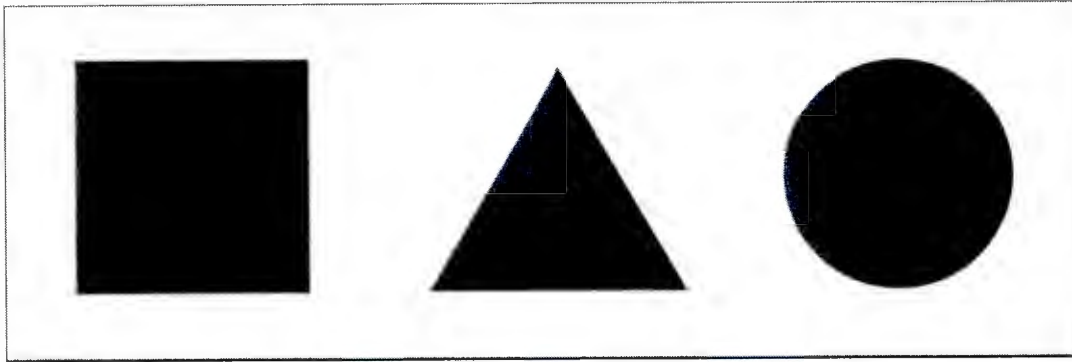
1.1 Line

A line is defined as a mark with length and direction, created by a point that moves across a surface. A line can vary in length, width, direction, curvature, and color. Line can be two-dimensional (a pencil line on paper), or implied three-dimensional.



1.2 Shape

A flat figure, shape is created when actual or implied lines meet to surround a space. A change in color or shading can define a shape. Shapes can be divided into several types: geometric (square, triangle, circle) and organic (irregular in outline).



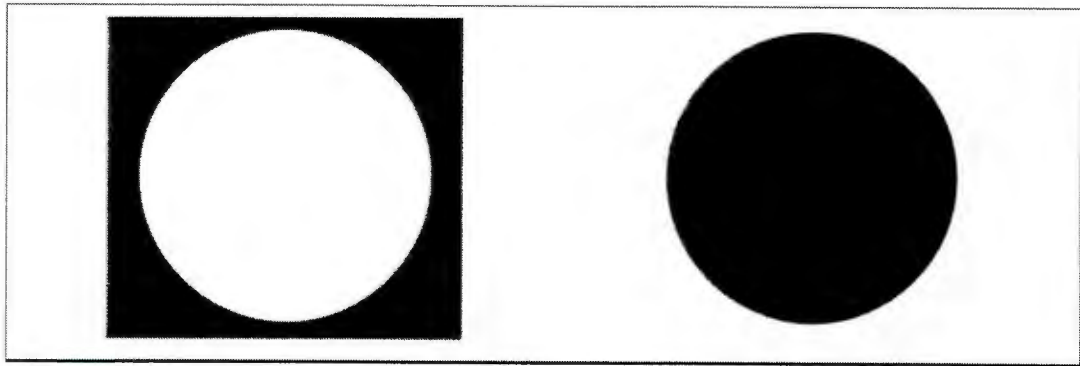
1.3 Size

This refers to variations in the proportions of objects, lines or shapes. There is a variation of sizes in objects either real or imagined.



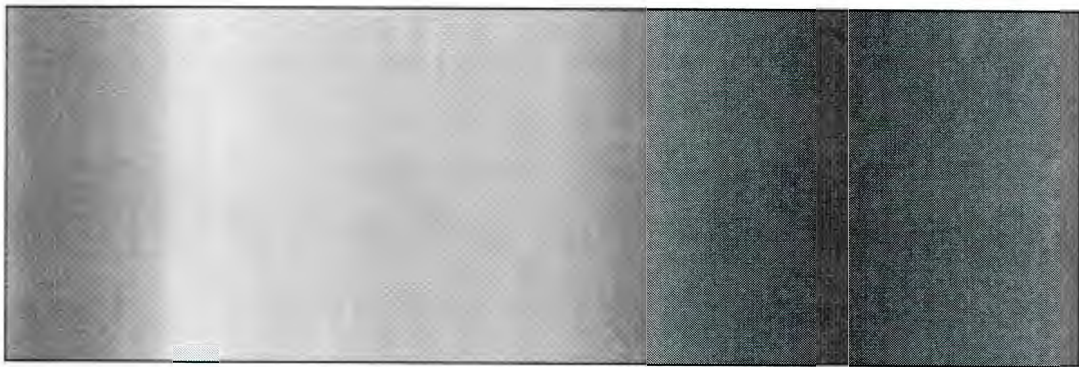
1.4 Space

Space is the empty or open area between, around, above, below, or within objects. Shapes and forms are made by the space around and within them. Space is often called three-dimensional or two-dimensional. Positive space is filled by a shape or form. Negative space surrounds a shape or form.



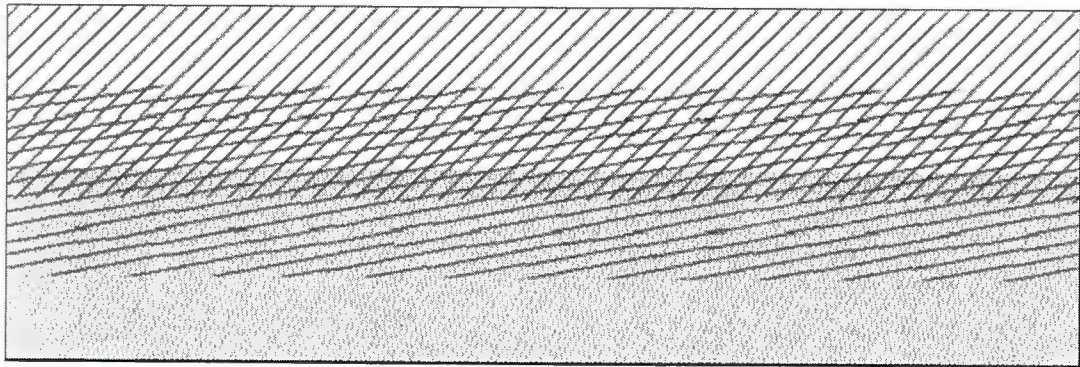
1.5 Color

Color is the perceived character of a surface according to the wavelength of light reflected from it. Color has three dimensions: HUE (another word for color, indicated by its name such as red or yellow), VALUE (its lightness or darkness), INTENSITY (its brightness or dullness).



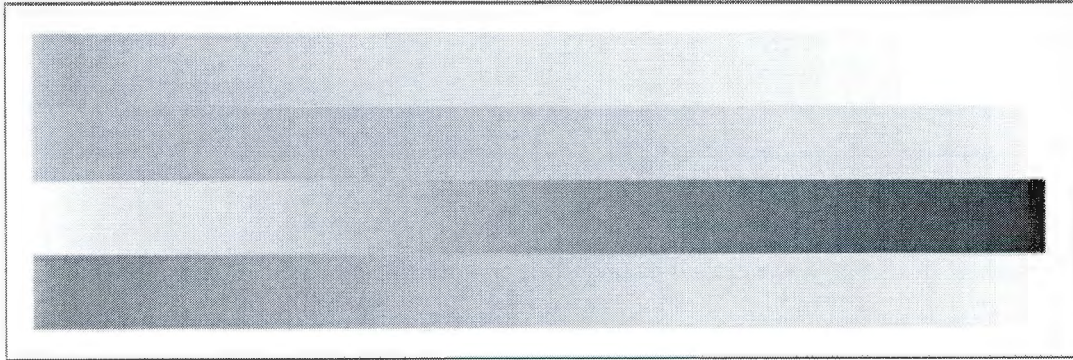
1.6 Texture

Texture is the way a surface feels (actual texture) or how it may look (implied texture). Textures are described by word such as rough, silky, or pebbly.



1.7 Value

Value is how dark or how light something looks. We achieve value changes in color by adding black or white to the color. Chiaroscuro uses value in drawing by dramatically contrasting lights and darks in a composition.

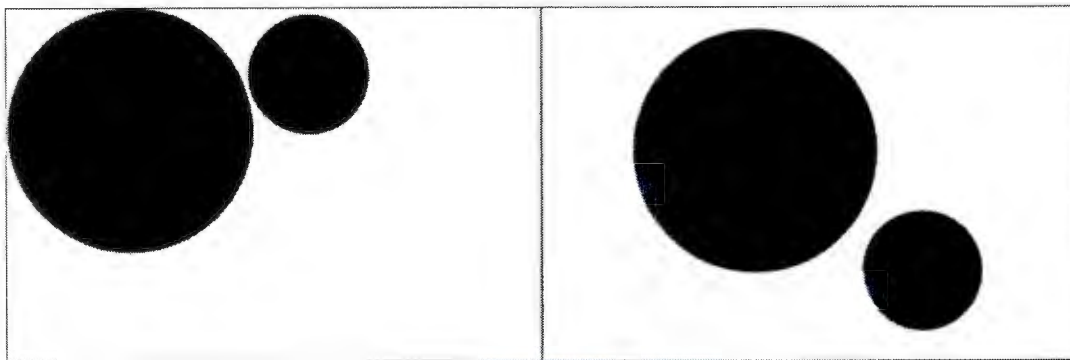


2 Principles of Design

The principles use the elements of design to create a composition.

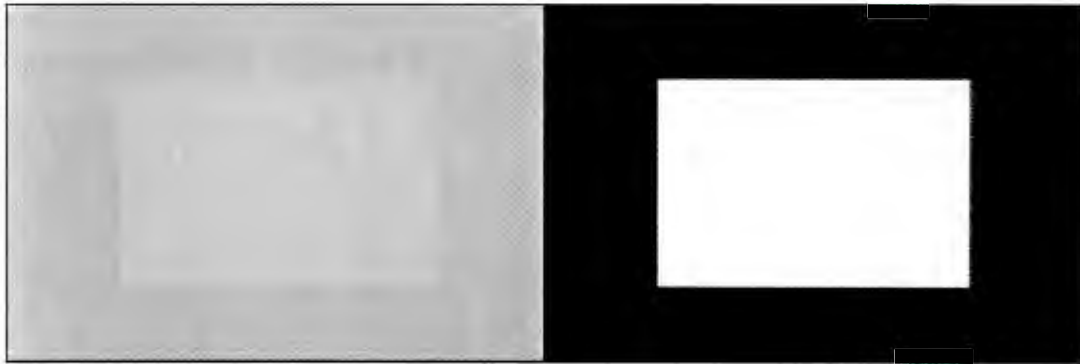
2.1 Balance

Balance is a feeling of visual equality in shape, form, value, color, etc. Balance can be symmetrical or evenly balanced or asymmetrical and un-evenly balanced. Objects, values, colors, textures, shapes, forms, etc., can be used in creating a balance in a composition.



2.2 Contrast

Contrast is the juxtaposition of opposing elements



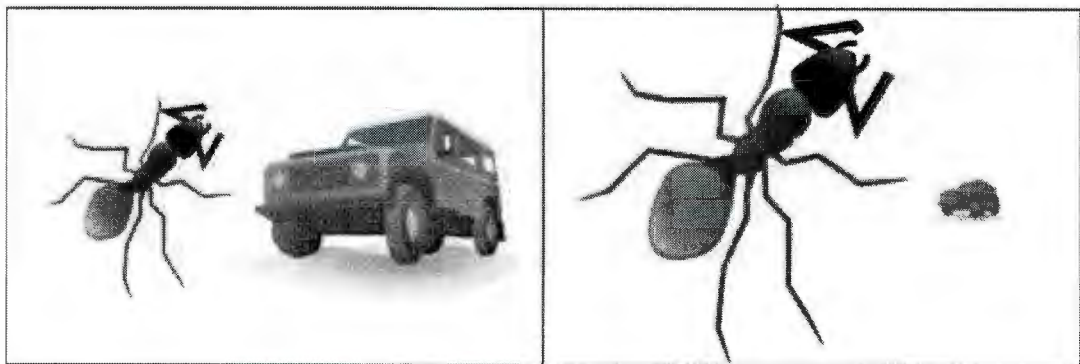
2.3 Emphasis

Emphasis is used to make certain parts of their artwork stand out and grab your attention. The center of interest or focal point is the place a work draws your eye to first.



2.4 Proportion

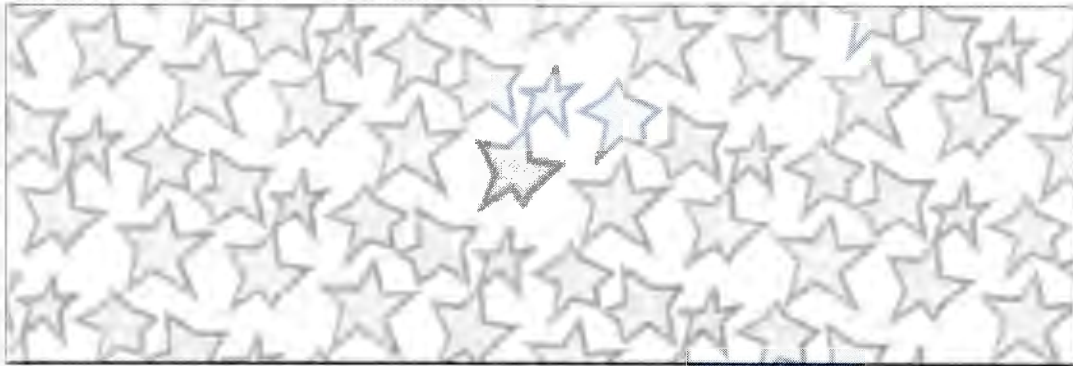
Proportion describes the size, location or amount of one thing compared to another.



Random Ant & 4WD
© 2000 Random Ant & 4WD
All rights reserved.

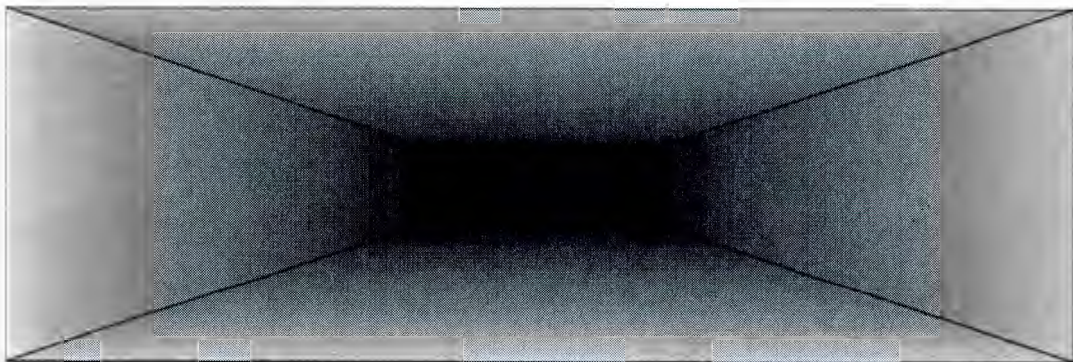
2.5 Pattern

Pattern is created by repeating an element (line, shape or color) over and over again.



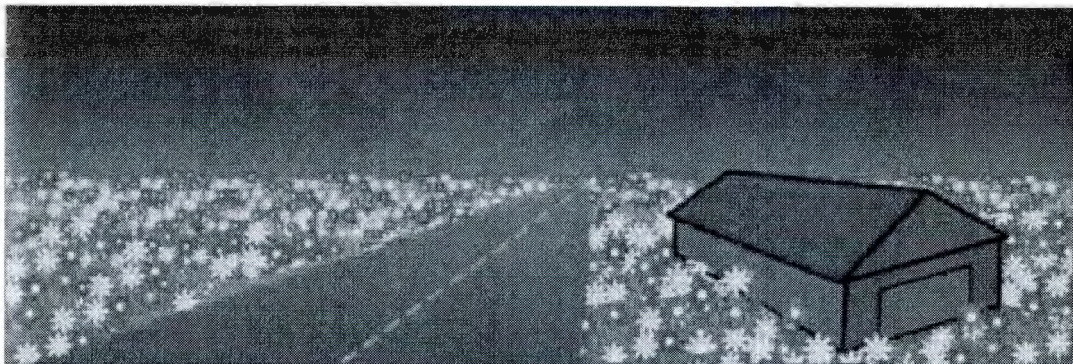
2.6 Gradation

Gradation of size and direction produce linear perspective. Gradation of color from warm to cool and tone from dark to light produce aerial perspective. Gradation can add interest and movement to a shape. A gradation from dark to light will cause the eye to move along a shape.



3 Composition

The combining of distinct elements to form a whole.



4 Bibliography

This is a partial bibliography used to build this document.

- <http://sanford-artedventures.com/study/study.html>
- <http://www.makart.com/resources/artclass/EPlist.html>
- <http://www.princetonol.com/groups/iad/Files/elements2.htm>
- http://oswego.org/staff/bpeterso/web/elements_and_principles.htm
- <http://www.johnlovet.com/test.htm>
- http://digital-web.com/articles/elements_of_design/
- http://digital-web.com/articles/principles_of_design/

Special thanks to Linda Kim (<http://www.redlucite.org>) for helping me (<http://www.rejon.org/>) with this tutorial. Also, thanks to the Open Clip Art Library (<http://www.openclipart.org/>) and the graphics people have submitted to that project.

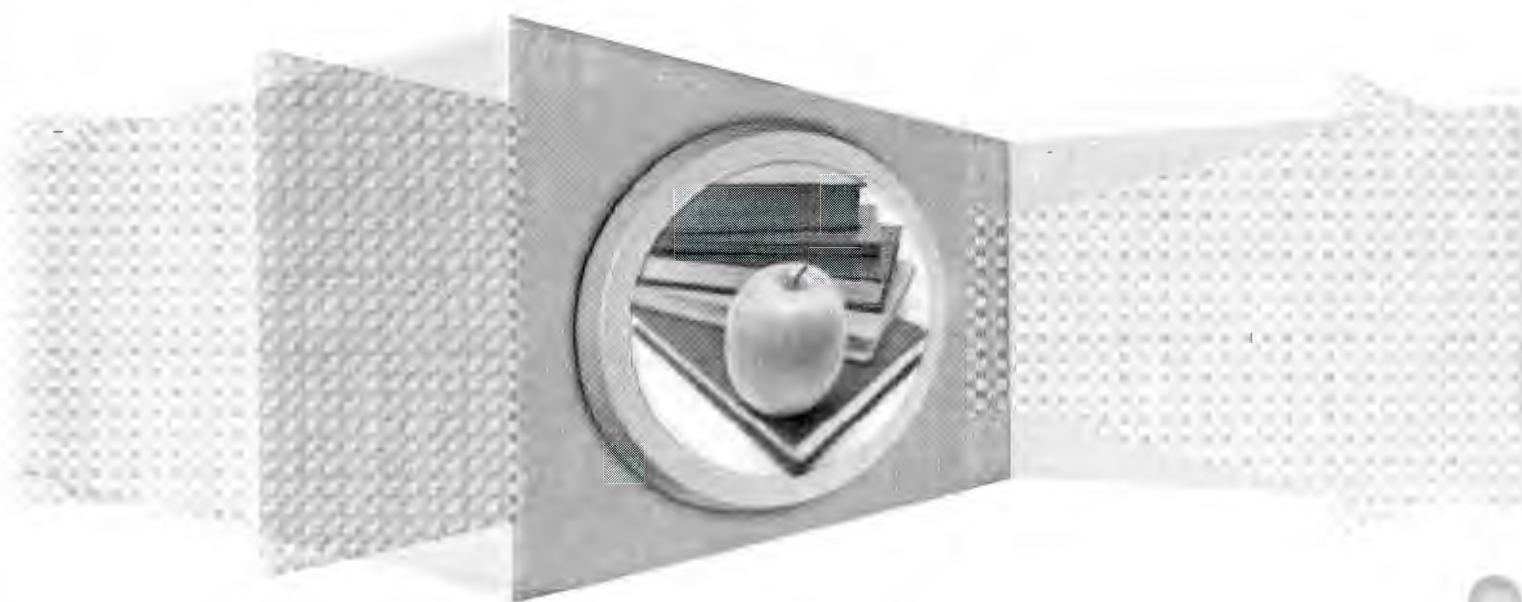
APPENDIX B₃

A+ (ADVANCED STEM) PROGRAM

1. A+ Overview
2. A+ Brochure
3. A+ Junior Curriculum
4. A+ Junior Guidelines
5. A+ Math Coach Handbook
6. A+ Computer Science Coach Handbook



A+ Program Overview



WHY A+ PROGRAM?

*In 2007, National Academies published a report, **Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future**, identifying the urgent need to increase the number of Science and Technology graduates within the next decade. The report's conclusions are serious, noting that there is a serious risk that the United States may soon and irrevocably lose its lead in science and technology. Among the recommendations of the report is:*

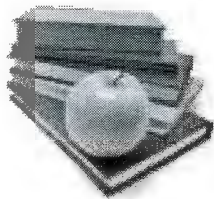
"Vastly improve K-12 science and math education"

In its biannual publication, *Indicators* the National Science Board drew the US public's attention to the increasing shortage of qualified science and engineering (S&E) personnel in the workforce. The 2004 issue emphasized the following serious problems:

- The number of jobs requiring S&E skills in the U.S. is growing at a rate of almost 5 percent per year. In contrast, the growth rate of other jobs is just over 1 percent.
- Between 1990 and 2000 the percentage of foreign-born people with bachelor's degrees in S&E occupations rose from 11 to 17 percent; the percentage of foreign-born with master's degrees rose from 19 to 29 percent; and the percentage of foreign-born with PhDs in the S&E labor force rose from 24 to 38 percent.
- Visas for students and S&E workers have been issued more slowly since the events of September 11, owing to both increased security restrictions and a drop in applications.
- Since the 1980s other countries have increased investment in S&E education and the S&E workforce at higher rates than the United States. Between 1993 and 1997 the OECD countries increased their number of S&E research jobs by 23 percent, more than double the 11 percent increase in S&E research jobs in the United States.

There is a great need to inspire and encourage students in the United States to pursue careers in science and engineering. In addition, according to reports prepared by the National Association for Gifted Children (NAGC), there are approximately 3 million academically gifted children in grades K-12 in the U.S --approximately 6% of the student population. The NACG emphasized that gifted students are in need of services or activities not normally provided by schools. However, the federal government does not provide specific funding for gifted education directly to districts. The reports also pointed out the missed opportunities to identify and serve gifted students in the U.S.

PROGRAM DESCRIPTION



The A+ Program is Accord Institute's unique program for grades K-12 that aims to increase talented students' interest in and advanced study of math and science.

Early math and science training by experts ensures that students have the background they need for higher education and careers in math and science. A+ is a concentrated training program that helps students develop their critical and analytical thinking skills within a challenging environment. Specifically, A+ utilizes prestigious math and science competitions at regional, national and international levels to motivate and train students. Some of these competitions are:

- International Mathematics Olympiad (IMO)
- International Olympiad in Informatics (IOI)
- USA Math Olympiads (USAMO)
- USA Computing Olympiads (USACO)
- American Mathematics Competitions (AMC-8, AMC-10, AMC-12, AIME)
- MathCounts
- Math League
- Math Olympiads for Elementary and Middle Schools (MOEMS)
- Gauss League (Accord Institute's Math Competition)
- ACCompete (Accord Institute's Computer Science Competition)
- MathMatters

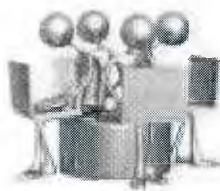
GOALS OF A+



The goals of A+ Program are to:

- Enrich students with a more challenging curriculum in the sciences
- Cultivate an interest in math, science, and technology related fields
- Provide essential resources and tools for students to excel and reach their full potential
- Create a challenging environment for students via a regional, competitive ranking system and A+ camps
- Empower students to succeed in secondary and post secondary education
- Contribute to meeting our nations' and world's future needs by preparing skilled and dedicated citizens
- Groom qualified scientists for our community and our nation

ACCORD INSTITUTE'S A+ TEAM



FATİH GELGI, PH.D. (A+ PROGRAM COORDINATOR)

Fatih Gelgi received his Ph.D. in Computer Science in 2007 from the Arizona State University. Dr. Gelgi won bronze medal in the International Olympiads in Informatics (IOI'99). He has been training computer olympiad students for more than a decade. Currently, he serves as the A+ Program Coordinator as well as the Computer Science Coordinator at Accord Institute. He is also a coach of USA Computing Olympiad (USACO) through which the American team for the International Olympiad in Informatics is chosen and trained.

MEHMET KAYSI (MATH COACH)

Mehmet Kaysi received has B.S. degree in Mathematics. He participated in IMO'04 as a high school student. He has been training math olympiad student for five years from beginning to international levels. He served as one of the Turkish National Math Team coaches between 2004 and 2009.

ALI GUREL, PH.D. (MATH COORDINATOR)

Ali Gurel received his Ph.D. from California Institute of Technology (Caltech) Math Department. He won a silver medal at the International Mathematics Olympiads (IMO'96). He has been training math olympiad students for more than a decade. He trained Zarathustra Brady, a gold medalist (IMO'06), Tedrick Leung a bronze medalist (IMO'07), and David Yang a USAMO Winner (2009) on advanced math subjects. Currently, he serves as the math coordinator of Accord Institute's A+ team and one of the coaches of the Math Olympiad Program (MOP) through which the American team for the International Math Olympiads is chosen and trained.

BENEFITS OF A+



Participation in the Accord Institute's A+ Program benefits students and schools both academically and socially. The advantages include the following:

- Team spirit
- Increased interest in science and mathematics
- Creative problem solving strategies
- Improved self-confidence
- Immediate support for students' weak areas
- A challenging environment for students
- Disciplined study habits
- Constructive and productive investment of time
- A solid background in advanced math, computer and science concepts
- Mastery of the scientific method
- Early and confident decision-making to pursue careers in math and science
- Accurate, grade-level, student ranking in math and computers based on exams taken by students in all member schools
- Recognition for success at prestigious competitions
- An exceptional accomplishment that top ranked universities are looking for

A+ CAMPS



A+ camps consist of advanced topics covered by experts and aim to increase student motivation during the year. Each year students can look forward to:

- 4 school camps
- 2 regional camps
- 2 national camps

All camps follow A+ Camp Guidelines. Camp programs, schedules, and lecture materials are carefully selected by the Accord Institute with student interests in mind: educational and motivational movies, math and science games, and team building activities.

All students participate in school sleepovers, which are organized by the A+ school coordinator. Sleepovers last only one day, from Friday evening until Saturday evening.

Regional and national camps are by invitation. Students are selected based on their test scores, assignments, effort, and behavior. Regional camps last two-days and are organized by the A+ school coordinators in that region. They are from Friday evening until Sunday noon. Currently, A+ camps are organized in four regions: Arizona, Utah-Colorado, Nevada, and California. In the winter and summer, students are invited from all the regions to participate in one-week national camps. Outstanding academicians and professionals are invited to these national camps as guest speakers.

Questions about camps should be directed to the A+ school coordinator.

PARENT INVOLVEMENT



A+ staff and parents work as a team. A+ is a proven effective system. However, students' individual level of success depends heavily on parental support and involvement. Many interests and diversions compete for adolescents' time. We ask parents to help make A+ a priority for their son/daughter. The most successful students have highly committed parents.

We value your input and recommendations. Please respond to camp surveys.

FACTS: MATH, SCIENCE EDUCATION AND GIFTED STUDENTS IN THE U.S.

In 2007, National Academies published a report that identifies the urgent need to increase the number of Science and Technology graduates within the next decade. Otherwise, there is a serious risk that *the U.S. may soon and irrevocably lose its lead in science and technology*. It is strongly recommended to vastly improve K-12 science and math education.

according to reports prepared by the National Association for Gifted Children (NAGC), there are approximately 3 million academically gifted children in grades K-12 in the U.S, approximately 6% of the student population. The NAGC emphasized that *gifted students are in need of services or activities not normally provided by schools*. However, the federal government does not provide specific funding for gifted education directly to districts. The reports also pointed out the missed opportunities to identify and serve gifted students in the U.S.



Thousands of geniuses live and die undiscovered - either by themselves or by others.

Mark Twain

A+ TEAM

FATIH GELGI, PH.D. (A+ PROGRAM COORDINATOR)



Fatih Gelgi received his Ph.D. in Computer Science in 2007 from the Arizona State University. Dr. Gelgi won bronze medal in the International Olympiads in Informatics in 1999 (IOI'99). He has been training computer olympiad students for more than 10 years. He is also a coach of USA Computing Olympiad (USACO) through which the American team for the International Olympiad in Informatics is chosen and trained.

ALI ERDEM ERSOZ (A+ MATH COORDINATOR)

Ali E. Ersoz received his B.S. in teaching mathematics. He worked as a math teacher for 20 years. He has been an A+ Math Coach for 10 years. He took the leadership role on the A+ problem writing committee and prepared several problems that appeared at math contests such as MathMatters.



ALI GUREL, PH.D. (A+ MATH COACH)



Ali Gurel received his Ph.D. from California Institute of Technology (Caltech) Math Department. He won a silver medal at the International Mathematics Olympiads in 1996 (IMO'96). He has been training math olympiad students for more than 12 years. He trained Zarathustra Brady gold medalist of the IMO'06 and David Yang gold medalist of IMO'11 and IMO'12. He also serves as one of the coaches of the Math Olympiad Summer Program (MOP) through which the American team for the International Math Olympiads is chosen and trained.

MEHMET KAYSI (A+ MATH COACH)

Mehmet Kaysi has B.S. degree in Mathematics. He participated International Mathematics Olympiads (IMO) in 2004 as a high school student. He has been training math olympiad students for 5 years from beginner to international levels.



IBRAHIM BAYRAKTAR (A+ SCIENCE COORDINATOR)



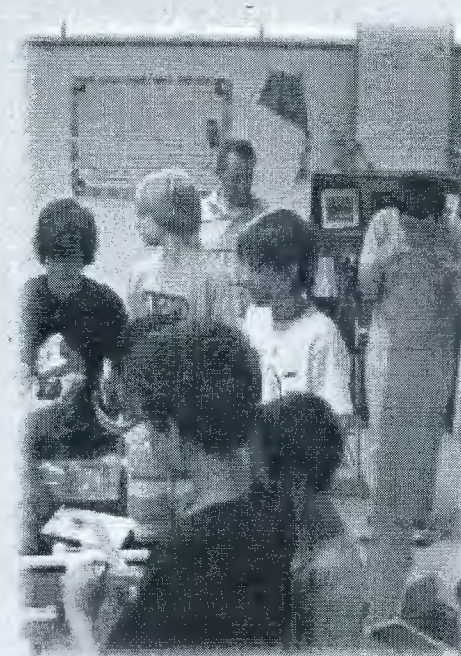
Ibrahim Bayraktar has B.S. degree in Biology. He taught biology at middle and high school classes for more than 10 years. Beside teaching science, he has been organizing science competitions, camps, field study programs to foster more student interest in science.

ACCORD
INSTITUTE
for Education Research

<http://www.accordeducation.org>

A+ PROGRAM

*Advanced Science, Technology,
Engineering, and Math Program*



ACCORD INSTITUTE'S A+ PROGRAM

WHAT IS A+ PROGRAM ?

A+ Program is a unique and rigorous advanced Science, Technology, Engineering and Math (STEM) program offered to students in grades 4-12. Participants meet regularly with experienced coaches to explore exciting, advanced topics in STEM, in preparation for prestigious competitions. It is especially designed to challenge promising students and provide them extensive experience with math, science and computer science concepts.

WHY A+ ?

In the United States today, the growth rate of jobs in science and engineering is five times greater than the growth rate of jobs overall. Simultaneously, schools are inadequately identifying and serving academically gifted students. Taken together, it is clear that U.S. schools hold the key to better motivating talented students to pursue careers in STEM. A+ is the dynamic program developed for this purpose.

BENEFITS OF A+

- ✓ Team spirit
- ✓ Increased interest in science and mathematics
- ✓ Creative problem solving strategies
- ✓ Improved self-confidence
- ✓ Immediate support for students' weak areas
- ✓ A challenging environment for students
- ✓ Disciplined study habits
- ✓ Constructive and productive investment of time
- ✓ A solid background in advanced math, computer and science concepts
- ✓ Mastery of the scientific method
- ✓ Early and confident decision-making to pursue careers in math and science
- ✓ Accurate, grade-level, student ranking in math and computers based on exams taken by students in all member schools
- ✓ Recognition for success at prestigious competitions
- ✓ An exceptional accomplishment that top ranked universities are looking for

It was a great experience to teach A+ classes. This program ensures that talented students learn the higher level thinking skills and concepts they will need in order to attain high academic success. Thank you for making this available!

Erdem E., Teacher

GOALS OF A+

- ✓ Enrich students with a more challenging curriculum in the sciences
- ✓ Cultivate an interest in STEM related fields
- ✓ Provide essential resources and tools for students to excel and reach their full potential
- ✓ Create a challenging environment for students via a regional, competitive ranking system and A+ camps
- ✓ Empower students to succeed in secondary and post secondary education
- ✓ Groom qualified scientists for our community and our nation



The winter camp marked an important turning point in my daughter's development. She was very apprehensive about going to the camp but she returned invigorated, enthusiastic, confident, and notably matured. She made new friends and became closer with her old friends. She learned plenty of math, but I think she learned even more about herself.

Denise M., Parent

A+ JUNIOR – CURRICULUM

For A+ Junior program, at least 3 classes per week is recommended; one class for Math Academy activities, one class for Mathematical Olympiads for Elementary and Middle Schools (MOEMS), and one class for Game Club activity.

MATH ACADEMY – MATH ACTIVITIES

Each booklet contains 4-5 activities. Each activity is for one class. It is recommended to be done one activity per week.

1. Dining Out – Explorations in Fractions, Decimals & Percents
<http://www.actuarialfoundation.org/pdf/math-academy-dining-out.pdf>
2. Let's Go to the Mall – Explorations in Combinatorics
<http://www.actuarialfoundation.org/pdf/math-academy-mall.pdf>
3. Are You Game? – Explorations in Probability
<http://www.actuarialfoundation.org/pdf/Math-Academy-Are-You-Game.pdf>
4. Play Ball! – Explorations in Data Analysis & Statistics
<http://www.actuarialfoundation.org/pdf/math-academy-play-ball.pdf>
5. Can You See It in Nature – Explorations in Patterns & Functions
<http://www.actuarialfoundation.org/pdf/math-academy-see-it.pdf>

MOEMS

- Enroll MOEMS as soon as possible in the beginning of the year at <http://www.moems.org/enroll.htm> (due date is 09/30/2009).
- At least, one class per week is recommended.
- Monthly assignment, MOEMS problem of the month <http://www.moems.org/zinger.htm>.
- All students will enter the contests as a team. Contest dates for 2009-2010; November 17, December 15, January 12, February 9, and March 9.
- Follow the books:
 - Creative Problem Solving in School Mathematics 2nd Edition by Dr. George Lenchner
 - Math Olympiad Contest Problems for Elementary and Middle Schools by Dr. G. Lenchner.
 - Math Olympiad Contest Problems Volume 2 edited by Richard Kalman.

PUZZLE CLUB

The plan below contains 18 weeks; 3 weeks are optional. Instructor can choose the 15 weeks s/he wants. See 'Puzzle Handbook.pdf' for brief descriptions of puzzles.

- Puzzles (individual + group, 3 weeks)
 - Jigsaw, 100 pieces, individual competition (1st week)

- Jigsaw, 300 pieces, team competition (2nd week)
- 3D, team competition (3rd week)
- Tangram (individual + group, 1 week)
- Wood, metal, chain puzzles (individual, 1 week)
- Detective, thieves & Robin Hood game (group, 3 weeks)
- Logic puzzles (individual + group, 2 weeks)
- Lateral thinking puzzles (group, 2 weeks)
- Rubik's cube (individual, 3 weeks)
 - Solving methods (3 weeks)
- Treasure hunt or a puzzle competition (school wide organization, 3 weeks)

Besides, puzzle club is responsible for running "puzzle of the week" contest (school wide).

PUZZLE OF THE WEEK CONTEST

Puzzle club publishes "puzzle of the week"; a puzzle per week on the puzzle club bulletin, school bulletin board, and the website. These puzzles have to be solved individually. At the end of the semester top scorers (e.g. top 3 scorers) is awarded. It is recommended that a student is assigned to run the puzzle of the week. The solutions are submitted to that student.

The student will be responsible for:

- Finding the puzzles (with the help of the club teacher),
- Receiving the solutions from the solvers.
- Keeping the list of the solvers and update their scores every week.
- Providing the puzzle, last week's answer, list of the top scorers (e.g. top-20 scorers in the school) and his/her contact information to the publicity officer and the webmaster to publish the puzzle to the puzzle club bulletin, school bulletin board, and the website.

The puzzles can be found at the websites (this list mustn't be uncovered to the students; that spoils the contest):

- Logical Problems, <http://www.foli.com/puzzles/>
- Brain Food, <http://www.rinkworks.com/brainfood/>
- AIMS Puzzle Corner, <http://www.aimsedu.org/Puzzle/index.html>

TREASURE HUNT

The treasure hunt game is an activity that can be organized in the school building. 4-5 people teams try to find the clues or puzzles hidden in different places in the school. After finding the clue, a team proceeds to the next possible clue location using the current clue. At the end of the clues, team finds the treasure. The first team that finds the treasure in a certain time period wins the game. Treasure hunts are very enjoyable by students. They can be one of the best fun activities in the schools; improves social skills and team spirit in the school. Entrance fee can be collected (ex. \$10 per team) so it won't have any cost to the club. For treasure hunt ideas and guidelines check:

- Treasure hunt ideas, http://www.creativekidsathome.com/activities/activity_28.html
- Make your own treasure hunt, http://www.creativekidsathome.com/activities/activity_147.shtml

PUZZLE COMPETITION

Puzzle competition is organized school wide. It can also be organized as a Puzzle Night involving the families. The competition can be either individuals, teams, or both parts. It can be composed of all the puzzles in the curriculum. The individual/team gets the highest score wins the competition.

A+ JUNIOR – GUIDELINES

OVERVIEW

A+ Junior is a preparatory program for A+ Program in elementary school, 4th and 5th grades. In the elementary school, the goals of A+ Junior program are:

- To provide enthusiasm for math and science,
- To warm-up students for the academic discipline and studying,
- To train the students toward MOEMS competition,
- To provide joyful time with math activities,
- To improve problem solving and analytical reasoning skills.

CLASSROOM SETUP & IMPLEMENTATION

GENERAL SETUP

- **Maximum number of students:** 24
- At least, 3 classes per week is recommended; one class Math Academy activities, one class Mathematical Olympiads for Elementary and Middle Schools (MOEMS), and one class Puzzle Club activity.
- **Publicity**
 - Fliers & posters
 - Use readable lettering
 - Post fliers on bulletin boards, ask other teachers to put them up, and leave some at the library and the main office.
 - Website
 - Announce club activities, student achievements, member lists, and top puzzle ratings in the club and in the school etc.
 - News releases
 - School newspaper, yearbooks
 - Club newsletter
- **A+ Junior membership**
 - Ask A+ Program Coordinator for A-STEM CMS account
 - Enroll your students in A-STEM CMS
- **Bulletin board**
 - Weekly "Puzzle of the Week", throughout the semester
 - May have cheap entry fee
 - Prizes for top scorers
 - Top puzzle solvers' list
 - Activity photos
- Individual, group and school wide puzzles.

- Enroll MOEMS as soon as possible at the beginning of the year at <http://www.moems.org/enroll.htm> (due date is **October 15, 2012**)
- Club organizes a Treasure Hunt or a Puzzle Competition
 - It should be school wide game open to everyone (e.g. including school staff may improve the spirit in the school)
 - Requires publicity to heat up student so the event flyer and participation form.
 - The game can be treasure hunt or variations such as scavenger hunt (see <http://www.treasurehuntbook.com/> for details).
 - Suggested to be a team game composed of 4-5 people in each team (may be some restrictions like 'at most 1 staff per team').
 - Entrance fee can be collected (ex. \$10 per team) so it won't have any cost to the club.
 - Trophies and awards are given at the end of the competition.

MATH ACADEMY

Math Academy activities included in the booklets were designed to create hands-on activities and a fun learning environment for the teaching of mathematics to students. Five booklets of Math Academy are included in the A+ Junior curriculum. See http://www.actuarialfoundation.org/programs/youth/math_academy.shtml for details.

MOEMS

Mathematical Olympiads for Elementary and Middle Schools (MOEMS) is a math competition for 4-8 graders. A+ Junior requires 4th and 5th graders to enter Elementary Division of MOEMS contest.

Created in 1977 by Dr. George Lenchner, an internationally known math educator, the Math Olympiads went public in 1979. Last year 150,000 students from 5,000 teams worldwide participated in the Olympiads. All 50 states and 25 other countries were represented. See the website for details: <http://www.moems.org/index.htm>.

PUZZLE CLUB

Puzzle club aims to improve students' analytical thinking and reasoning skills. The class consists of three types of activities; individual, group and school wide organized puzzles. See 'Puzzle Handbook.pdf' for puzzles information.

PREREQUISITES

- A+ placement test for all participating students (in the Courses => General section on A-STEM CMS)
- Student enrollment to A-STEM CMS
- For grades 4 and 5

COMPETITIONS

MOEMS is the targeted competition of A+ Junior Competition is briefly described below. See <http://www.moems.org/contests.htm> for details.

- A team may consist up to 35 students.
- 4th and 5th graders can enter only Division E (Elementary school division).

- MOEMS have 5 monthly contests from November to March. Contest dates for 2012-2013; November 13, December 11, January 8, February 12, and March 12s.
- **Enrollment package**
 - All 25 problems and detailed solutions from the previous year. New enrollees receive 50 problems and solutions from the previous two years.
 - 5 monthly contests with detailed solutions.
 - 8 newsletters that lead the sponsor through all procedures provide statistics and relevant information.
 - Certificates for all students and awards for about 50% of all participating students and about 25% of all teams.
 - Check <http://www.moems.org/enroll.htm> for enrollment.
- **Contest Format**
 - Contests are taken in the participating school.
 - Each contest consists of five non-routine problems.
 - Every problem requires careful mathematical thinking and has a time limit.
 - Each student, working alone, scores 1 point for each correct answer. Thus, a student may score up to 25 points per year.
 - Calculators are not permitted.
 - When a problem introduces a more advanced concept, all necessary definitions are included.
 - The detailed solution for each problem usually names the strategy required.
 - Many solutions include follow-up problems and activities.
 - After each contest, results are submitted to us for scorekeeping. Our records will determine which awards are to be shipped after the last contest.
- For those entering scores online, the contests will be posted **one week prior** to the scheduled Olympiad date. Your password will be required to access the contest.
- **Awards**
 - *Individual:* Each participant receives a Certificate of Participation. The high scorer of each team receives a trophy. (Note: An Honorable Mention trophy is also available for purchase.) Each of the top 50% of all participants in each division receives a handsome embroidered Olympiad patch. Each of the top 10% of all participants in each division receives a silver or gold pin. Each student who achieves a perfect score of 25 points receives a bronze medallion.
 - *Team:* Each team in the top 10% of all teams receives a plaque; the next 10%, a certificate. The grade level of a team is the highest grade level of any of its members. In Division E, special certificates are awarded to the top 20% of all Grade 5 Teams and also of all Grade 4 Teams.
- Sample contests can be downloaded from <http://www.moems.org/sample.htm>.

EQUIPMENTS & BUDGET

- Math Academy activities
 - Booklets (free, see http://www.actuarialfoundation.org/programs/youth/math_academy.shtml or the links in the curriculum to download)
- MOEMS
 - *Books:*
 - Creative Problem Solving in School Mathematics 2nd Edition by Dr. George Lenchner.
 - Math Olympiad Contest Problems for Elementary and Middle Schools by Dr. George Lenchner.

- Math Olympiad Contest Problems Volume 2 edited by Richard Kalman
 - The “Problem-Solving Set” of all three volumes: ~\$100. (See http://store.moems.org/mm5/merchant.mvc?Store_Code=MOEMS&Screen=CTGY&Category_Code=OLYMPIADBOOKS for details)
- Enrollment fee: Online \$89, Mail \$99 (per team)
- Puzzle Sets (can be found at Wal-Mart, Target, Toys’R’us, Barnes & Noble)
 - Jigsaw, 100-piece (1 per students), Price: ~\$10
 - Jigsaw, 300-piece (1 per 4 students), Price: ~\$10
 - 3D puzzles (1 per 6 students), Price: ~\$15, examples:
 - <http://puzzles.about.com/od/jigsawpuzzlessshopping/tp/3DBuildings.htm?p=1>
 - <http://www.areyougame.com/interact/category.asp?cat=3D+Puzzles&tracking=related>
 - Wood, iron, chain puzzles (1 per student), examples:
 - Accoutrements Magic Metal Puzzles (12 puzzles), Price: \$5.90
<http://www.amazon.com/Accoutrements-Magic-Metal-Puzzles/dp/B000Q84SRC/>
 - CUBE puzzle Wood with slanted corners, Price: \$7.50
<http://www.amazon.com/CUBE-puzzle-Wood-slanted-corners/dp/B000JMCPAC>
 - Tangram, examples:
 - Tangram set (1 per student)
Learning Resources Classpack Tangrams, 4 Colors, 30/Set, Price: \$15
<http://www.amazon.com/Learning-Resources-Classpack-Tangrams-LER0416/dp/B000VUJO1A/>
 - Recommended book: Tangrams: 330 Puzzles, Dover Publications, 1965, Price: \$6.95
<http://www.amazon.com/exec/obidos/ASIN/0486214834/interactivetangr>
 - Rubik’s Cube (1 per student), Price: \$7.83
<http://www.amazon.com/Winning-Moves-5025-Rubiks-Cube/dp/B00081RYNC>
- Detective, thieves & Robin Hood game
 - One deck of cards, Price: ~\$5
- Organizing Treasure Hunt: ~\$100 including a Treasure Hunt Set, equipments and snacks
 - Treasure Hunt Set x 1 (<http://www.treasurehuntbook.com/>), Price: ~\$25
- Initial cost:
 - Math activities: \$0
 - MOEMS books and enrollment: ~ \$100 + \$100 = \$200
 - Puzzles: \$20 per student = \$600
 - Total: \$800 initial cost
- Additional yearly cost: \$100 (MOEMS enrollment fee)

ADDITIONAL RESOURCES

- Math Academy, http://www.actuarialfoundation.org/programs/youth/math_academy.shtml
- MOEMS homepage, <http://www.moems.org/>
- ThinkFun Game Club, <http://www.thinkfungameclub.com/>

MATH COACH HANDBOOK

A+ MATH PROGRAM

CONTENTS

Chapter 1: Overview	3
What is A+ Math Program?	3
Goals, benefits, and distinctive features	3
A+ Structure	4
Chapter 2: Methodology	5
Student Motivation	5
Teaching how to learn	6
Improving social, team skills	7
Parent Involvement	8
Publicity	9
Chapter 3: Implementation	10
Overview	10
A+ Online Course Management System	11
Student selection process	11
Curriculum	12
Classes and Homework Assignments	13

Camps	15
Assessment	16
Chapter 4: Program Requirements	16
Chapter 5: Appendix	17
Resource Library.....	17
Middle School Math Competitions Overview	17
MathCounts.....	17
MOEMS (Math Olympiad for Elementary and Middle Schools)	19
AMC-8 (American Mathematics Contest-8).....	20
Contest Format.....	21
Math League	22
Contest Format (for 6th, 7th and 8th Grade Contests).....	23
A+ Library	24

CHAPTER 1: OVERVIEW

WHAT IS A+ MATH PROGRAM?

A+ Math Program is for advanced students in middle and high schools that aim to motivate them by challenging problems in advanced math topics while training them for prestigious national and international math competitions like MathCounts, MathLeague, American Mathematics Competitions (AMC), USA Math Olympiads, and International Math Olympiads.

GOALS, BENEFITS, AND DISTINCTIVE FEATURES

The goal of A+ CS Program is to:

“inspire and motivate students and increase their interest and confidence in CS by training them for prestigious CS competitions”.

The benefits include learning problem solving skills, a huge plus in college applications, college-life and throughout their careers:

- The students will learn the mysteries and joys of problem solving and these skills to solve math problems which they can apply to other fields in life. Most of the science, industry, and finance jobs are based on problem solving and one who can solve math problems has the potential to solve any real life problem because math and logic is in the core of all the subjects and sciences.

One of the math competitions that the A+ students prepare for is MathCounts and statistically, MathCounts alumni students have had very high SAT scores and went to top colleges in US.

The distinctive features of the A+ Math Program are A+ camps, learning mathematical reasoning, and improving social, team skills:

- A+ camps have problem solving classes, fun competitions, and team activities. They improve student motivation throughout the year. Students love the camps and they work hard to be selected for the following A+ regional and national camps.

The A+ Math Program is based on understanding the mathematical logic and reasoning instead of focusing on applying formulas. Many students have the misconception that math is a bunch of formulas and the more formulas you know the better you get at math. Unfortunately, math is taught to encourage this misconception in most classes and programs and because of this, many students find math boring and especially gifted students grow away from math. A+ Math Program focuses on the mathematical reasoning behind the formulas.

A third distinctive feature of the A+ Math Program is that it does not see students as problem solving machines and focuses on increasing their social, team skills which will help them throughout their life. In today's world, one cannot be successful without these important skills. A+ camps offer many team and social activities like sport activities, team games and competitions, and great social games like the famous traditional A+ camp game: 'Detective, Thieves, and Robin Hood (DTR)'. You may find more information about DTR at the Appendix.

A+ STRUCTURE

At participating schools, A+ Math Program is run by A+ School Math Coaches in coordination with the A+ School Coordinator and A+ Math Coordinator at Accord Institute.

A+ has two major components: weekly classes and camps.

A+ math middle school component is a two-year program whose curriculum is based on advanced topics and problem solving techniques used in competitions like MathCounts and AMC-8 which are national math competitions among middle school students with around half a million students participating in each.

The curriculum has four main components: Algebra, Number Theory, Counting, and Geometry. Students learn and practice problem solving techniques with challenging and original problems in these four subjects. Past competitions, problem solving books and Accord Problem Packages are used in weekly classes and camps. The problems are not easily done using traditional methods that they learn in school which encourages them to be creative, think outside the box, and come up with original solution techniques.

The math component of A+ camps has fun math lectures and problem solving classes. In addition, students take past MathCounts competitions composed of individual, team, and countdown rounds.

CHAPTER 2: METHODOLOGY

STUDENT MOTIVATION

A+ Camps: A major component of A+ Math Program is A+ camps that aim to increase student motivation. In addition to fun lectures and problem solving hours, the camps contain several fun activities, team games and competitions to show the students the beautiful and cool sides of math.

Non-routine problems: The problems used in weekly classes are designed to challenge students and to encourage thinking instead of asking them practice routine methods and calculations.

Make it fun: A+ classes and activities should be remembered by students as fun activities. Give points to students for solving problems. Make problems interesting by including stories in the problems about your students and their hobbies. For variables, use fun notation like apples and pears instead of the traditional boring x , y notation. Organize occasional individual or team competitions. Most students love to compete as teams. It is also a good idea to have food for weekly gatherings. Feel free to ask parents help for taking turns and bringing food or snacks.

Promote effort: Promote effort and hard-work rather than ingeniousness. Putting an effort and understanding only parts of the subject is much better than being smart and doing nothing. As the saying goes, a walking turtle covers more distance than a standing rabbit.

Be encouraging, set individual goals: Do not kill the math spirit of students by discouraging them because of their low scores! The exams they take are not easy ones and they have two years of preparation to reach their maximum potential. If they got 5 correct answers among 30 problems, encourage them to work hard and try increasing their score to a 7 or 8 next time.

TEACHING HOW TO LEARN

Avoid using formulas: Avoid using formulas at all costs! Instead, teach them the underlying mathematical reasoning and problem solving

techniques. For example, if the student is asked to add up the first 100 positive integers, the traditional math makes the students memorize and apply the formula which tells them to multiply the last number, 100, with one more than that, 101, and divide the product by 2, which gives the answer 5,050.

Students, who solve the problem this way, see no beauty in math whatsoever and get bored by merely applying one formula after another without thinking. In A+ Math Program however, the student will be hinted towards seeing that these numbers can be grouped in pairs like (1, 100), (2, 99), (3, 98) and so on, so that the two numbers in each pair adds up to 101. Since we have 50 such pairs, the sum of the 100 numbers is 50 times 101, or 5,050. It is said that legendary mathematician Gauss came up with this idea in primary school when the class was asked this same problem by their busy teacher who was surprised by hearing the correct answer from Gauss in less than a minute. Students, who solve the problem using this clever method learn a clever problem solving technique, see the beauty of math and are encouraged to think and find clever ways themselves to solve challenging math problems.

IMPROVING SOCIAL, TEAM SKILLS

A+ School Team T-shirts: This would increase the team spirit among the students. When you seek or find sponsors for the program, tell them where and how in the t-shirts you would be using their logo for advertisement. Encourage the students to wear the t-shirts at math competitions and A+ camps.

Team competitions: Include team games and activities in A+ camps. They will learn useful skills on splitting the task and working efficiently as a team, helping others, and asking help from others.

Social games: Have them play games which force them to talk to each other. Detective, thieves, and Robin Hood is a great example! It is a role playing game where they play a character and they have to talk and convince others to stay in the game. More information about the rules can be found in the Appendix. While choosing board games to play, pick ones that encourages student communication. Monopoly and Settlers of Catan are good examples.

Sports: Have outdoor activities in A+ School and Regional Camps. Team games like soccer, dodge ball, capture the flag are great examples.

PARENT INVOLVEMENT

Parent Presentation: At the beginning of the year make a parent presentation for selected students to inform the parents about the program and to invite them to participate. After regional and national camps, make a slide show using the many photos taken during the camp. Invite the parents and enjoy watching them together.

Home visits: Plan home visits earlier in the year to meet with the parents. This will help your communication with the parents throughout the year. It also gives them a chance to see how dedicated you are about their children's education.

E-mail group: Make an e-mail group with the parents. Use it for sharing news with them and giving them updates. The more direct communication channels you have with the parents, the better.

Call them: Make occasional phone calls to talk about how the student is doing. Remind them about the upcoming A+ camps and Gauss League contests. Share good news about success of the student and the program with the parent.

Show your dedication: Let them see that you are putting a lot of effort for their kids. Dedication the power of a teacher and unlike Superman's powers, this one is not good to hide.

Ask for parent support: Do not be shy. Ask for parent support whenever needed. You are working for the future of their kids and they will love to help you! There are several ways for parent support: They can take turns to bring food to weekly gatherings or school camps, help you with transportation for the A+ camps, help you organizing an A+ bake sale or even make donations or encourage their friends or companies to make donations.

PUBLICITY

School Walls: Advertise the program in the school by showing news and pictures from the A+ camps.

Annual Presentations: Make annual presentations to school, parents, and local sponsors about the program and its success.

School Newsletter: Write or ask students, parents to write articles in the school newsletter about A+ program, events, and competitions.

A+ fundraising sales: Organize a bi-weekly or monthly A+ bake, ice-cream, cady sale. Inform the A+ parents ahead of time and ask for their help to bake and bring cookies etc. or to help selling to all the students in the school. The sales money could be used to imrove your A+ library,

to give scholarships for successful students towards A+ National Camps etc.

CHAPTER 3: IMPLEMENTATION

OVERVIEW

A+ implementation consists of two main components: weekly classes and camps. At the beginning of every year incoming students take a placement exam to participate in A+. After the selection, the classes begin.

A+ math program requires at least 3 hours of weekly classes which follow a two-year A+ math curriculum each year consisting of 30 weeks. Classes are devoted to teaching the students problem solving techniques and equipping them with tools to solve challenging math problems. Weekly homework assignments are given to students and the homework grades based on effort and accuracy are recorded on the A+ Online Course Management System (CMS)¹ by the school CS coach.

A+ has 4 school camps, 2 regional and 2 national camps throughout the year. The schools camps are organized by school as either sleepovers or full day camps, the regional camps are organized by participating schools in a region as a weekend camp, and national camps are one-week long organized by Accord Institute.

As assessment, Accord Institute uses current and past competitions of MathCounts, AMC-8, and Gauss League. Students also take frequent

¹ A+ CMS website: <http://accordeducation.org/A+/cms/>.

review exams and an evaluation exam at the beginning and in the end of the year to measure the growth-level.

A+ ONLINE COURSE MANAGEMENT SYSTEM

A+ CMS has the following features to help organizing A+ CS class at the school:

- Following up A+ reminders and events
- Student reporting, monitoring student progress, student status among all A+ students
- Easy follow-up of A+ tasks via A+ school checklist
- Course material available for download
- Online grading and attendance

For details, refer to the CMS session at Accord Institute A+' training.

STUDENT SELECTION PROCESS

A+ is an advanced program which requires certain level of mathematical skills and talent. So, only selected students may participate in the program. The goal is to have 10% to 20% of the incoming students participate in A+.

A+ School Coordinators are primarily responsible for the A+ student selection process in their schools. The selection is done in the first three weeks of the school year. The steps of A+ student selection process is as follows:

1. In the first week, A+ Placement Test downloaded from A+ CMS is given to all the incoming students and any other student who wants to join the program. A+ Coaches grade the placements test

using automated grader downloaded from CMS. The placement test booklets are **destroyed** and all the student answer sheets are mailed to Accord Institute.

2. In the first two weeks, A+ Coaches gather information about the level of the students by observing their performance in the classes and talking to their teachers and parents. After this period, A+ School Team selects the team.
3. After the selection, A+ School Coordinator contacts the parents of the selected students and invites them to the A+ Parent Presentation (downloaded from CMS) scheduled for the second weekend or the third week of school year.
4. After the presentation, parents make a contract with A+ school team. This contract indicates the responsibilities and commitment of the parent, the student, the school and Accord Institute. Those who agree to participate in the program signs and returns the 'A+ Terms and Conditions' document (downloaded from CMS) to the A+ School Coordinator.
5. After the selection is over, the students are enrolled in A+ program by submitting their information to CMS.
6. Finally, the A+ Math and CS Coaches start the weekly classes.

CURRICULUM

A+ math curricula are prepared after careful investigation of the contests that A+ is training its students for. In middle school, the curriculum is based on MathCounts exams and problems. Past MathCounts problems were carefully analyzed and a curriculum was formed based on the topic-distribution of these problems. In the curriculum, for every week there is a topic of the week with an

explanation of what is being covered that week and a few sample problems.

A+ middle school math program follows a two year based curriculum: Year of the Chicken and Year of the Egg. The two curricula alternate as the years do. A school-year starting at an even (odd) year like 2008-2009 (2009-2010) is a year of the chicken (egg). None is a prerequisite of the other so a student joining the program any year can start with whichever year is being implemented without the knowledge of the other year, which explains the choice of the names chicken and egg. Both years follow a 30-week curriculum first 10 of which are devoted to basic algebra knowledge and skills while the remaining 20 weeks focus on algebra and number theory in years of the chicken and geometry and counting in years of the egg. There are five review weeks in the curriculum: weeks 10, 15, 20, 25, and 30. Please see the Appendix for the curriculum of both years.

CLASSES AND HOMEWORK ASSIGNMENTS

In middle school, A+ math program requires at least 3-hours of weekly classes. These classes are mostly devoted to learning and applying problem solving techniques related to the topic of the week in the curriculum. Every week, three problem sets (penguin, rabbit, and squirrel sets) sent by Accord A+ team, each containing 8 problems, will be given to students as homework for the following week. There is also a review test given every week. The coaches have the option to use it as homework set or to apply it in class as exam. Students should be given enough time, at least one week, before the homework sets are due. Each student is expected to try all the problems in all of the homework sets.

The first class of a week should be spent on lecturing and solving sample problems. Two useful resources for lecturing are shared lecture notes from other A+ math coaches which can be found on the A+ Online System and A+ library books. For a list of A+ library required and suggested books, please see the Appendix. The remaining classes are devoted to going over homework problems and additional MathCounts, AMC-8 material such as warm-up work-outs and club materials.

Homework sets may be graded at the beginning of a class by writing down the answers on the board and ask the students to switch their sets and do peer-grading. The grading is based on effort and accuracy. The effort-grading is to measure if the students are working on the problems. Students indicate which problems they made an effort on. Making an effort on a problem means working on it for at least 5 minutes or until the student thinks that the problem is solved regardless of the answer being correct or not. The accuracy-grading is the standard grading which considers if the answer is correct or not. The total grades on each set should be marked on the grading box on the top of the page.

Before the review weeks, the students will be encouraged to go over past weeks topics and problems and will be given a review package as homework. A review week exam will be given during the review week. A+ School Math Coaches are responsible to enter both effort and accuracy grades, out of 32 problems, in the A+ Online System every week. Until the past grades are updated, further problem sets will not be accessible.

CAMPS

Students also participate in monthly A+ activities such as school, regional, and national camps.

A+ Program asks schools to organize 4 school camps in a year to which all the A+ students in the school are invited. School camps could be organized as sleepover or as full day camps. In each school camp, students take a past MathCounts exam with individual, team, and countdown rounds, and go over the solutions of the individual rounds with their teacher.

Schools in the same region are encouraged to organize one regional camp every semester. These regional camps are invitational only and A+ School Coaches and Coordinator in coordination with the A+ Regional Coordinator make the selection based on performance and attitude of the students. They are weekend camps usually from Friday evening to Sunday noon. Students are given a MathCounts exam with all the rounds in it. A+ Math Teacher goes over the solutions of the individual rounds with the students. Also there are math problem solving sessions scheduled in the regional camps. The necessary documents and problems will be provided by Accord Institute.

Accord Institute organizes national winter and summer camps every year. The space is very limited in these camps. Accord Institute A+ Team makes the selection of invited students after consulting with school coaches and sends invitation letters to the parents. The national camps are 5 to 7 days. At the first class of these camps, the students take an exam and according to the results, they are separated into several groups with different levels. There are math problem solving

sessions in the mornings taught by lecturers from Accord staff and A+ school coaches. Problems for different groups are provided by Accord Institute to the lecturers in advance. Every national camp focuses on one of the four subjects: algebra, numbers, geometry, and counting which are cycled through every two years. On the last day of the camp, students take a MathCounts exam containing all the rounds. In the end of the camp, students will be awarded in several categories like academic performance, most responsible, most helpful, and tidiest.

ASSESSMENT

To determine how the students are improving and how well the program is running, A+ uses the results of exams such as Review Exams, MathCounts, and AMC-8 practice exams.

In addition, A+ students are encouraged to participate in several math competitions throughout the year including MathCounts, AMC-8, Math League, and MOEMS. You may find more information about these competitions and how to register for them in the Appendix.

CHAPTER 4: PROGRAM REQUIREMENTS

Qualified Teachers: Teachers are required to complete A+ training and be certified by Accord Institute to teach an A+ class. There are two training programs organized by Accord Institute every year.

A+ Library: A+ has a library of required and suggested books. These are carefully selected by the A+ team and are required to implement the program effectively. For the list of A+ math library books, please see the Appendix.

A+ Class: A+ requires weekly classes of at least 3-hours of math and 2-hours of computer science. The students should be given credit by the school for taking these classes.

A+ Camps: A+ requires each school to organize four school camps throughout the year. Schools are also encouraged to organize or participate in two regional camps.

CHAPTER 5: APPENDIX

RESOURCE LIBRARY

All documents, weekly packages and resources can be downloaded from A+ CMS website.

MIDDLE SCHOOL MATH COMPETITIONS OVERVIEW

MATHCOUNTS

<http://mathcounts.org>

The MATHCOUNTS Foundation is a nonprofit organization incorporated in 1984 to promote math excellence among U.S. middle school students. Since the program began in 1983, over 6 million students have participated. More than 6,000 schools participate in competitions annually from all 50 states. Each year, over 250,000 students utilize MATHCOUNTS materials. Corporations and individuals donate \$1.5 million to \$1.7 million annually to the national program and over \$500,000 to the local and state programs. President George W. Bush

and former Presidents Clinton, Bush and Reagan have all recognized MATHCOUNTS in White House ceremonies.

CONTEST FORMAT

<http://mathcounts.org/Page.aspx?pid=288>

Consisting of fun and creative problems, the MATHCOUNTS competitions have written and oral rounds, as well as individual and team components. Though challenging and non-routine, the competition problems focus on the 6th through 8th grade standards of the National Council of Teachers in Mathematics.

Participants advance through School (January), Chapter (February) and State Competitions (March) until the final 228 students are selected from fifty-seven states and territories to advance to the Raytheon MATHCOUNTS National Competition held each May. Results at the state level determine the top four individuals and top coach who earn the honor of representing their state team at the national finals.

Competition Name	MathCounts
Contest Website	http://mathcounts.org/
Grades	6-8
Registration Deadline	http://mathcounts.org/Page.aspx?pid=312 (December)
Registration Fee	\$160 (\$80 for Title-I schools)
Registration Form	http://mathcounts.org/Document.Doc?id=229
Contest Dates	http://mathcounts.org/Page.aspx?pid=294 (Jan, Feb, Mar, May)
Sample Problems	http://mathcounts.org/Page.aspx?pid=295
Resources	http://mathcounts.org/Page.aspx?pid=315
Awards	http://mathcounts.org/Page.aspx?pid=208

MOEMS (MATH OLYMPIAD FOR ELEMENTARY AND MIDDLE SCHOOLS)

<http://www.moems.org/program.htm>

Created in 1977 by Dr. George Lenchner, an internationally known math educator, the Math Olympiads went public in 1979. Last year 150,000 students from 5,000 teams worldwide participated in the Olympiads. All 50 states and 25 other countries were represented. The competition goals are to stimulate enthusiasm and a love for Mathematics, to introduce important Mathematical concepts, to teach major strategies for problem solving, to develop Mathematical flexibility in solving problems, to strengthen Mathematical intuition, to foster Mathematical creativity and ingenuity, and to provide for the satisfaction, joy, and thrill of meeting challenges.

CONTEST FORMAT

<http://www.moems.org/contests.htm>

There are five monthly contests, given from November to March. No traveling is required. Your school's math club meets weekly for an hour. Club members practice for the contests using non-routine problems from both Math Olympiad Contest Problems Volume 2 or Mathematical Olympiads Contest Problems for Elementary and Middle Schools (or other sources). There are two Divisions: Division E for teams in grades 4-6 and division M for grades 7-8. Each team has up to 35 students. Students take 5 monthly contests at their schools given from November to March. Each exam has 5 non-routine problems. Calculators are not permitted in the exams. The individual scores are the sum of the 5 contest scores of the individual and the team score is the sum of the

ten highest individual scores, taken after the fifth contest. In the end, certificates for all students and awards for about 50% of all participating students and about 25% of all teams will be shipped to schools. The high scorer of each team receives a trophy. Each student who achieves a perfect score of 25 points receives a bronze medallion.

Competition Name	MOEMS
Contest Website	http://www.moems.org/
Grades	4-6 in Division E, 7-8 in Division M
Registration Deadline	http://www.moems.org/enroll.htm (September)
Registration Fee	Mail Rate: \$99, Online Rate: \$89.
Registration Form	http://www.moems.org/enroll.htm
Contest Dates	http://www.moems.org/contests.htm (Nov, Dec, Jan, Feb, Mar)
Sample Problems	http://www.moems.org/sample.htm
Resources	http://www.moems.org/Books.htm
Awards	http://www.moems.org/awards.htm

AMC-8 (AMERICAN MATHEMATICS CONTEST-8)

<http://www.unl.edu/amc/e-exams/e4-amc08/amc8.shtml>

The American Mathematics Contest 8 (AMC 8) (formerly the American Junior High School Mathematics Examination) for students in grades 8 and below, begun in 1985. Around 150,000 students participated in AMC 8 in 2007. It is a contest designed to promote the development and enhancement of problem solving skills in junior high school (middle school) mathematics. Many problems are designed to challenge students and to offer problem solving experiences beyond those

provided in most junior high school mathematics classes. Additional purposes of the AMC 8 are to promote excitement, enthusiasm and positive attitudes towards mathematics and to stimulate interest in continuing the study of mathematics beyond the minimum required for high school graduation.

CONTEST FORMAT

<http://www.moems.org/contests.htm>

The AMC-8 is offered at participating schools the Tuesday before the week of Thanksgiving, in late November. It is a 25 question, 40 minute multiple choice examination for students in grade 8 or below. One point is given for each correct answer and no penalty for incorrect answers. Starting in 2008, calculators are not allowed. Subject matter normally associated with the seventh and eighth grade mathematics curriculum including (but not limited to) such topics as the arithmetic of integers, fractions and decimals, percent and proportion, number theory, informal geometry, perimeter, area, volume, probability and statistics, and logical reasoning. Several types of awards are given to all the high scoring students. Specific awards are given to perfect scorers, highest scoring students at each school, the top three students for each school section and high scoring students in 6th grade or below.

Name of the Competition	AMC-8
Contest Website	http://www.unl.edu/amc/e-exams/e4-amc08/amc8.shtml
Grades	8 or below
Registration Deadline	http://www.unl.edu/amc/whatswhen.shtml (October)

Registration Fee	\$33 + \$11 for every 10 students
Registration Form	http://www.unl.edu/amc/e-exams/e4-amc08/archive8.shtml
Contest Dates	http://www.unl.edu/amc/whatswhen.shtml (mid November)
Sample Problems	http://www.unl.edu/amc/e-exams/e4-amc08/archive8.shtml
Resources	http://www.unl.edu/amc/d-publication/publication.shtml
Awards	http://www.unl.edu/amc/e-exams/e4-amc08/amc8.shtml

MATH LEAGUE

<http://www.themathleague.com/>

Formed in 1977 by Steven R. Conrad and Daniel Flegler, The Math League is dedicated to bringing challenging mathematics materials to students. The Math League has Math Contests for Grades 4 through 8, Algebra 1 students, and High School Students. The goal is to encourage student interest and confidence in mathematics through solving worthwhile problems. Schools compete in statewide or multistate league competitions. Over 1 million students participate in Math League contests each year. Contest questions are designed to cover a range of mathematical knowledge for each grade level. Questions on the contests never require any mathematics beyond the grade level tested.

CONTEST FORMAT (FOR 6TH, 7TH AND 8TH GRADE CONTESTS)

Each contest consists of 40 multiple-choice questions that you can do in 30 minutes. On each 3-page contest, the questions on the 1st page are generally straightforward, those on the 2nd page are moderate in difficulty, and those on the 3rd page are more difficult. There is a 6th Grade Score Report, and a 7th and 8th Grade Score Report sent to schools in each league after the contest.

Students in each league compete for the highest scores, while schools compete for the highest team score: the total of the top 5 scores in each school. Questions may cover: basic topics, plus exponents, fractions, reciprocals, decimals, rates, ratios, percents, angle measurement, perimeter, area, circumference, basic roots, patterns, sequences, integers, triangles and right triangles, and other topics, depending on the grade level.

Competition Name	Math League
Contest Website	http://www.themathleague.com/
Grades	4-5, 6-8, Algebra-1, High School
Registration Deadline	http://www.themathleague.com/index.php?option=com_content&view=article&id=90&Itemid=83 (Grades 6-8: January)
Registration Fee	Grades 4-8: \$30, High School: \$75 (per set of 30)
Registration Form	http://www.themathleague.com/index.php?option=com_content&view=article&id=106&Itemid=80
Contest Dates	http://www.themathleague.com/index.php?option=com_content&view=article&id=90&Itemid=83 (Grades 6-8: February)
Sample Problems	http://www.themathleague.com/index.php?option=com_content&view=article&id=97&Itemid=79

Resources	http://www.themathleague.com/index.php?option=com_content&view=article&id=96&Itemid=71
Results	http://www.mathleague.com/reports/leagues.htm

A+ LIBRARY

<i>Estimated Cost of Required Material:</i>	\$599
<i>Estimated Cost of Recommended Material (optional):</i>	\$205
<i>Total Estimated Cost (excluding taxes and shipping costs)</i>	\$804

MathCounts Materials

<https://mathcounts.org>

> MathCounts Store > Online Store > Coaching Materials

Name	Unit Price	# of items	Total Price
All-time Greatest MathCounts Problems	\$17	1	\$17
Competition Sets (most recent 5 years)	\$25	5	\$125
Electronic Countdown Rounds (most recent 5 years)	\$12	5	\$60
Practice Competitions for MathCounts	\$35	1	\$35
Stretches, Warm-ups and Workouts	\$11	5	\$55
			\$292

American Mathematics Competitions

<http://www.unl.edu/amc/>

> Publications > Order form

Name	Unit Price	# of Items	Total Price
DVD - Hard Problems	\$25	1	\$25
Individual Practice Set for AJHSME/AMC 8 (most recent 5 years)	\$2	5	\$10
CD - AJHSME/AMC 8 1985-2007, contests, solutions + worksheets	\$20	1	\$20
AMC-8 Math Club Package with CD	\$25	1	\$25
			\$80

Canadian Math Competitions

<https://cemc.math.uwaterloo.ca>

> Order Books > Browse Catalog and Place Order

Name	Unit Price	# of Items	Total Price
Problems problems problems (Volumes 1,2,4,6,7,9)	\$15	6	\$90
			\$90

Art of Problem Solving (optional)

<http://www.artofproblemsolving.com/>

> Bookstore

Name	Unit Price	# of Items	Total Price
Introduction to Algebra: Textbook & Solutions Manual	\$59	1	\$59
Introduction to Counting & Probability: Textbook & Solutions Manual	\$42	1	\$42
Introduction to Geometry: Textbook & Solutions Manual	\$57	1	\$57
Introduction to Number Theory: Textbook & Solutions Manual	\$47	1	\$47
			\$205

Games

Amazon, Barnes & Noble, Target, Toys-R Us, Walmart

Name	Unit Price	# of Items	Total Price
Blokus	\$30	1	\$30
Mastermind	\$15	2	\$30
Connect 4	\$13	2	\$26
Mancala	\$5	2	\$10
Set	\$12	1	\$12
Monopoly	\$13	1	\$13
Chess	\$8	2	\$16
			\$137

COMPUTER SCIENCE COACH HANDBOOK

A+ COMPUTER SCIENCE PROGRAM

CONTENTS

Chapter 1: Overview	3
What is A+ Computer Science Program?	3
Goals, benefits, and distinctive features	3
USACO System	4
A+ Structure	5
Chapter 2: Methodology	6
Student Motivation	6
Teaching how to learn	7
Improving social, team skills	7
Parent Involvement	7
Publicity	8
Chapter 3: Implementation	9
Summary	9
A+ Online Course Management System	10
Student selection process	10

Curriculum	11
Syllabus.....	12
Lesson Plans	12
Lecture Notes	13
Classes and Homework Assignments.....	14
Camps.....	14
Assessment.....	15
Chapter 4: Program Requirements	16
Chapter 5: Appendix	16
Resource Library	16
Competitions Overview	18
US Computing Olympiad	18
ACCompete	18
Scratch Project Competition	19

CHAPTER 1: OVERVIEW

WHAT IS A+ COMPUTER SCIENCE PROGRAM?

A+ Computer Science (CS) Program is for advanced students in middle and high schools that aim to motivate them by challenging problems in CS topics while training them for prestigious national and international math competitions, like USA Computing Olympiads (USACO), and International Olympiads in Informatics (IOI).

GOALS, BENEFITS, AND DISTINCTIVE FEATURES

The goal of A+ CS Program is to:

“inspire and motivate students and increase their interest and confidence in CS by training them for prestigious CS competitions”.

The benefits include learning problem solving skills, a huge plus in college applications, college-life and throughout their careers:

- The students will learn the mysteries and joys of problem solving and these skills to solve CS problems which they can apply to other parts of their life. Most of the science, industry, finance jobs are based on problem solving and one who can solve CS problems has the potential to solve any kind of real life problems because math and its logic is in the core of all the subjects and sciences.

The distinctive features of the A+ CS Program are A+ camps, learning analytical reasoning, and improving social, team skills:

- A+ camps have problem solving classes, fun competitions, and team activities. They improve student motivation throughout the

year. Students love the camps and they work hard to be selected for the following A+ regional and national camps.

The A+ CS Program is based on understanding the basic programming concepts, logic and reasoning instead of focusing on applying formulas. Instead of memorizing the lecture notes, A+ CS Program focuses on the analytical reasoning behind the formulas, hence applies inquiry based learning techniques in its lecture notes always asking questions to the students instead of providing programming code or formula.

A third distinctive feature of the A+ CS Program is that it does not see students as problem solving machines and focuses on increasing their social, team skills which will help them throughout their life. In today's world, one cannot be successful without these important skills. A+ camps offer many team and social activities like sport activities, team games and competitions, and great social games like traditional A+ camp game: 'Detective, Thieves, and Robin Hood' (DTR). You may find more information about DTR in Appendix.

USACO SYSTEM

USACO online system is composed of a training gate for beginners and contests throughout the year in three different levels (bronze, silver, and gold) in terms of problem difficulty. Beginners enter the training gate to improve their level by reading the lecture materials and solving the questions. All students can enter bronze contests but silver and gold levels are by invitation only depending on the student performance in former contests. At the end of the school year, around top-15 students based on their performances in the contests are invited to the one-week USACO National Camp where the National Computer

Team composed of 4 students is selected. USA National Computer Team represents US in International Olympiads in Informatics (IOI) which has participants more than 85 countries.

USACO bronze level requires introductory level programming, and algorithmic problem solving skills. Silver level student needs strong background in programming and algorithms whereas gold level student needs to be proficient in programming and problem solving especially Dynamic Programming in addition to the former ones. See <http://www.usaco.org/> for further information on USACO.

A+ STRUCTURE

In member schools, A+ CS Programs are run by A+ School CS Coaches in coordination with the A+ School Coordinator and A+ CS Coordinator at Accord Institute.

A+ has two major components: weekly classes and camps.

A+ CS middle school component is a three-year program with two levels and aims to teach CS topics and problem solving techniques used in national middle school level competitions like USACO:

- **Level 1:** Beginners in programming (6th & 7th grades)
- **Level 2:** Beginners in algorithms (8th grade)

In addition to the CS lectures in school, A+ curriculum has different strategy in camps. CS lectures are only for level 1 students in camps. Camp lectures focus on improving critical thinking and reasoning, and problem solving skills. Hence, CS lectures are based on introductory level game theory, in other words, math game strategy analysis. Later in the high school, the lectures will help in understanding CS problems

in Artificial Intelligence, and will let them write their own programs implementing advanced game strategies and playing games.

CHAPTER 2: METHODOLOGY

STUDENT MOTIVATION

A+ Camps: A major component of A+ CS Program is A+ camps that aim to increase student motivation. In addition to fun lectures, the camps contain several fun activities, team games and competitions to show the students the cool side of CS.

Non-routine problems: The problems used in weekly classes are designed to encourage thinking and challenge the students instead of practicing routine methods and calculations.

Make it fun: A+ classes and activities should be remembered by students as fun activities. Give points to students for solving problems. Make problems interesting by including stories in the problems about your students and their hobbies. For variables, use fun notation like apples and pears instead of the traditional boring x , y notation. Organize occasional individual or team competitions. Most students love to compete. It is also a good idea to have food for weekly gatherings.

Promote effort: Promote working hard and effort rather than being smart. Working hard and understanding only parts of it is better than being smart and doing nothing. As the saying goes, a walking turtle covers more distance than a standing rabbit.

Be encouraging, set individual goals: Do not discourage students by their low scores on exams! The exams they will take are not easy ones

and they have three years of preparation to reach their maximum potential. If they got 1 correct answer in 5 problems, ask them to work hard and try increasing that score to a 2 or 3 next time.

TEACHING HOW TO LEARN

Avoid using formulas: Instead, teach them the underlying analytical reasoning and problem solving techniques. Instead of directly providing the proof, use inquiry based learning method (e.g. asking each step of the proof) to make them do the proof.

IMPROVING SOCIAL, TEAM SKILLS

A+ School team t-shirts: This would increase the team spirit among the students.

Team competitions: Include team games and activities in A+ camps. They will learn useful skills on splitting the task and working efficiently as a team, helping others, and asking help from others.

Social games: Have them play games which force them to talk to each other. Detective, thieves, and Robin Hood is a great example. It is a role playing game where they play a character and they have to talk and convince others to stay in the game. More information about the rules can be found in the Appendix.

Sports: Have outdoor activities in A+ camps. Team games like soccer, dodgeball, capture the flag are great examples.

PARENT INVOLVEMENT

Parent Presentation: Make a parent presentation for selected students to inform the parents about the program and to invite them to participate.

Home visits: Plan home visits to meet with the parents earlier in the year.

E-mail group: Make an e-mail group to share news.

Call them: Make occasional phone calls to talk about how the student is doing. Remind them about upcoming A+ camps and ACCompete. Share good news about success of the student and the program with them.

Show your dedication: Let them see that you are putting a lot of effort for their kids.

Ask for support: Do not be shy. Ask for support whenever needed. You are working for the future of their kids and they will love to help you! There are several ways for parent support: They could take turns to bring food to weekly gatherings or school camps. They could help you with transportation for the A+ camps. They could make donations or ask their companies to make donations.

PUBLICITY

School Walls: Advertise the program in the school by hanging news and pictures from the A+ camps.

Annual Presentations: Make annual presentations to school, parents, and local sponsors about the program in school and successes that year.

School Newsletter: Write or ask students, parents to write articles in the school newsletter about A+ program, events, and competitions.

A+ bake sale: Organize an A+ bake sale. Ask A+ parents to bake and bring cookies etc. to sell to all the students in the school. You may use the sales money for A+ students, to buy them books or organize A+ camps.

CHAPTER 3: IMPLEMENTATION

SUMMARY

A+ implementation consists of two main components: weekly classes and camps. At the beginning of every year incoming students take a placement exam to participate in A+. After the selection, the classes begin.

A+ CS program requires at least 2 hours of weekly classes which follows a three-year A+ CS curriculum each year consisting of 30 weeks. Classes are devoted to teaching the students problem solving techniques and equipping them with tools to solve challenging CS problems. Weekly homework assignments and quizzes are given to students and the homework grades based on effort and accuracy are recorded on the A+ Online Course Management System (CMS)¹ by the school CS coach.

A+ has 4 school camps, 2 regional and 2 national camps throughout the year. The school camps are organized by school as either sleepovers or full day camps, the regional camps are organized by several

¹ A+ CMS website: <http://accordeducation.org/A+/cms/>.

participating schools in a region as a weekend camp, and national camps are one-week long organized by Accord Institute.

As assessment, Accord Institute uses competitions and practice competitions such as ACCompete, Scratch Project Competition and USACO training gate. Students also take evaluation exam at the beginning and in the end of the year to measure the growth-level.

A+ ONLINE COURSE MANAGEMENT SYSTEM

A+ CMS has the following features to help organizing A+ CS class at the school:

- Following up A+ reminders and events
- Student reporting, monitoring student progress, student status among all A+ students
- Easy follow-up of A+ tasks via A+ school checklist
- Course material available for download
- Online grading and attendance

For details, refer to the CMS session at Accord Institute A+' training.

STUDENT SELECTION PROCESS

A+ is an advanced program which requires certain level of CS skills and talent. So, only selected students may participate in the program. The goal is to have 10% to 20% of the incoming students participating in A+.

A+ School Coordinators are primarily responsible for the A+ student selection process in their schools. The selection is done in the first three weeks of the school year. The steps of A+ student selection process is as follows:

1. In the first week, A+ Placement Test downloaded from A+ CMS is given to all the incoming students and any other student who wants to join the program. A+ Coaches grade the placements test using automated grader downloaded from CMS. The placement test booklets are **destroyed** and all the student answer sheets are mailed to Accord Institute.
2. In the first two weeks, A+ Coaches gather information about the level of the students by observing their performance in the classes and talking to their teachers and parents. After this period, A+ School Team selects the team.
3. After the selection, A+ School Coordinator contacts the parents of the selected students and invites them to the A+ Parent Presentation (downloaded from CMS) scheduled for the second weekend or the third week of school year.
4. After the presentation, parents make a contract with A+ school team. This contract indicates the responsibilities and commitment of the parent, the student, the school and Accord Institute. Those who agree to participate in the program signs and returns the 'A+ Terms and Conditions' document (downloaded from CMS) to the A+ School Coordinator.
5. After the selection is over, the students are enrolled in A+ program by submitting their information to CMS.
6. Finally, the A+ Math and CS Coaches start the weekly classes.

CURRICULUM

A+ CS curricula are prepared after careful investigation of the USACO contests and learning abilities of middle school students in programming. In the 6th grade, students start learning programming

with Scratch programming language developed by MIT Research Lab for youngsters. It's been shown that Scratch simplifies to learn basic programming concepts such as variables, input/output, conditions, and loops, and makes programming fun for kids. In the next step, conceptual understanding of programming provided by Scratch helps to switch a more advanced programming language, C++ which is the most efficient language accepted by USACO. In short, Scratch programming language is used to teach programming in C++ in the entire 6th grade. In the 7th grade, students improve their programming skills in scratch and C++ with projects in addition to the lectures in introductory level discrete mathematics (Graph Theory, Combinatorics, and Number Systems). 8th grade curriculum consists of lecture notes designed for self study to learn introductory level algorithms necessary and supplementary for USACO training gate. All level 2 students are obliged to register USACO training gate at <http://ace.delos.com/usacogate>. High school curriculum is also self study based in USACO system and consists of algorithms for USACO levels. Student level is not determined by his/her class but his/her level in USACO competition.

SYLLABUS

Syllabuses can be dwonloaded from CMS:

- **Level 1 – Part 1** (6th grade): Curriculum under CS Level 1.1 Course
- **Level 1 – Part 2** (7th grade): Curriculum under CS Level 1.2 Course
- **Level 2** (8th grade): Curriculum under CS Level 2 Course

LESSON PLANS

A+ CS lesson plans are based on 30 weeks in a school year in the school. Each week, 2 hours are required. Lesson plans in level 1 have weekly

written assignments, quizzes, and programming assignments. They can be downloaded from CMS:

- **Level 1 – Part 1:** Annual plan under CS Level 1.1 Course
- **Level 1 – Part 2:** Annual plan under CS Level 1.2 Course
- **Level 2:** Annual plan under CS Level 2 Course

Assuming each class is 45 minutes, teachers are recommended to have:

- 5 minutes for solving last homework, brief review of the last class
- 30 minutes for lecture
- 5 minutes for quiz
- 5 minutes for motivation, team work and review.

LECTURE NOTES

Lecture notes are prepared for middle school only; books will be used in the high school. See Resource Library section for details. All lecture notes are based on inquiry based learning; they don't provide the proof or answer directly but make students find the answers by asking questions. Answering each question, student gets closer to the answer. Level 1 lecture notes are designed for teachers and students separately, and they include lecture slides. Teacher's lecture notes provide guideline to the teacher in the class including the approximate time required for the topic, analogies for concepts, in-class activity hints, and solutions to the exercises. All the programming codes are tested and also provided as separate files in the lecture note package. They can be downloaded from CMS.

CLASSES AND HOMEWORK ASSIGNMENTS

Every week, one problem set (available on CMS) each containing 3 to 8 problems, and programming problems (including optional ones) will be given to students as homework for the following week. Homework sets are graded based on effort and accuracy. The effort-grading is to measure if the students are working on the problems. Students indicate which problems they made an effort on. Making an effort on a problem means working on it for at least 5 minutes or until the student thinks that the problem is solved regardless of the answer being correct or not. The accuracy-grading is the standard grading which considers if the answer is correct or not. Each week, students will be given the quiz of the week provided in A+ CS package. All grades must be weekly updated on CMS by the A+ CS Coach.

CAMPS

Students also participate in monthly A+ activities such as school, regional, and national camps. For sample sleepover, regional and national camp schedules, please see the Appendix.

A+ Program asks schools to organize 4 school camps in a year to which all the A+ students in the school are invited. School camps could be organized as sleepover or as full day camps.

Schools in the same region are encouraged to organize one regional camp every semester. These regional camps are invitational only and A+ school coaches and coordinator make the selection based on performance and attitude of students. They are weekend camps usually from Friday evening to Sunday noon.

Accord Institute organizes national winter and summer camps every year. The space is very limited in these camps. Accord Institute A+ Team makes the selection of invited students after consulting with school coaches and sends invitation letters to the parents. The national camps are 5 to 7 days. At the first class of these camps, the students take an exam and according to the results, they are divided into groups with different levels. Each day, there is a one-hour CS lecture in the afternoon taught by Accord and A+ school coaches. In the end of the camp, students will be awarded in different categories like academic performance, most responsible, most helpful, and tidiest.

School and regional camps have 1 hour of CS lectures whereas winter and summer camps have 3 and 5 hours for level 1 students. Camp CS lectures for level 1 (two-year package) alternates each year. In both school and regional camps, students learn to do analysis on strategy games in CS lessons. Necessary documents and problems will be provided by Accord Institute.

ASSESSMENT

To determine how the students are improving and how well the program is running, A+ uses the results of exams such as Accompete, quizzes and homework assignments.

CHAPTER 4: PROGRAM REQUIREMENTS

Qualified Teachers: Teachers are required to complete A+ training and be certified by Accord Institute to teach an A+ class. There are two training programs organized by Accord Institute every year.

A+ Library: A+ has a library of required and suggested resources. These are carefully selected by the A+ team and are required to implement the program effectively. For the list of A+ CS library resources, please see the Appendix.

A+ Class: A+ requires weekly classes of at least 3-hours of math and 2-hours of computer science. The students should be given credit by the school for taking these classes.

A+ Camps: A+ requires each school to organize four school camps throughout the year. Schools are also encouraged to organize or participate in regional camps.

CHAPTER 5: APPENDIX

RESOURCE LIBRARY

Programming languages Scratch and C++ can be downloaded freely from:

- http://info.scratch.mit.edu/Scratch_1.4_Download
- <http://www.codeblocks.org/downloads/26>

In the middle school, along with the lecture notes assignments and quizzes are provided by Accord Institute for level 1. Level 1 consists of

weekly written assignments, quizzes, and programming assignments. Solutions are also provided including the source codes. Written assignments consist of 2 to 6 from the lecture of the week. Each week there is an additional question which is a type of brain teasers, puzzles, or tricky questions in order to stimulate student thinking. Similarly, quizzes consist of 2 to 4 questions related to the last lecture. Continuous practice is required to learn programming hence students are given up to 4 weekly programming assignments. The first one is required, and the remaining ones are given as long as student progresses. The weekly packages, lecture notes and materials can be downloaded from CMS.

Additional resource on Scratch:

- Scratch Programming for Teens, J. L. Ford, Course Technology PTR, 2008.
- Scratch challenging projects:
<http://www.uwp.edu/sws/usaco/Scratch/index.htm>
- Scratch programming projects:
<http://nebomusic.net/scratch.html>
- Scratch resources for teachers:
<http://wiki.classroom20.com/Scratch>

In level 2, the main resource is USACO training gate
<http://ace.delos.com/usacogate>.

COMPETITIONS OVERVIEW

US COMPUTING OLYMPIAD

There are not many computer science competitions in US. USACO is the most significant one but its level is for high school level although middle school participants are accepted. Homepage is <http://www.usaco.org>. Participation is free. You can find all necessary links about contests, registration, and schedule. USACO is briefly explained above in USACO System section. USACO has seven monthly contests from October to April in each three different levels (bronze, silver, gold). October contest is optional and for determining the level of the student. April contest is the most important one in terms of contest score weighting, and the remaining one have equal weight.

Registering for USACO online training gate is strongly recommended for the students that will participate in USACO. Training gate is located at <http://train.usaco.org>. New users can also register there. The contests are available for 3 or 4 days at the given dates in the website. One can only participate in that interval. Once the participant started the contest, he/she will have 3 or 4 question to solve in 3 to 5 hours – it will be provided before the competitions.

ACCOMPETE

Accord Institute implemented its own CS competitions; ACCompete² and Scratch project competition³. ACCompete is Accord Institute's computer science competition for middle schools. It is an online

² ACCompete website: <http://accompete.accordeducation.org>

³ TIE & Scratch Contest website: <http://tiescratch.accordeducation.org/>

competition open to currently middle school student of Accord member schools. But it will be for any middle school students in the upcoming years. It has 4 contests throughout the year; starts in December, and has typically following contests in February, March and April. The contents of the contests are in Scratch and C++ programming, and aligned with A+ CS curriculum. Top-3 student according the cumulative score of the 4 contests and their teachers will be awarded.

SCRATCH PROJECT COMPETITION

Scratch programming language is very appropriate for developing creative projects, and it has no limits. Scratch project competition is for middle school students of Accord affiliated schools. It is similar to TIE contest; the only difference is that students will use scratch programming language for their project. In the competition, there will be stories determined by the organizers, and students will try to implement the story visually in Scratch. Top-3 students chosen by the referees and their teachers will be awarded. Registration is online.

APPENDIX B₄

CURRICULUM AND COURSE DESCRIPTIONS

1. Curriculum
2. Middle School Curriculum and Course Descriptions
3. High School Curriculum and Course Descriptions

CURRICULUM AND COURSE DESCRIPTIONS

CURRICULUM

The school leadership and faculty of BayTech ensure that all students are provided with a rigorous, relevant, coherent, standards-based college-preparatory STEM curriculum that supports the vision and mission, the academic standards, and goals of the school. While the curriculum concentrates on a hands-on approach to STEM areas, the school also provides a solid education in humanities and social sciences to educate the whole child.

BayTech will adopt and transition to the Common Core State Standards (CCSS) which were developed through a state-led initiative to establish consistent and clear education standards for English-language arts and mathematics that would better prepare students for success in college, career, and the competitive global economy. BayTech collaborates with Accord in reviewing and revising all curricula to ensure it is aligned to the common core standards and ready for implementation when common core standardized testing is in place.

BayTech curriculum immerses students in the scientific method and encourages them to use computers and the Internet to plan and organize projects, hypothesize, analyze data, and draw conclusions from tests they create. In the process, students become self-reliant, independent problem-solvers. In keeping with the STEM emphasis at BayTech, advanced courses are available in these subjects. Please see Section 1.4.2, titled "STEM Focus for Creativity and Innovation," for further details.

Language Arts curriculum is literature-based with fluency practice in reading and writing. Conventions of writing are emphasized in daily written homework and lab assignments. Students taking advanced foreign language will also be encouraged to study works written in that language, e.g., Spanish. The curriculum incorporates a period of sustained silent reading as part of the daily curriculum. Accelerated Reader © by Renaissance Learning is utilized to personalize reading practice to each student's current level, maximizing its effectiveness.

Social science courses use inquiry-based and topics involve real-world problems, with a focus on local current events, history and culture. In accordance with the National Council for the Social Studies¹, social studies courses aim to prepare students to identify, understand, and work to solve the challenges facing our diverse nation in an increasingly interdependent world. Education for citizenship should help students acquire and learn to use the skills, knowledge, and attitudes that will prepare them to be competent and responsible citizens throughout their lives. Competent and responsible citizens are informed and thoughtful, participate in their communities, are involved politically, and exhibit moral and civic virtues.

As part of its art curriculum, BayTech will offer courses and clubs in art, music and technology. Study of the arts will be enhanced by their integration into other subjects, such as: The Physics of Sound and Music, The Art of Fractals and Snowflakes, Design Elements in Art (analysis of Marc Chagall's work in Technology courses), Design on the Frontier (simulated quilt construction in the eighth grade American History course), Japanese Papermaking and Kite Design (World History and Cultures), and streamline and deco design, as used in automobile styling, and film robots described in science fiction literature (as part of the technology and robotics lab). Students will not be "cultural tourists," but instead will be immersed in culture and diversity through daily discussion, projects and guest speaker presentation.

¹ Source: <http://www.ncss.or/positions/powerful>

Writing serves as an important vehicle for learning, and BayTech students are given writing assignments frequently to reinforce learning and enhancing understanding. We believe that every student must be able to express themselves clearly through writing in every subject. As the common core writing standards² phrase it, "For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt."

BayTech teachers develop curriculum maps at the beginning of each school year, clearly defining the course objectives with an alignment to California content standards and the academic needs of our students based on CST and MAP test results. They develop weekly lesson plans that include clearly outline objectives, use of academic language, use of various instructional strategies, and assessments that check for understanding. The lesson plans are submitted to the School Administration for review and feedback prior to implementation.

BayTech teachers regularly meet in departments and grade levels where they share best practices, receive feedback and collaborate on horizontal and vertical alignment of the BayTech curriculum across grades and subjects. Curriculum revision and refinement processes are continuous and collaborative based on student performance assessment and data. These processes continue in the summer and at the beginning of the school year as part of comprehensive in-service programs.

To implement the BayTech curriculum most effectively, teachers design instruction for diverse learners that engages them in active learning in meaningful, real-world activities by utilizing effective instructional approaches such as differentiation, scaffolding, brain-based learning, authentic multi-level teaching and learning, workshop teaching and multiple intelligences. BayTech teachers use a wide variety of effective instructional strategies³ to shape instruction. Some of those strategies can be listed as (1) Identifying similarities and differences; (2) Summarizing and note taking; (3) Reinforcing effort and providing recognition; (4) Homework and practice; (5) Nonlinguistic representations; (6) Cooperative learning; (7) Setting objectives and providing feedback; (8) Generating and testing hypotheses (9) Cues questions, and advance organizers.

The following instructional guide offers a representative sample of course descriptions and content that will inform the curriculum at BayTech.

² Source: http://www.corestandards.org/assets/CCSSI_ELA%20Standards.pdf

³ Marzano, Robert J., Deborah Pickering, and Jane E. Pollock. Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement Alexandria, Va.: ASCD, 2001.

MIDDLE SCHOOL CURRICULUM AND COURSE DESCRIPTIONS

In grades 6 through 8, students are required to take core courses in Mathematics, Science, English-Language Arts and History-Social Science. In addition, the following courses are also part of the comprehensive education program and may be offered depending on student needs/demands and availability of teachers and resources: Languages Other than English, Visual and Performing Arts, Physical Education/Health, Computers and Technology, Math/ELA Enrichment, Get Ready For Life (GRFL), Sustained Silent Reading (SSR), and other elective courses that students can choose from.

Core Courses

GRADE 6

Math 6

(Annual Course-Grade 6)

Prerequisites: None

Text: Holt California Mathematics, Course 1

Course Description

In this course students master the four arithmetic operations with whole numbers, positive fractions, positive decimals, and positive and negative integers, and apply their knowledge to statistics and probability. Students conceptually understand and work with ratios, proportions and percentages. They use formulas to compute the areas of geometric shapes and solve one-step linear equations. Students provide oral and written explanations of math concepts, and apply mathematics to everyday life. They become aware of a wide array of mathematics-related careers.

Expected Pupil Outcomes

- A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the Curriculum Content Standards for California
- Ability to solve text-based as well as real-world problems using a variety of mathematics tools and procedures
- Implement a variety of problem-solving strategies
- Develop fluency in basic computational/procedural skills
- Communicate precisely about quantities and logical relationships
- Make connections among mathematical ideas and between mathematics and other disciplines
- Be aware of the range of careers available in mathematics

Content

Compare and order positive and negative fractions, decimals, and mixed numbers. Solve problems involving fractions, ratios, proportions, and percentages:

- A. Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.
- B. Interpret and use ratios in different contexts (e.g., batting averages, miles per hour) to show the relative sizes of two quantities, using appropriate notations (a/b , a to b , $a:b$).
- C. Use proportions to solve problems (e.g., determine the value of N if $4/7 = N/21$, find the length of a side of a polygon similar to a known polygon). Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.
- D. Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.

Calculate and solve problems involving addition, subtraction, multiplication, and division:

- A. Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.

- B. Explain the meaning of multiplication and division of positive fractions and perform the calculations (e.g., $5/8 \div 15/16 = 5/8 \times 16/15 = 2/3$).
- C. Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations that use positive and negative integers and combinations of these operations.
- D. Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction).

Write verbal expressions and sentences as algebraic expressions and equations; they evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results:

- A. Write and solve one-step linear equations in one variable.
- B. Write and evaluate an algebraic expression for a given situation, using up to three variables.
- C. Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.
- D. Solve problems manually by using the correct order of operations or by using a scientific calculator.

Analyze and use tables, graphs, and rules to solve problems involving rates and proportions:

- A. Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches).
- B. Demonstrate an understanding that *rate* is a measure of one quantity per unit value of another quantity.
- C. Solve problems involving rates, average speed, distance, and time.

Investigate geometric patterns and describe them algebraically:

- A. Use variables in expressions describing geometric quantities (e.g., $P = 2w + 2l$, $A = 1/2bh$, $C = \pi d$ - the formulas for the perimeter of a rectangle, the area of a triangle, and the circumference of a circle, respectively).
- B. Express in symbolic form simple relationships arising from geometry.

Measure plane and solid shapes and use this understanding to solve problems:

- A. Understand the concept of a constant such as π ; know the formulas for the circumference and area of a circle.
- B. Know common estimates of π (3.14; 22/7) and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements.
- C. Know and use the formulas for the volume of triangular prisms and cylinders (area of base \times height); compare these formulas and explain the similarity between them and the formula for the volume of a rectangular solid.

Identify and describe the properties of two-dimensional figures:

- A. Identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms.
- B. Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle.
- C. Draw quadrilaterals and triangles from given information about them (e.g., a quadrilateral having equal sides but no right angles, a right isosceles triangle).

Compute and analyze statistical measurements for data sets:

- A. Compute the range, mean, median, and mode of data sets.
- B. Understand how additional data added to data sets may affect these computations of measures of central tendency.
- C. Understand how the inclusion or exclusion of outliers affects measures of central tendency.
- D. Know why a specific measure of central tendency (mean, median, mode) provides the most useful information in a given context.

Use data samples of a population and describe the characteristics and limitations of the samples:

- A. Compare different samples of a population with the data from the entire population and identify a situation in which it makes sense to use a sample.

- B. Identify different ways of selecting a sample (e.g., convenience sampling, responses to a survey, random sampling) and which method makes a sample more representative for a population.
- C. Analyze data displays and explain why the way in which the question was asked might have influenced the results obtained and why the way in which the results were displayed might have influenced the conclusions reached.
- D. Identify data that represent sampling errors and explain why the sample (and the display) might be biased.
- E. Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.

Determine theoretical and experimental probabilities and use these to make predictions about events:

- A. Represent all possible outcomes for compound events in an organized way (e.g., tables, grids, tree diagrams) and express the theoretical probability of each outcome.
- B. Use data to estimate the probability of future events (e.g., batting averages or number of accidents per mile driven).
- C. Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, $1-P$ is the probability of an event not occurring.
- D. Understand that the probability of either of two disjoint events occurring is the sum of the two individual probabilities and that the probability of one event following another, in independent trials, is the product of the two probabilities.
- E. Understand the difference between independent and dependent events.

Make decisions about how to approach problems:

- A. Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.
- B. Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.
- C. Determine when and how to break a problem into simpler parts.

Use strategies, skills, and concepts in finding solutions:

- A. Use estimation to verify the reasonableness of calculated results.
- B. Apply strategies and results from simpler problems to more complex problems.
- C. Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.
- D. Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
- E. Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.
- F. Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.
- G. Make precise calculations and check the validity of the results from the context of the problem.

Move beyond a particular problem by generalizing to other situations:

- A. Evaluate the reasonableness of the solution in the context of the original situation.
- B. Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.
- C. Develop generalizations of the results obtained and the strategies used and apply them in new problem situations.

Science 6

(Annual Course-Grade 6)

Prerequisites: None

Text: Focus on Earth Science California, Grade 6, Glencoe

Course Description

The sixth grade science course provides students with an understanding of basic science concepts and skills in scientific inquiry, with an emphasis on earth science. Course topics include plate tectonics, the distribution of fossils, Earth's structure, how weathering affects topography, thermal energy and the transfer of energy. The course also covers ecology and energy and material resources. Students will develop skills in scientific investigation by making hypotheses, selecting tools for investigations, collecting, analyzing and interpreting data, and communicating their results in the form of written reports and oral presentations.

Expected Pupil Outcomes

- A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the California Content Standards
- Work individually and on a team, using scientific inquiry and skills and the scientific method to ask and answer questions about the physical world
- Use critical thinking skills to analyze scientific problems and reach conclusions
- Effectively communicate results verbally and in writing
- Be aware of the range of careers available in science

Content

Plate Tectonics and Earth's Structure

- A. Evidence of plate tectonics is derived from the fit of the continents; the location of earthquakes, volcanoes, and mid-ocean ridges; and the distribution of fossils, rock types, and ancient climatic zones.
- B. Earth is composed of several layers: a cold, brittle lithosphere; a hot, convecting mantle; and a dense, metallic core.
- C. Lithospheric plates the size of continents and oceans move at rates of centimeters per year in response to movements in the mantle.
- D. Earthquakes are sudden motions along breaks in the crust called faults and that volcanoes and fissures are locations where magma reaches the surface.
- E. Major geologic events, such as earthquakes, volcanic eruptions, and mountain building, result from plate motions.
- F. Major features of California geology (including mountains, faults, volcanoes) are a result of plate tectonics.
- G. The epicenter of an earthquake and the effects of an earthquake on any region vary, depending on the size of the earthquake, the distance of the region from the epicenter, the local geology, and the type of construction in the region.

Shaping Earth's Surface

- A. Water running downhill is the dominant process in shaping the landscape, including California's landscape.
- B. Rivers and streams are dynamic systems that erode, transport sediment, change course, and flood their banks in natural and recurring patterns.
- C. Beaches are dynamic systems in which the sand is supplied by rivers and moved along the coast by the action of waves.
- D. Earthquakes, volcanic eruptions, landslides, and floods change human and wildlife habitats.

Heat (Thermal Energy) (Physical Science)

- A. Energy can be carried from one place to another by heat flow or by waves, including water, light and sound waves, or by moving objects.
- B. When fuel is consumed, most of the energy released becomes heat energy.
- C. Heat flows in solids by conduction (which involves no flow of matter) and in fluids by conduction and by convection (which involves flow of matter).

- D. Heat energy is also transferred between objects by radiation (radiation can travel through space).

Energy in the Earth System

- A. The sun is the major source of energy for phenomena on Earth's surface; it powers winds, ocean currents, and the water cycle.
- B. Solar energy reaches Earth through radiation, mostly in the form of visible light.
- C. Heat from Earth's interior reaches the surface primarily through convection.
- D. Convection currents distribute heat in the atmosphere and oceans.
- E. Differences in pressure, heat, air movement, and humidity result in changes of weather.

Ecology (Life Science)

- A. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis and then from organism to organism through food webs.
- B. Matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.
- C. Populations of organisms can be categorized by the functions they serve in an ecosystem.
- D. Different kinds of organisms may play similar ecological roles in similar biomes.
- E. The number and types of organisms an ecosystem can support depends on the resources available and on abiotic factors, such as quantities of light and water, a range of temperatures, and soil composition.

Resources

- A. The utility of energy sources is determined by factors that are involved in converting these sources to useful forms and the consequences of the conversion process.
- B. Different natural energy and material resources, including air, soil, rocks, minerals, petroleum, fresh water, wildlife, and forests, and know how to classify them as renewable or nonrenewable.
- C. The natural origin of the materials used to make common objects.

Investigation and Experimentation

- A. Scientific progress is made by asking meaningful questions and conducting careful investigations. Perform scientific investigations by following these steps:
 - Develop a hypothesis.
 - Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.
 - Construct appropriate graphs from data and develop qualitative statements about the relationships between variables.
 - Communicate the steps and results from an investigation in written reports and oral presentations.
 - Recognize whether evidence is consistent with a proposed explanation.
- B. Read a topographic map and a geologic map for evidence provided on the maps and construct and interpret a simple scale map.
- C. Interpret events by sequence and time from natural phenomena (e.g., the relative ages of rocks and intrusions).
- D. Identify changes in natural phenomena over time without manipulating the phenomena (e.g., a tree limb, a grove of trees, a stream, a hillslope).

English-Language Arts 6

(Annual Course-Grade 6)

Prerequisite: None

Text: Holt Literature & Language Arts Grd 6, Introductory Course

Classroom Library: College level dictionary, Spanish/English and English/Spanish dictionary, Thesaurus, The Oxford Picture Dictionary, The Little Oxford Thesaurus

Course Description

This course focuses on reading comprehension, vocabulary development and writing. Students improve their abilities to critically analyze texts, write clear, comprehensible essays, as well as narrative and expository texts. Students also learn how to deliver focused, coherent presentations, and well-organized and persuasive speeches.

Expected Pupil Outcomes

- Grade-level and critical reading skills
- Knowledge of a coherent body of literature from the traditional canon
- Effective and accurate writing skills
- Effective verbal communication skills
- Critical-thinking skills

Curriculum

Reading: Students will read works focusing on:

- Reading aloud narrative, informational and expository materials
- Understanding argumentation and development of persuasive reasoning
- Grade-appropriate historically and culturally significant literary works selected from the *Recommended Literature, Kindergarten Through Grade Twelve*
- Self-directed reading
- Developing a love of reading for relaxing and enjoyment
- Specialized vocabulary (with emphasis on Engineering, Technology, Science and Biography)
- Expanding reading capacity to one million words for the school year

Samples of student work will reflect high standards for:

- Identification and interpretation of figurative language with multiple meanings
- Recognition of origin and meanings of frequently used foreign words in literature and readings
- Use of clues to monitor expository text
- Understanding and explanation of "shades of meaning" of words
- Recognition of paragraph clues
- Projects and assignments reflecting classic and contemporary literature
- Research assignments illustrating use of magazines, newspapers and online information
- Understanding thesis and point of view, as related to literature presenting studies and experiments
- Identification, critique and understanding of characteristics of the forms of fiction
- Multiple-paragraph assignments focusing on understanding character, plot, setting, tone, speaker, language usage, theme and literary devices

Writing and Writing Applications: Students will complete assignments that require:

- Writing grade-appropriate clear, coherent and focused essays of at least 500-700-words that illustrate an understanding of the stages of the writing process
- Use of Standard English
- Creation of essays, reviews and correspondence
- Illustrate an awareness of audience and purpose
- Writing and recognition of a well-written, multiple-paragraph expository compositions
- Creation of written pieces using a variety of written organizational patterns
- Research utilizing a wide variety of electronic text features
- Proper formatting for research (APA and Chicago Style Manuals)
- Revision of written work using portfolio rubrics for various writing genres

Sixth grade writing will include quality, grade appropriate writing samples of:

- Narratives
- Expository
- Research reports and papers
- Responses to literature
- Persuasive compositions
- Electronic text research
- Appropriate formatting
- Revisions of work
- Use of Standard English
- Appropriate use of audience and purpose
- Multi-paragraph pieces
- Proper use of sentence structure, grammar, punctuation, capitalization, spelling

Listening and Speaking: Students will research, write and deliver presentations that illustrate:

- An understanding of appropriate verbal communication
- Appropriate mood, tone and emotion for the subject
- Understanding of multiple-step oral instructions and directions
- Have a focus, point of view, organizational structure, and appropriate vocal modulation
- Emphasis on the main points
- Appropriate pitch, rate and volume for the audience and occasion

Grade 6 Literature Selections:

L'Engle, Madeleine, *A Wrinkle in Time*
 Sacher, Louis, *Holes*
 Steinbeck, John, *The Red Pony*
 Bridges, Ruby, *Through My Eyes*
 Oates, Joyce Carol, *Big Mouth and Ugly Girl*
 O'Dell, S, *Island of the Blue Dolphins*
 Rawlings, A, *The Yearling*
 Silverstein, Shel, *Where the Sidewalk Ends*
 Lewis, C.S., *The Chronicles of Narnia*
 Armstrong, William H., *Souder*
 Young, Ed, *Lon Po Po: The Red Riding Hood Story from China* and *Red Riding Hood*
 James, *We Have Always Lived in the Castle*
 DiCamillo, Kate, *Because of Winn Dixie*
 Blume, Judy, *Tiger Eyes*
 Rawls, Wilson, *Where the Red Fern Grows*

Taylor, Theodore, *The Cay*
 Dahl, Roald, *Charlie and the Chocolate Factory*
 Lewis, C.S., *The Lion, the Witch and the Wardrobe*
 White, E.B. *Charlotte's Web*
 Hunt, Irene, *Across Five Aprils*
 Uchida, Yoshiko, *A Jar of Dreams*
 Paulsen, Gary, *My Life in Dog Years*
 Cushman, Karen, *Catherine Called Birdy*
 Winter, Jeanette, *Follow the Drinking Gourd*
 Doucet, Sharon Arms, *Why Lapin's Ears Are Long* and other tales of the Louisiana Bayou
 Coburn, Jewell Reinhart, *Angkat* and *Cinderella*

History-Social Science 6

(Annual Course—Grade 6)

Prerequisite: None

Text: Holt CA, World History: Ancient Civilizations

Course Description

History-Social Science 6 focuses on the people and events that ushered in the dawn of the major Western and non-Western civilizations. The course emphasizes geography as it relates to and informs human history. It also focuses on the everyday lives, problems, and accomplishments of people, their roles in developing social, economic, and political structures, and in establishing and spreading ideas that transformed the world. Students develop higher-level critical thinking skills by examining the various factors, such as climate, native vegetation, and animals that influenced the rise of civilization in some areas of the world but not in others.

Expected Pupil Outcomes

- Ability to analyze, explain and evaluate world history
- Ability to link events in one historical period to another
- Effective writing and verbal communication skills
- Critical-thinking skills
- Critical-reading skills
- Understanding of cause and effect
- Understanding the importance of belief systems

Curriculum:

Units:

Quarter One	Quarter Two	Quarter Three	Quarter Four
Archaeological Development Mapping Concepts	Early Civilization of Mesopotamia, Egypt, and Kush Ancient Hebrews Ancient Greece	Early Civilizations of India Early Civilization of China	Rome Links to Current Events

Humankind from the Paleolithic era to the agricultural revolution. This unit will study:

- Hunter-gatherer societies and the tools that they used
- Growth of human communities and their adaptation
- Influence of climate changes
- Human modifications of the physical environment
- Research the use of scientific tools to estimate age of archeological finds

The geographic, political, economic, religious and social structures of the early civilizations of Mesopotamia, Egypt and Kush including:

- Mapping of the river systems and physical settings
- Development of agricultural techniques in this region
- Study of the relationships between religion and social
- Political order in Mesopotamia and Egypt
- Establishment of a student court will examine the Code of Hammurabi
- Integration of art and architecture in Egypt will be studied as part of a field trip to the Getty Museums
- Role of Egyptian trade in the eastern Mediterranean and Nile valley Queen Hatshepsut and Ramses the Great will compliment the English and Language Arts study of biography at this grade level
- Students will be able to locate the Kush civilization
- Understanding the political, commercial, and cultural relations with Egypt

Unit study of the evolution of language including:

- The written form will use themes and require students to complete the elements of a research paper, including use of digital research note cards and use of an outline.
- Students will use computers to develop a timeline for the evolution of language, as reported during student projects.

Analysis of the geographic, political, economic, religious, and social structures of the Ancient Hebrews will form the basis of the fourth unit.

Students will identify:

- The origins, teachings and significance of Judaism
- Details of how Judaism survived and developed after the destruction of the second Temple
- Abraham, Moses, Naomi, Ruth, David and Yohanan ben Zaccai will be the subjects of biographical study
- The geographic movement and settlements of Hebrew peoples will be taught through a geographic unit using Internet research and mapping programs

Early Greek civilizations will be studied through the geography, politics, economics, religion, and social structures.

Students will know the:

- Geographic links between the city-states
- Early forms of governments and differences between direct and democracy
- Representative democracy will be developed into an activity that compares and contrasts Democracy in the United States
- The mythology unit will ask students to do research from secondary sources on Greek gods
- Study of the Persian Empire will focus on current events and ask students to highlight the founding, expansion and political organizations in that region
- Activities will ask students to compare and contrast life in Athens and Sparta
- Alexander the Great will be studied as a biographical subject
- Panel discussions will ask students to present oral reports on Greek figures in the arts and a separate group of panel presentations on Greek figures in the sciences
- Student produced timeline of the contributions of Greek scientists will be displayed in each classroom

Early Indian civilizations, with analysis of the geographic, political, economic, religious and social structures, will be examined in a separate unit of study that features current events in this region.

- Students will understand the geography in the region and be able to discuss the significance of the Aryan invasions
- Brahmanism and early Hinduism and Buddhism will be discussed and local guest speakers will share customs and traditions of these two religions
- Buddha and Asoka will be the biographical subjects for this unit
- The significance of aesthetic and intellectual traditions will focus on the mathematical and medical contributions of this region in activities and lessons

Early Chinese civilizations will be the subject of unit analysis by examination of the geographic, political, economic, religious, and social structures. Students will:

- Study of the origins of the Chinese civilization will emphasize mapping of the regions
- The Shang, Qin and Han dynasties will be compared and contrasted in panel discussions
- Trade on the "Silk Road" will be the subject of a geographical-based activity
- The political policies and achievements of key Chinese figures will be examined
- Biographical study of Confucius and Shi Huangdi will be part of this unit of study

After studying the materials and participating in the activities in the unit on the Roman Empire, students will be able to:

- Track the expansion of the empire over time and identify important figures
- Depending on the size of the class, oral reports (or written reports for larger classes) will be presented for the major mythical and historical figures identified with the empire
- Activities will require students to compare and contrast the government of Rome with the earlier governments of the Greek and Hebrews. Students will use a computerized spreadsheet to make the comparison.
- Jesus of Nazareth, Julius Caesar and Augustus will be the subject of biographical studies
- Guest speakers will discuss the growth of Christianity in the world Roman art and architecture will be viewed as part of a field trip activity to the Getty Museums.
- Technology and science will be featured lessons in this unit and links between this unit and scientific study will be required as part of the study
- Students will use online resources to explore Greek architecture

GRADE 7

Math 7

(Annual Course-Grade 7)

Prerequisites: Math 6

Text: Holt California Mathematics, Course 2

Course Description

Pre-Algebra prepares the students for the first course in Algebra. This course covers an introduction to measurement, geometry, basic algebra, and statistics. The focus will be on logical thought and presenting problems that allow students to reason symbolically.

Expected Pupil Outcomes

- A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the Curriculum Content Standards for California
- Ability to solve text-based as well as real-world problems using a variety of mathematics tools and procedures
- Implement a variety of problem-solving strategies
- Develop fluency in basic computational/procedural skills
- Communicate precisely about quantities and logical relationships
- Make connections among mathematical ideas and between mathematics and other disciplines
- Be aware of the range of careers available in mathematics

Curriculum:

Transition to Algebra: Students will understand:

- Use of symbols
- Properties of symbols
- Arithmetic operations
- Experimentation

Basic Skills: Students will understand:

- Simplifying
- Distributive laws
- Commutative laws
- Associative laws
- Graphing
- Verification
- Problem Solving

Content

Properties of and computation with rational numbers expressed in a variety of forms:

- A. Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10) with approximate numbers using scientific notation.
- B. Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers.
- C. Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.
- D. Differentiate between rational and irrational numbers.
- E. Know that every rational number is either a terminating or repeating decimal and be able to convert terminating decimals into reduced fractions.
- F. Calculate the percentage of increases and decreases of a quantity.
- G. Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest.

Using exponents, powers, and roots and using exponents in working with fractions:

- A. Understand negative whole-number exponents. Multiply and divide expressions involving exponents with a common base.
- B. Add and subtract fractions by using factoring to find common denominators.
- C. Multiply, divide, and simplify rational numbers by using exponent rules.
- D. Use the inverse relationship between raising to a power and extracting the root of a perfect square integer; for an integer that is not square, determine without a calculator the two integers between which its square root lies and explain why.
- E. Understand the meaning of the absolute value of a number; interpret the absolute value as the distance of the number from zero on a number line; and determine the absolute value of real numbers.

Expressing quantitative relationships by using algebraic terminology, expressions, equations, inequalities, and graphs:

- A. Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A).
- B. Use the correct order of operations to evaluate algebraic expressions such as $3(2x + 5^2)$
- C. Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used.
- D. Use algebraic terminology (e.g., variable, equation, term, coefficient, inequality, expression, constant) correctly.
- E. Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph.

Interpreting and evaluating expressions involving integer powers and simple roots:

- A. Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication by the multiplicative inverse. Simplify and evaluate expressions that include exponents.
- B. Multiply and divide monomials; extend the process of taking powers and extracting roots to monomials when the latter results in a monomial with an integer exponent.

Graphing and interpreting linear and some nonlinear functions:

- A. Graph functions of the form $y = nx^2$ and $y = nx^3$ and use in solving problems.
- B. Plot the values from the volumes of three-dimensional shapes for various values of the edge lengths (e.g., cubes with varying edge lengths or a triangle prism with a fixed height and an equilateral triangle base of varying lengths).
- C. Graph linear functions, noting that the vertical change (change in y-value) per unit of horizontal change (change in x-value) is always the same and know that the ratio ("rise over run") is called the slope of a graph.
- D. Plot the values of quantities whose ratios are always the same (e.g., cost to the number of an item, feet to inches, circumference to diameter of a circle). Fit a line to the plot and understand that the slope of the line equals the quantities.

Solving simple linear equations and inequalities over the rational numbers:

- A. Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context from which they arose, and verify the reasonableness of the results.
- B. Solve multistep problems involving rate, average speed, distance, and time or a direct variation.

Choosing appropriate units of measure and use ratios to convert within and between measurement systems to solve problems:

- A. Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters).
- B. Construct and read drawings and models made to scale.
- C. Use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems; check the units of the solutions; and use dimensional analysis to check the reasonableness of the answer.

Computing the perimeter, area, and volume of common geometric objects and use the results to find measures of less common objects. Knowing how perimeter, area, and volume are affected by changes of scale:

- A. Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders.
- B. Estimate and compute the area of more complex or irregular two- and three-dimensional figures by breaking the figures down into more basic geometric objects.
- C. Compute the length of the perimeter, the surface area of the faces, and the volume of a three-dimensional object built from rectangular solids. Understand that when the lengths of all dimensions are multiplied by a scale factor, the surface area is multiplied by the square of the scale factor and the volume is multiplied by the cube of the scale factor.
- D. Relate the changes in measurement with a change of scale to the units used (e.g., square inches, cubic feet) and to conversions between units ($1 \text{ square foot} = 144 \text{ square inches}$ or $[1 \text{ ft}^2] = [144 \text{ in}^2]$, 1 cubic inch is approximately $16.38 \text{ cubic centimeters}$ or $[1 \text{ in}^3] = [16.38 \text{ cm}^3]$).

The Pythagorean theorem and understanding of plane and solid geometric shapes by constructing figures that meet given conditions and by identifying attributes of figures:

- A. Identify and construct basic elements of geometric figures (e.g., altitudes, midpoints, diagonals, angle bisectors, and perpendicular bisectors; central angles, radii, diameters, and chords of circles) by using a compass and straightedge.
- B. Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their image under translations and reflections.
- C. Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement.
- D. Demonstrate an understanding of conditions that indicate two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures.
- E. Construct two-dimensional patterns for three-dimensional models, such as cylinders, prisms, and cones.
- F. Identify elements of three-dimensional geometric objects (e.g., diagonals of rectangular solids) and describe how two or more objects are related in space (e.g., skew lines, the possible ways three planes might intersect).

Collecting, organizing, and representing data sets that have one or more variables and identifying relationships among variables within a data set by hand and through the use of an electronic spreadsheet software program:

- A. Know various forms of display for data sets, including a stem-and-leaf plot or box-and-whisker plot; use the forms to display a single set of data or to compare two sets of data.
- B. Represent two numerical variables on a scatterplot and informally describe how the data points are distributed and any apparent relationship that exists between the two variables (e.g., between time spent on homework and grade level).
- C. Understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set.

Making decisions about how to approach problems:

- A. Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.
- B. Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.
- C. Determine when and how to break a problem into simpler parts.

Using strategies, skills, and concepts in finding solutions:

- A. Use estimation to verify the reasonableness of calculated results.
- B. Apply strategies and results from simpler problems to more complex problems.
- C. Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.
- D. Make and test conjectures by using both inductive and deductive reasoning.

- E. Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.
- F. Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.
- G. Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.
- H. Make precise calculations and check the validity of the results from the context of the problem.

Determining a solution is complete and moving beyond a particular problem by generalizing to other situations:

- A. Evaluate the reasonableness of the solution in the context of the original situation.
- B. Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.
- C. Develop generalizations of the results obtained and the strategies used and apply them to new problem situations.

Science 7

(Annual Course-Grade 7)

Prerequisite: Science 6

Text: Focus on Life Science California, Grade 7, Glencoe

Expected Pupil Outcomes

- A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the California Content Standards
- Work individually and on a team, using scientific inquiry and skills and the scientific method to ask and answer questions about the physical world
- Use critical thinking skills to analyze scientific problems and reach conclusions
- Effectively communicate results verbally and in writing
- Be aware of the range of careers available in science

Course Description

The major purpose of this course is to provide students with knowledge of basic science concepts with an emphasis on biological sciences. This course will cover;

- Cell biology:
- Genetics:
- Evolution:
- Earth and Life History:
- Structure and Function in Living Systems:
- Physical Principles in Living Systems

Laboratory

In this course, the students will do experiments to develop comprehensive understanding of scientific method. As a result, the students will:

- Develop hypotheses.
- Select and use appropriate tools and technology to perform tests.
- Collect data, display data, construct appropriate graphs from data.

Communicate the steps and results from investigation in the form of written reports and oral presentations.

Content

Cell Biology: Students will

- Work using computer programs and simulations to explore the working of the cells. This will include:
- Cell function in living organisms
- Character differences of plant and animal cells
- Role of the nucleus in genetic information
- How mitochondria works
- Chloroplast Purpose
- Cell division in mitosis
- Understand multicellular organism development through use of microscopes and lab work

Genetics: Students will use manipulatives to discover

- The influence of environmental factors on cell development
- Life cycles and reproduction methods of sexual and asexual organisms
- Transfer of genes in sexual reproduction
- Determination of an inherited traits
- Role of alleles in phenotype and how this relates to the study of viruses
- Role of DNA and how it works. Students will incorporate probability study in this lesson using computer models

Evolution: Student will understand

- Evolution and how it occurs in generations
- Genetic variation and environmental factors. Students will read and debate the role of pollution in genetic variation
- Biographical study of Charles Darwin and the historical period of Darwin
- How Darwinism influences study today
- Theory of evolution and the evidence supporting it
- How to construct a simple branch diagram for living organisms and how to expand it for fossil organisms
- How species become extinct and will complete a rain forest project tracing extinction of one species today. Students will also research an species nearing extinction, but now removed from the list due to human efforts in conservation

Earth and Life History: Students will discuss and debate

- The role of rocks in understanding the evolution of life on Earth
- History of life on Earth
- Rock cycle
- Geologic layers and radioactive dating. Students will use dating in research project
- Use fossils to discuss how environment has changed
- How the movements of the Earth have made changes in climate and geography
- The past and present distribution of organisms on changes in climate and geographic connections
- How to explain significant developments and extinction of plants and animal life on the geologic time scale. Students will debate what happened to the dinosaurs in this lesson.

Structure and Function in Living Systems: Students understand

- Basic anatomy and physiology of plants and animals
- How organ systems function
- How bones and muscles work
- How the reproductive organs of humans function
- Function of the umbilicus and placenta
- How structures and processes of flowering plants function
- How to relate structures of the eye and ear to their function.

Physical Principles in Living Systems: Students understand

- Physical principles underlying biological structures and functions
- The way the eye works
- The properties of light: basic, reflected, refracted, transmitted and absorbed by matter through lab experiments using light and prisms
- How simple lenses work through experimentation with lenses
- The function of white light and the manner that retinal cells react
- Angle of reflection of a light and its relation to the angle of incidence
- How to compare joints in the body with structure used in machines and simple devices through work in the robotics lab and with classroom robots
- How levers work through use of assorted levers in a lab setting
- Basic function of the heart through computerized experimentation with valves and the circulatory system

Investigation and Experimentation: Students will

- Use numerous lab, laboratory equipment, and reporting techniques in their exploration of the curriculum listed above
- Use equipment including calculators, robotics, computers, balances, spring scales, microscopes and binoculars

- Examine print and electronic resources in each lesson
- Write a research paper at least once on a unit of study this year
- Be able to develop a hypothesis for an investigation this year
- Communicate their findings using logical connections, science concepts
- Develop and conduct tests to prove a connection
- Construct scale models
- Make maps
- Label diagrams correctly to communicate knowledge
- Communicate steps and results from an investigation in written reports and oral presentations

English-Language Arts 7

(Annual Course-Grade 7)

Prerequisites: English-Language Arts 6

Text: Holt Literature & Language Arts Grd 7, First Course

Classroom Library: College level dictionary, Spanish/English and English/Spanish dictionary, Thesaurus, The Oxford Picture Dictionary, The Little Oxford Thesaurus

Course Description

English-Language Arts 7 increases the student focus on expository and argumentative texts. Reading strategies focus on comprehending informational materials through the use and analysis of categories of materials and assessment of an author's argument. In addition, student interactions with literary texts become more sophisticated. Students are expected to articulate the purposes and characteristics of different forms of prose, ranging from short stories to essays; identify events that advance the plot in a story and determine how each event explains past or present actions or foreshadows future actions; and analyze themes and characterization. With regard to writing, English-Language Arts 7AB provides increased instruction in documentation and argumentative support. Students are expected to write research reports that not only summarize existing data but that also analyze and assess these data. Students are expected to write multiple essays of at least 700 words each in the following categories: literary interpretation, argumentation, summaries, and research. Students are expected to demonstrate a command of formal Standard English. With regard to speaking and listening, students are expected to deliver well-organized presentations using rhetorical strategies appropriate to a variety of situations, including presentations of research and summaries of articles and books.

Expected Pupil Outcomes

- Grade-level and critical reading skills
- Knowledge of a coherent body of literature from the traditional canon
- Effective and accurate writing skills
- Effective verbal communication skills
- Critical-thinking skills

Curriculum:

Reading: Student assignments, projects and portfolio inclusion will focus on:

- Development of analysis, understanding, and vocabulary fluency
- Understanding idioms, analogies, metaphors and similes in works of prose and poetry
- Development of an understanding of Greek, Latin, and Anglo-Saxon roots and affixes
- Continuation of work in clarification and understanding specialized vocabulary (with emphasis on Engineering, Technology, and Science)
- Reading and study of biographies of important figures in Social Science study this school year
- Continuation of expanding student reading capacity to one-million words for the school year
- Understanding differences and purposes of categories of informational materials
- Development of skills to locate consumer, workplace and public documents
- Analyzing text that uses cause-and-effect organization patterns
- Identification and flow-charting of author's arguments in text or oral reading
- Understanding and use of a mechanical or scientific device by following technical directions
- Reading and responding historically and culturally significant works of literature selected from *Recommended Literature, Kindergarten Through Grade Twelve* (Suggested works included in outline for this grade level)
- Understanding the purposes and characteristics of prose forms
- Understand and identify the use of bias, stereotyping, false claims and fallacies
- Analysis of the elements of a plot, characterization, themes, points of view
- Reading and analysis of a range of critical responses to literary works

Writing and Writing Applications: Student assignments, projects and portfolio inclusion will focus on:

- Writing clear, focused and coherent essays illustrating awareness of audience and purpose
- Effective use of transitions
- Appropriate use of anecdotes, descriptions, facts, and specific examples
- Clear note taking, lab reporting, writing of summaries and outlines

- Identification of research questions leading to written compositions
- Citation of sources and selection of text from authority
- Use of word-processing and publishing programs
- Use of at least one spreadsheet and one simple database integrated into a report
- Use of an outline, rough draft, and revision format in at least one paper each semester
- Scientific writing piece using logical progression of ideas and technical vocabulary
- Writing of at least one fictional and autobiographical narrative, a response to literature, two research reports, two persuasive compositions, and at least four summaries of reading materials
- Proper use of modifiers
- Use of the active voice
- Identification and use of infinitives and participles
- Clear reference between pronouns and antecedents
- Ability to identify all parts of speech and types and structure of sentences
- Demonstration of the mechanics of writing
- Identification and proper use of hyphens, dashes, brackets, and semicolons
- Correct usage of capitalization
- Spell derivatives correctly

Listening and Speaking Curriculum: Samples of student work submitted in portfolio will reflect high standards for:

- Understanding content of oral communication
- Delivery of focused, well-researched presentations
- Formulation of questions about speaker's use of evidence, claims and conclusions
- Understanding of speaker's purpose and attitude toward the subject
- Selection of appropriate speech organization pattern for purpose and audience
- Improvement of speaking technique over Grade Six, as determined by portfolio evaluation from Grade Six (If student does not have portfolio evaluation for Grade Six, improvement criterion will be based on presentations done over the course of Grade Seven)
- Utilization of appropriate images, text, voice modulation, eye contact, and enunciation in presentations
- Constructive and appropriate evaluation of oral presentations on tape of well-known public figures
- Understanding of historical examples of electronic journalistic techniques in presentation of important events

Grade 7 Literature Selections:

Steinbeck, John, <i>The Pearl</i> Tolkien, JRR, <i>The Simarillion</i> Filipovic, A, <i>Zlata's Diary</i> Macaulay, D, <i>Castles</i> Wilder, Laura I. <i>Little House on the Prairie</i> Adamson, Joy, <i>Born Free</i> Herriot, James, <i>All Things Great and Small</i> Houston, Jeanne, <i>Farewell to Manzanar</i> Jones, Ron, <i>The Acorn People</i> Parks, Rosa, <i>My Story</i> Hiaasen, Carl, <i>Hoot</i>	Frank, Anne, <i>The Diary of a Young Girl</i> White, Ryan, <i>The Ryan White Story</i> Dunbar, Paul Laurence, <i>Jump Back Honey</i> Grahame, Kenneth, <i>Wind in the Willows</i> Bradbury, Ray, <i>R is for Rocket of Dandelion Wine</i> Collier, <i>My Brother Sam is Dead</i> Curtis, Christopher Paul, <i>Bud, Not Buddy</i> Kipling, Rudyard, <i>The Jungle Book</i>
---	--

History-Social Science 7

(Annual Course-Grade 7)

Prerequisite: History-Social Science 6

Text: Holt CA, World History: Medieval to Early Modern Times

Course Description

History-Social Science 7 focuses on the social, cultural, and technological changes that occurred in Europe and the Mediterranean from the fall of the Roman Empire in the 6th century AD to the 19th century. The course also considers historical changes in Asia. The course examines the methods of investigation that archaeologist, anthropologists, and historians use to study the past. Students consider the influence of the Enlightenment on such concepts as natural rights of individuals, divine rights of kings, and experimentation in science. Students also assess how this influence is linked to the growth of democracy, particularly during the 18th century.

Expected Pupil Outcomes

- Ability to analyze, explain and evaluate world history
- Ability to link events in one historical period to another
- Effective writing and verbal communication skills
- Critical-thinking skills
- Critical-reading skills
- Understanding of cause and effect
- Understanding the importance of belief systems

Curriculum

Units:

Quarter One	Quarter Two	Quarter Three	Quarter Four
The Expansion and Decline of the Roman Empire Islam in the Middle Ages China in the Middle Ages	Ghana Mali in Medieval Africa Medieval Japan Medieval Europe	Meso-American and Andean Civilizations The Renaissance The Reformation	The Scientific Revolution Change Over Time: 16-18 Centuries

Content

Expansion and Fall of the Roman Empire: Students will study and understand:

- Early strengths and lasting contributions
- Reasons for fall of the empire
- Geographic boundaries during four periods of growth
- Biographical study of Constantine
- Development of the Byzantine Empire and capital Constantinople
- Comparison and contrast the Eastern Orthodox and Roman Catholic regions with guest speakers for a question and answers

China in the Middle Ages: Students will:

- Examine China under the Tang and Sung Dynasty
- Explore the reasons for expansion of Buddhism
- Introduce Confucianism and the development during the Sung and Mongol periods
- Understand the importance of trade during the Mongol Ascendancy and Ming Dynasty
- Participate in assigned panel reports on the influence of discoveries of tea, paper, woodblock printing, navigation inventions and gunpowder
- Compare and contrast the development of the imperial state and the scholar-official class

Islam in the Middle Ages: Students will understand:

- Physical geography of the region and interaction in region
- Origins of Islam with guest speaker
- Study of Muhammad, Qur'an, and Sunnah as biography
- Comparison and Contrast assignment between Judaism, Islam, and Christianity
- Exploration of the expansion of Muslim rule and use of the Arabic language
- Trace regional trade routes and their significance

- Contributions of Muslim scholars with focus on science, medicine and mathematics
- The rich cultural heritage of this period through online exploration of Islamic arts of the Middle Ages

Ghana and Mali in Medieval Africa: Students will:

- Understand the importance of the Niger River ecosystem
- Trace the development of Ghana and Mali
- Trace development of the states and cities of West Africa
- Map the routes of the trans-Saharan caravan trade
- Written reports on Islamic beliefs, ethics and laws
- Participate in group discussion comparing and contrasting US and Islamic beliefs, ethics and laws
- Read African folk tales and discuss the importance of oral language
- Interview a guest speaker to discuss the growth of the Arabic language in West Africa

Medieval Japan: Students will study and understand:

- Geographic significance and influence of China and Korea on Japan
- Prince Shotoku through a biographical study of his life. This examination will also include society of the time.
- Lord-vassal system
- Legacy of the warrior code in the twentieth century
- Development of Japanese Buddhism
- Ninth and Tenth Century Golden Ages through readings, guest speakers and online exploration of virtual museums
- Rise of a military society in the late twelfth century
- Role of the samurai in the late twelfth century

Medieval Europe: Students will study and understand:

- Geography of Europe and the relationship to the Eurasian land mass
- Spread of Christianity, early church and monasteries after the fall of the western half of the Roman Empire by creation of a timeline
- Development of feudalism and its role in medieval economy
- Relationship of feudalism to political order and physical geography
- Conflict and cooperation between the Papacy and European monarchs through biographical study of Charlemagne, Gregory VII and Emperor Henry IV
- Legal and constitutional practices of medieval England through reading the Magna Carta, debating modern day developments of habeas corpus in relationship to terrorists, and discussions of the importance of an independent judiciary
- Significance of the bubonic plague and the geographic route the disease traveled. Students will compare and contrast modern day pandemics with this event.
- Causes and the course of the Crusades
- Effects and significance of the Crusades
- Role of the Catholic church as a political, intellectual and aesthetic institution
- St. Thomas Aquinas classical philosophy with Christian theology
- Concept of "Natural Law" through Lincoln-Douglas debate assignment

Meso-American and Andean Civilizations: Student will study and understand through:

- Study of locations, landforms, and climates of Mexico, Central America, and South America
- Geographical effects on Mayan, Aztec, Incan societies
- Roles of people in the Mayan, Aztec and Incan societies
- How these empires rose and the reasons for the fall of each by creating a present day newscast script
- Artistic and oral traditions and architecture of each civilization through readings and online exploration of virtual museums
- Emphasis will be on the astronomic, agricultural and mathematical contributions of each society. Cross-curricular assignments will be used integrating use of the science lab and school garden.

The Renaissance: Students will study and understand:

- Humanism
- Importance of Florence through exploration of virtual museums and their collections

- Importance of the “Silk Road” and will review route it took
- Through biographical study, Marco Polo and the geographic routes taken by his party
- New communication and information channels
- Students will manufacture a small piece of paper and block print one image
- Advances made during this period in literature, arts, cartography and engineering. Emphasis will be on scientific, mathematic, engineering and astronomical advances during this period.
- Biological study of William Shakespeare will integrate with Language Arts classes in written reports and oral presentations

The Scientific Revolution: Students will study and understand:

- Roots of Scientific Revolution
- Significance of new scientific theories
- Significance of new inventions by selecting one invention for a written report that will be incorporated into the final multimedia presentation
- Scientific Method
- This unit will incorporate direct laboratory work with Science classes
- Growth of scientific rationalism on the growth of democratic ideas
- Coexistence of science with traditional religious beliefs

Comparison of the Sixteenth, Seventeenth and Eighteenth Centuries

- Understand the reasons behind the great explorations, chart the routes, and the influence of cartography
- Explore botany, horticulture, and technological advances
- Trace the origins of modern capitalism through readings on the stages of development
- Use technology to map the trading and marketing patterns
- Trace ideas from the Enlightenment to earlier movements with spreadsheet
- Use Enlightenment thinkers and philosophers from the centuries for a timeline for classroom display
- Read excerpts from the Magna Carta, the English Bill of Rights, and the American Declaration of Independence and compare and contrast principles

GRADE 8

Algebra 1

(Annual Course-Grade 8)

Prerequisites: Math 7

Text: Algebra 1, Holt CA

Course Description

Algebra I is a two semester course that provides students with a solid background in algebra and that prepares them for all higher-level math courses. Students will use logic to reason symbolically to solve problems and types of equations. Problems will increase in difficulty from the first semester to the second. Students will understand, write, solve and graph linear and quadratic equations. Semester one introduces concepts and operations and the second semester focuses on an integration of the materials mastered in semester one to extend mathematical reasoning to real world issues and problems.

Expected Pupil Outcomes

- A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the Curriculum Content Standards for California
- Ability to solve text-based as well as real-world problems using a variety of mathematics tools and procedures
- Implement a variety of problem-solving strategies
- Develop fluency in basic computational/procedural skills
- Communicate precisely about quantities and logical relationships
- Make connections among mathematical ideas and between mathematics and other disciplines
- Be aware of the range of careers available in mathematics

Curriculum:

Students will be able to:

- Identify and use mathematic properties of subset and integers and rational, irrational and real numbers
- Understand closure properties for the four basic arithmetic operations
- Use properties of numbers to demonstrate whether assertions are true or false
- Understand and use operations of finding the reciprocal, taking a root and the opposite, and raising to a fractional power
- Understand the rules of exponents
- Solve equations and inequities involving absolute values
- Simplify expressions before solving problems
- Solve multi-step problems involving linear equations and linear inequalities in one variable, showing justification
- Graph a linear equation and compute the x- and y- intercepts
- Able to sketch the region defined by linear inequalities
- Verify that a point lies on a line, given an equation of the line
- Derive linear equations by using the point-slope formula
- Concepts of parallel and perpendicular lines and how their slopes are related
- Find the equation of a line perpendicular to a given line that passes through a given point
- Solve a system of two linear equations in two variables algebraically and interpret the answer graphically
- Solve a system of two linear inequalities in two sets and sketch the solution sets
- Add, subtract, multiply and divide monomials and polynomials
- Solve multistep problems, including word problems using subtraction, multiplication and division of monomials and polynomials
- Apply basic factoring techniques to second- and simple third-degree polynomials.
- Simplify fractions with polynomials in the numerator and denominator
- Add, subtract, divide and multiply rational expressions and functions
- Solve a quadratic equation by factoring or completing the square
- Apply algebraic techniques to solve rate and work problems, and percent mixture
- Understand the concepts of relation and a function and how they work in relation to one another

- Determine the domain of independent and dependent variables defined by a graph, a set of ordered pairs or a symbolic expression
- Determine whether a relation defined by a graph, a set of ordered pairs or a symbolic expression is a function and justify the conclusion
- Know the quadratic formula and are familiar with its proof
- Can complete the square with a quadratic formula
- Can use the quadratic formula to find the roots of a second-degree polynomial and how to solve quadratic equations
- Graph quadratic functions
- Understand the root of quadratic function graphing is at the x-intercepts
- Use quadratic formula or factoring technique (or both) to determine whether the graph of a graph of a quadratic function will intersect the x-axis in zero, one, or two points
- Apply quadratic equations to physical problems, such as the motion of an object under the force of gravity. Students will visit with a guest speaker from JPL to discuss the use of Algebra in Space Science.
- Use and know the simple steps of a logical argument. This study will integrate into their Social Science and Language Arts classes in the study of logical proofs and political arguments.
- Use the properties of the number system to judge the validity of the results, to justify each step of the procedure, and to prove or disprove statements

Science 8

(Annual Course-Grade 8)

Prerequisite: Science 7

Text: Focus on Physical Science California, Grade 8, Glencoe

Expected Pupil Outcomes

- A grade of "C" or better (which is equivalent to a "proficient" performance level) in the content areas outlined in the California Content Standards
- Work individually and on a team, using scientific inquiry and skills and the scientific method to ask and answer questions about the physical world
- Use critical thinking skills to analyze scientific problems and reach conclusions
- Effectively communicate results verbally and in writing
- Be aware of the range of careers available in science

Course Description

This course will be taught at SCP with an emphasis on student experimentation. Students will replicate the experiments with instruments done by the scientific community in the original discoveries. Units in motion, forces and studies in density and buoyancy will all be done with student self-discovery as the first element of the lessons and activities. Other units will incorporate lab study and field trips to local science museums

Laboratory:

In this course, the students will do experiments to develop comprehensive understanding of scientific method. As a result, the students will:

- Develop hypotheses.
- Select and use appropriate tools and technology to perform tests.
- Collect data, display data, construct appropriate graphs from data.
- Communicate the steps and results from investigation in the form of written reports and oral presentations.

Curriculum

Motion: Students will understand:

- Velocity through experimentation
- Formulas to calculate average speed, position, velocity
- Interpretation of graphs using velocity and motion
- How to solve problems using distance, time and average speed through experimentation with physical objects

Forces: Students will understand:

- Unbalanced forces and how they work
- Identify forces acting on an object
- Role of gravity through use of the NASA online curriculum

Structure of Matter: Students will understand:

- Basics of matter, properties and atomic structure
- Role of elements
- Structure of the atom
- How compounds are formed
- How atoms and molecules form solids through a mini-lab using crystals
- States of matter
- How to use the periodic table to identify elements in single compounds

Earth in the Solar System: Students will:

- Know the basic structure and composition of the universe including galaxies
- Role of the Sun in the Milky Way and our galaxy
- Basics of stars including composition of stars, role of stars,

- Basic appearance and size, appearance and composition of plants, stars, satellites, comets and asteroids

Reactions: Students will understand:

- Basic nature of chemical reactions
- How atoms and molecules interact
- Conservation of matter on a simple level
- Heat is released from chemical reactions
- How to determine whether solution is acid, base or neutral
- Basic physical properties through experimenting with ice

Chemistry of Living Systems: Students will:

- Know basic characteristics of carbon and the role it plays in the chemistry of living organisms
- Understand the composition of living organisms
- Be aware that living organisms have different kind of molecules

The Periodic Table: Students will:

Develop a periodic table for a hobby or interest

- Identify regions on the table and understand what they mean
- Understand that each element has corresponding numbers and what these mean
- Know substances can be classified and how the table does this
- Understand the properties of elements on the table

Density and Buoyancy: Students will understand:

- Nature of buoyant forces in fluids
- How to measure buoyancy
- How to calculate the density of a substance
- The theory underlying buoyancy
- How to predict "Will it float or sink?"
- The mass of an object (mass per unit volume) through experimentation with water and objects

English-Language Arts 8

(Annual Course-Grade 8)

Prerequisite: English-Language Arts 7

Text: Holt Literature & Language Arts Grd 8, Second Course

Course Description

English-Language Arts 8 builds on the skills developed in 7AB. The focus of reading activities is on literary analysis. Specifically, students are required to evaluate plot and to analyze character motivations, setting, and theme. In addition, students are expected to understand the structural and rhetorical differences among various genres, including poetry. Writing activities continue to emphasize the structural and rhetorical features of academic discourse, with particular attention to documentation, evidence, and audience. Students are expected to produce papers of at least 700 words in a variety of modes for diverse audiences. With regard to speaking and listening, students are expected to deliver well-organized presentations using rhetorical strategies appropriate to a variety of situations, including presentations of research and summaries of articles and books.

Expected Pupil Outcomes

- Grade-level and critical reading skills
- Knowledge of a coherent body of literature from the traditional canon
- Effective and accurate writing skills
- Effective verbal communication skills
- Critical-thinking skills

Curriculum

Cross-Curricular Projects and Assignments

- Use of slang in world culture through participation in the Pen Pal Project
- Influence of prejudice and bias in language creation Use of Teach Tolerance curriculum offered by the Southern Poverty Law Center
- Avoiding use of bias language and inferences
- Influence of History on language usage and creation of words and phrases

Reading: Student assignments, projects and portfolio inclusion will focus on:

- Word origins, word meaning and word relations, with special emphasis on Latin words utilized in scientific study
- Historical and literary context clues
- Analysis of idioms, analogies, metaphors and similes used in literal and figurative meanings
- Use of exact language in laboratory reporting and journals
- Creation of a narrative to illustrate the importance of historical influence on word meanings
- Reading and responding to historically or culturally significant works of literature linking to assignments and projects in integrated history or social science class

Writing and Literary Response and Analysis: Student assignments, projects and portfolio inclusion:

- Use of word meanings in appropriate context
- Demonstration of the ability to verify meanings by definition, restatement, example, comparison and contrast
- Competent in use and understanding of metaphors, idioms, analogies and metaphors and similes in both prose and poetry
- Demonstration of reading and comprehension and response to historically and culturally significant works of literature at grade-level to selections from California *Recommended Literature, Kindergarten Through Twelve* (Text suggestions included above)
- Meeting the yearly one-million word requirement by selecting narrative and expository texts and materials
- Ability to compare and contrast features and critical elements of consumer materials to gain meaning
- Understanding proposition-to-proof argument pattern in texts and documents
- Ability to find similarities and differences between texts in treatment, scope or organization of ideas
- Ability to identify an accurate summary of written material

- Understanding and explaining use of complex mechanical devices through following technical directions
- Explain a problem-solving situation or decision using information from a variety of consumer, workplace and public documents
- Appropriate evaluation of the unity, coherence, logic, internal consistency and structural patterns of texts
- Demonstrate an understanding and explain the difference between the purposes and characteristics of various poetry forms.
- Evaluate the structural elements of plot, plot development and plot resolution
- Illustrate an understanding of motivation and reactions of literary characters from different historical eras in similar situations using comparison and contrast
- Illustrate the relevance of setting, mood, tone, and meaning
- Demonstrate the understanding of recurring themes in traditional and contemporary works
- Understand the relationship between literature and science
- Read biographical works about scientists and mathematicians and be able to analyze how the work reflects the author's heritage, traditions, attitudes and belief.
- Writing clear, coherent, and focuses essays that illustrate a significant improvement over previous grade-level portfolio submissions
- Writing evaluation rubrics for this year will emphasize awareness and understanding of audience and purpose, use of effective transitions, parallel organization structures, formal introductions, supporting evidence and conclusions. Final portfolio evaluation will look for student voice and development of a lively personal writing style. Sentence structure requirements include emphasis on written devices to indicate clear relationship between ideas and comparisons.
- Writing evaluation rubrics will also evaluate use of paraphrases, quotations, opinion from authorities and comparison, especially in written lab reporting
- Mastery of planning and conducting multi-step information searches on biographical and scientific topics using computer networks, databases and modems
- Understanding the nature of support and original ideas and create reports, essays and narrative that illustrates a balanced presentation of research and original ideas
- Make numerous revisions in written work including word selection, organization, point of view and transitions. Rubrics for edited manuscripts will include peer review categories for correct grammar, spelling and correct usage of punctuation and capitalization.
- Inclusion of student written narrative, expository, persuasive and descriptive essays of 500- to 700- words in each genre, including biographical and autobiographical works
- Student writing will reflect Standard American English including correct punctuation, capitalization and spelling
- Response to literature using careful insights in interpretation
- Written research reports integrating social science and scientific themes
- Written persuasive compositions with well-planned organization and appropriate supporting materials
- Written career documents including formal requests for research materials, simple business letters, and at least one job application in a field related to science or math
- Three written documents relating to science or math projects that identify sequencing, include necessary factors and variables, and formatting techniques required by the audience and topic

Listening and Speaking: Samples of student work submitted in portfolio will reflect high standards that:

- Video or digital copies of focused, coherent oral presentations conveying clear ideas that reflect the background and interests of the audience
- Demonstrate an analysis of oral interpretations of literature that reflect the interpretation of experts, as well as the student
- Paraphrase a speaker's purpose, point of view, content, and use of support
- Illustrate effective organization, vocabulary, and delivery of information to meet purpose
- Preparation of a well-organized and developed written outline
- Video or digital copies of speech reflecting understanding of a solid organization pattern, analysis of the audience, appropriate grammar and word choice, pace, and use of language
- Demonstrate the ability to evaluate the credibility of a speaker based on established protocols of bias and use of evidence, rather than personality or looks
- Clear understanding of visual markers communication techniques and approaches
- Illustrate ability to deliver well-organized formal presentation employing traditional rhetorical

- strategies of narrative, exposition, persuasion and description
- Deliver an oral response to literature, research presentation, persuasive debate presentation, and recitation of poetry

Grade 8 Literature Selections:

Klingsolver, Barbara, <i>Bean Trees</i>	Mandela, Nelson, <i>A Long Walk to Freedom</i>
Steinbeck, John, <i>Cannery Row</i>	Hughes, Langston, <i>The Big Sea</i>
Richter, C, <i>Light in the Forest</i>	Wolf, Tobias, <i>This Boy's Life</i>
Santiago, Esmeralda, <i>When I was Puerto Rican</i>	Soto, Gary, <i>Taking Sides</i>
Dorris, Michael, <i>Yellow Raft in Blue Water</i>	Santiago, Esmeralda, <i>When I Was Puerto Rican</i>
Gaines, Ernest, <i>The Autobiography of Miss Jane Pittman</i>	Kidd, Sue Monk, <i>The Secret Life of Bees</i>
Tolkien, JRR, <i>The Hobbit</i>	Bradbury, Ray, <i>Something Wicked This Way Comes</i>
De Saint-Exupery, <i>The Prince</i>	Sinclair, Upton, <i>The Jungle</i>
	Twain, Mark, <i>The Adventures of Tom Sawyer</i>

History-Social Science 8

(Annual Course-Grade 8)

Prerequisite: History-Social Science 7

Text: Holt CA, United States History: Independence to 1914

Course Description

History-Social Science 8 focuses on American history from the framing of the Constitution to the start of World War I, with special emphasis on America's role in the war. After reviewing the development of America's democratic institutions founded on the Judeo-Christian heritage and English parliamentary traditions, particularly the shaping of the Constitution, students trace the development of American politics, society, culture, and economy. They examine the regional variations that emerged after the Constitution and consider how these variations contributed to the outbreak of civil war. Finally, students examine industrialization and its social and economic consequences.

Expected Pupil Outcomes

- Ability to analyze, explain and evaluate the US history
- Ability to link events in one historical period to another
- Effective writing and verbal communication skills
- Critical-thinking skills
- Critical-reading skills
- Understanding of cause and effect
- Understanding the importance of belief systems

Curriculum

Important characteristics of the course include:

- Thematic study of history
- In-depth and comprehensive study of major events and periods
- Development of civic and democratic values, including the fundamental principles embodied in the U.S. Constitution and Bill of Rights
- Projects and assignments emphasizing critical thinking, reasoning, and logic
- Cross-curricular readings, especially literature and science and mathematic papers
- Enrichment using relevant art and music
- Emphasis on the California State Social Studies Framework and the California State Social Studies Standards for the eighth grade

The Goals and Curriculum Strands of the program emphasize:

- Knowledge and Cultural Understanding, incorporating knowledge from history and other humanities, geography and the social sciences
- Democratic Understanding and Civic Values - including an understanding of our national identity, constitutional heritage, civic values, rights and responsibilities
- Skills Attainment and Social Participation - understanding basic study skills, critical thinking and participatory skills needed for effective citizenship

Creation of a Republic: Students will:

- Growth of political parties
- Roles of branches of government
- Rise of cities-Urbanization
- Immigration
- Geography and significance of colonization

Creation and Development of the Constitution: Students will understand:

- Natural Rights and Philosophies
- Role of government
- Elements of the Constitution
- Levels of government
- Amending the Constitution
- States' Rights
- 3/5 Compromise and Slavery

- Role of women
- Cultural and Social Trends and Customs

Trials of the New Republic: Students will understand:

- Creation of political parties
- Sectionalism and Nationalism
- Supreme Court decisions
- Changing role of the three branches of government
- Economic trends
- Voice of Congress
- Trade and industrialization
- Personalities of the period

The Age of Jackson: Students will study and understand:

- The role of the West in government policy and the public mind
- Jackson will be debated: Indian Policy and Legacy as President
- Students will examine the life of a student living during this period. Topics will be divided into cultural, political and economic themes.

Industry and Growth: Students will understand:

- Growth of industry
- Create a timeline of inventions they have researched
- Examine and map the growth of cities

Democracy in the Age of Jackson: Students will understand:

- Changed in government over time using a computerized spreadsheet
- Social changes since the new government
- What a student learned in this time
- Chart the growth of the new country
- How new states are admitted to the union

Westward Expansion: Students will understand:

- Role of art and culture
- Cowboy and Indian culture
- Native peoples and traditions
- Natural resources

Polarization of the North and South: Students will understand:

- Reasons for the Civil War
- Advantages and disadvantages of both sides

The Era of Reform: Students will study and understand:

- Social reform through the biographical study of reformers
- Religious movements through biographical study of leaders
- Rise of culture by museum field trips
- Architectural design through online study

Dividing a Nation: Students will:

- Understand the significance of the war by debating sides
- Legacies of the war through reading literature selections
- The role of politics and Lincoln
- Study of Lincoln-the Man

The Civil War and Reconstruction: Students will:

- Debate the strategies in conducting the war
- The lasting influence of Reconstruction on the South

An Era of Change in the West: Students will:

- Students will challenge their gold rush skills online
- Mapping activities will stress the growth of America

The Rise of Industry and Unions: Students will:

- Divide major unions into categories and research histories and biographies
- Research major inventions

Immigration and the Growth of Cities: Students will:

- Trace immigration through online records
- Select a major city for research
- Study major immigration laws

Progressives and Reformers: Students will:

- Understand the Progressive Party goals and leaders
- Trace development of the Populist Party

World Chaos and World War I: Students will:

- Understand the world events leading to WWI
- Debate US entry into the war
- Understand social and cultural events on the Home Front
- Link influenza outbreak with potential for pandemic disease today

Core Courses Standard Alignment

Objectives, Units/Lessons and Standards

MATHEMATICS

Overview:

Mathematics in the middle schools will focus on building a foundation of number sense, operations and quantitative reasoning, including algebraic thought, patterns, and relationships. Geometry and spatial reasoning skills, measurement, basic skills in probability and statistics will also be included in units of study. Lessons will ask students to explore math concepts, properties of numbers and algorithms in practical real-life problems. Students will be asked to describe these relationships in verbal, numeric, graphic and symbolic representations of the relationships. Lessons and activities will demonstrate geometric relationships and properties and spatial reasoning including modeling, problem solving and analysis of word problems. Assessment will require students to use critical thinking skills to quantify attributes, generalize procedures to solve problems. Students will use appropriate statistics, data, reasoning and concepts using probability to draw conclusions, evaluate arguments and proofs, and adapt and revise reasoning based on peer and instructor recommendations.

Units, lessons, and activities, emphasize problem solving and appropriate language to make connections between mathematics and other content areas. Students will use technology, including four-function calculators, for use in problems involving whole numbers, decimals and fractions. Lessons and units will also include manipulative materials to facilitate conceptual understanding and problem solving.

Grade: 6 Mathematics

Objective	Units/Lessons	Standard(s)
Number Sense: Compare and Order and Solve Problems	Fun With Foods (Real World Problems & Nutrition Integration)	1.1-1.4 & 2.1-2.4
	Fractions, Fractions, Everywhere!	1.1; 1.2
	A Decimal is an Important Point	1.1
	Patterns in Nature (Science Integration)	1.2
	Compare and Order	1.1; 1.2; 1.3; 1.4
	Tangrams	1.0
	Erastosthenes Formula	
Calculate and Solve addition, subtractions, multiplication, and division	Southern California Edison Power Units	2.1; 2.2; 2.3; 2.4
	Text	2.0
	Decimals Patchwork Patterns (NSA/MEPP)	2.1
Algebra and Functions	Text	1.0-1.4
	It's All Variable (NSA/MEPP)	1.0-1.4
	Graphing (integration with Social Sciences)	2.0-2.3
	NASA Speed, Distance and Time Units	2.2;2.3
Measurement and Geometry	NASA Math Units of plane and solid shapes	1.0
	Two-dimensional figure	2.0

	descriptions and identification	
Statistics, Data Analysis and Probability	Birth Rates for Our City Unit (Integration of Social Science)	1.0, 2.0, 3.0
Mathematical Reasoning	Our School Census	1.0; 2.0; 3.0
	School Garden and Planting Design	1.0; 2.0; 3.0
Careers in Math	Meet a Mathematician (NSA/MEPP)	

Grade: 7 Mathematics

Objective	Units/Lessons	Standard(s)
Number Sense	Rational Numbers in Scientific Notations Problems and Approximate Number Problems	1.1
	Positive Number to Whole Number Powers Problems	1.2
	Convert Fractions to Decimals and to Percent Problems	1.3
	Problems Using Rational and Irrational Numbers	1.4; 1.5
	Exponent, Powers and Root Problems	2.0; 2.1; 2.2; 2.3; 2.4; 2.5
Algebra and Functions	Problems Using Qualitative Relationships Involving Algebraic Terminology, Expressions, Equations, Inequalities, Graphs	1.1; 1.2; 1.3; 1.4; 1.5
	Problems Involving Integer Powers and Simple Roots	2.0
	Problems Requiring Graphs and Interpretation of Linear and Nonlinear Functions	3.0
	Problems Involving Simple Linear Equations and Inequalities over the Rational Numbers	4.0
Measurements and Geometry	School Garden Design	1.0-3.0
Statistics, Data Analysis, and Probability	Planting Guide	1.0
	Portfolio: Semester Problem Involving: Collection, Organization, Data Sets (Technology Integration with Spreadsheet)	1.0
Mathematical Reasoning	Real World Problems	
	Guest Speaker from Industry Illustrating Connection with this Course	

Grade: 8 Algebra I

Objective	Units/Lessons	Standard(s)
Identify and Use Properties and Subsets	Integers	1.0
	Rational and Irrational Numbers	1.0
	Real Numbers	1.0
	Closure Properties	1.0
Operations	Take the Opposite	2.0
	Find the Reciprocal	2.0
	Take the Root	2.0
	Raise to a Fractional Power	2.0
	Rules of Exponents	2.0
Solve Equations and Inequalities	Absolute Value Problems	3.0
Simplify	Expressions and Polynomials	4.0; 12.
Solve Multistep Problems	Word Problems	5.0
	Linear Equations	5.0
	Justification	5.0
Graphing	Linear Equations	6.0
Verify Points	Points on Line	7.0
Point Slope Formula	Linear Equations	7.0
Parallel and Perpendicular Lines	Text Problems	8.0
Monomials and Polynomials	Word Problems and Multistep Problems	9.0; 10.0
Factoring	Common Factor Problems and Squares	11.0
Rational Expressions and Functions	Text Problems	13
Application	Space Mathematics (NASA)	1.0-13.0

SCIENCE

The Science classes will integrate the service learning projects, such as school garden and battery recycling into the curriculum. All courses will use lab and experimentations at a minimum of four times a year. Technology will be integrated into every lesson offered at all grade levels.

Grade: 6 Earth Science

Objective	Units/Lessons	Standard(s)
Plate Tectonics and Earth's Structure	Shake, Rattle and Roll: Online Plate Tectonics	1.a; 1.b; 1.c; 1.d; 1.e; 1.f; 1.g
	Graphing CA 1989 Quake (Integration with History)	1.e; 1.f; 1.g
	Exploring the Environment Units (NASA)	1.e-1.g
Shaping Earth's Surface	Project Wet	2.a; 2.b; 2.d
	FEMA Flood Lesson	2.a; 2.b; 2.d
	EPA Beaches and Coastal Tidelands	2.b; 2.c
Heat (Thermal Energy)	EPA-SunWise Program	3.a; 3.b; 3.c; 3.d
	From a Distance: An Introduction to Remote Sensing/GIS/GPS Units (NASA)	3.a-3.c
	Hurricanes as Heat Engines (NASA)	3.c
Energy in the Earth System	Project Wet	4.a; 4.b; 4.c; 4.d; 4.e
	EPA-SunWise Program	4.a; 4.b; 4.c; 4.d; 4.e
	Graphing Atmospheric Ozone (NASA)	4.o
Ecology (Life Sciences)	Great Plant Escape (NASA)	5.a-5.e
	School Garden (Service Learning) Composting	5.a; 5.b; 5.c; 5.d; 5.e
Resources	EPA Environmental Detectives	6.a; 6.b; 6.c; 6.d; 6.e
	EPA Recycle Unit	6.a; 6.b; 6.c; 6.d; 6.e
	Wool Unit/National Wool Board	6.c
	Beef and Resources	6.a
Investigation & Experimentation	EPA SunWise UVH Lab	7.a; 7.b; 7.c; 7.d; 7.e; 7.f; 7.g; 7.h
	Project Wet Labs	7.a; 7.b; 7.c; 7.d; 7.e; 7.f; 7.g; 7.h
	FEMA Flood Lab	7.a; 7.b; 7.c; 7.d; 7.e; 7.f; 7.g; 7.h
	All NASA Units incorporate labs (as time permits these will be used)	7.a-7.h

Grade: 7 Life Science

Objective	Units/Lessons	Standard(s)
Cell Biology	Cell Software	1.0a-1.0f
	Discover Earth: Earth as a System (Adapted) (NASA)	1.0a-1.0f
	Simple Cells and the Microscope	1.0a-1.0f
Genetics	DNA Model Manipulatives Unit	2.0-2.0e
	Great Planet Escape (Adapted) (NASA)	2.0-2.0e
Evolution	Image the Universe (Adapted) (NASA)	3.0a-3.0e
Earth Sciences	Exploring the Environment (NASA) Volcanic eruptions and Plate Tectonics	4.a, 4.b, 4.e, 4.g
	Exploring the Environment (NASA) Asteroids	4.b, 4.g
	Exploring the Environment (NASA) Radioactivity, fossils and rocks	4.g, 4.c, 4.d, 4.a
Structure and Function of Living Systems	Discover Earth: Earth as a System (Adapted) (NASA)	5.o
	School Garden Unit-Plant Growth	5.a; 5.b
	PBS Human Body Series and Adapted Curriculum with manipulatives	5.a; 5.b; 5.c; 5.d; 5.e; 5.f; 5.g
Physical Science	IMAGERS (NASA)	6.a; 6.b; 6.c; 6.d; 6.e
	From a Distance (NASA)	6.a; 6.b; 6.c; 6.d; 6.e
	TRMM: EYE	6.a; 6.b; 6.c; 6.d; 6.e
	Robotics Lab	6.h; 6.i; 6.j
	Microscope and telescope Lab	6.g; 6.f
Investigation & Experimentation	All NASA Units incorporate labs (Integration of a minimum of six for the year)	7.o

Grade: 8 Physical Science

Objective	Units/Lessons	Standard(s)
Motion	Wright Flyer (NASA Quest Unit)	1.a-1.f
Forces	Wright Flyer (NASA Quest Unit) and NASA Aerospace Online Curriculum	1.a-1.f
Structure of Matter	Imagine the Universe (NASA)	3.a-f

	Units	
Earth Sciences (Earth in the Solar System)	From a Distance (NASA Unit) and	4.a-4.e
	Imagine the Universe (NASA Unit)	4.a-4.e
	From Stargazers to Starships (Stern) and Tour the ASM Sky	4.a-4.e
Reactions	From text	5
Chemistry of Living Systems (Life Sciences)	Discover Earth: Earth as a System (Adapted) (NASA)	6
Periodic Table	Unit: Periodic Table	7.a-7.c
Density and Buoyancy	Will It Float? And There's Air In There (NASA) And Archimedes' Principle (NASA/Aerospace)	8.a-8.d
Investigation and Experimentation	All units have a minimum of one lab. Six labs are required for this year.	9.a-9.g

ENGLISH-LANGUAGE ARTS

Courses in the Language Arts offer teachers a framework of mandatory assignments that build in units. Literature selections are taken from the approved list and teachers will work during the mandatory development days to integrate themes with other content areas before the school year begins. Integrated units will be evaluated at the end of each year. Classes at all levels integrate writing and grammar development using computer word processing and grammar and writing drill programs. Peer editing rubrics will be integrated into most of the writing assignments. Rubrics will be presented to students as assignments are given and students will use the same rubrics for peer editing.

Grade: 6- English-Language Arts

Objective	Units/Lessons	Standard(s)
Word Analysis, Fluency, and Systematic Vocabulary Development	Weekly Vocabulary and Assigned Grade Level Reading	1.0; 1.1; 1.2; 1.3
Reading Comprehension: Informational Materials	Daily Newspaper Article/Online Essay-Compare and Contrast	1.4; 1.5; 2.1; 2.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8
	Weekly Literature Magazine	1.4; 1.5; 2.1; 2.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8
Literary Response and Analysis: Focus on	Forms of Literature: Short Story, Essay, Novel	3.1
	Characterization	3.2; 3.8
	Setting	3.3
	Tone and the Language of Poetry	3.4
	Themes: Poetry	3.6
	Literary Devices	
	Plot	3.7
	Speaker/Voice	3.5
Writing Strategies	Writing Included in each activity or lesson	1.1
	Characterization: Paper	1.1; 1.2; 1.3
	Weekly current event summary	1.2; 1.3; 1.4; 1.5; 1.6
	Author Report	1.2; 1.3; 1.4; 1.5; 1.6
	Portfolio Essays	1.2; 1.3; 1.4; 1.5; 1.6
	Business Letter	1.1; 1.2; 1.3; 1.4; 1.5; 1.6
Writing Applications	Narrative Assignment (2 required)	2.1
	Expository Assignment (2 required)	2.2
	Research Report (1 required)	2.3
	Response to Literature (3 required)	2.4
	Persuasive Compositions (1 required)-Debate and Panel Discussion (one required)	2.5

Written and Oral English Language	Grammar Gremlin Competition (Integrated with Technology)	1.1; 1.2; 1.4
	Portfolio Review and Peer Edit	1.1; 1.2; 1.3; 1.4; 1.5
	Computerized topical spelling review	1.4; 1.5
	Personalized spelling review (Technology)	1.4; 1.5
	Business Letters	1.3; 1.2; 1.4; 1.5; 1.1
Listening and Speaking Strategies	Presentation: Author Presentation	1.4; 1.5; 1.6; 1.7
	Portfolio Defense	1.1; 1.2; 1.3
	Character Presentation	1.8; 1.7; 1.6
	Note taking-Other Presentations	1.3
	Note taking-Short Stories	1.3
	Advertisement Claims	1.9
Speaking Applications	Story Telling	2.1
	Book Summary & Review	2.2
	Book Panel	2.3
	Author Defense	2.4
	Multimedia Presentation on Social Science Topic Integration using thematic work and research	2.5

Grade: 7 - English Language Arts

Objective	Units/Lessons	Standard(s)
Word Analysis, Fluency, and Systematic Vocabulary Development	Weekly Vocabulary Jeopardy Game	1.0; 1.1; 1.2; 1.3
Reading Comprehension: Informational Materials	Daily Newspaper & Bi-weekly public document	2.1; 2.2; 2.3; 2.4; 2.5; 2.6
	Weekly Literature Magazine	1.4; 1.5; 2.1; 2.2; 2.3; 2.4; 2.5; 2.6
Literary Response and Analysis: Focus on	Forms of Prose: Short Story, Essay, Novel, Novella	3.1
	Foreshadowing-Short Story	3.2
	Characterization	3.3
	Contrasting Points of View	3.5
	Themes: Universal & Recurring	3.4
	Class Critique: Essay	3.5

Writing Strategies	Weekly current event summary	1.2; 1.3; 1.4; 1.5; 1.6; 1.7
	Author Research & Report/Technology	1.2; 1.3; 1.4; 1.5; 1.6; 1.7
	Portfolio Essays & Revision	1.2; 1.3; 1.4; 1.5; 1.6; 1.7
Writing Applications	Research Report (1 required)	2.3
	Autobiography	2.1
	Response to Literature (3 required)	2.2
	Persuasive Compositions (2 required)-Debate and Panel Discussion (one required)	2.4
	Portfolio Review and Peer Edit	1.1; 1.2; 1.3; 1.4; 1.5
Written and Oral English Language	Expand computerized topical spelling review database	1.7
	Personalized spelling review (Technology)	1.7
	Presentation: Author Presentation	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7
	Portfolio Defense	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7
Listening and Speaking Strategies	Character Defense Presentation	1.8; 1.7; 1.6
	Note taking-Other Presentations	1.1; 1.2; 1.3
	Note taking-Panels	1.7; 1.8
	Public Address Analysis	1.8
	Panel Presentation-Persuasive	1.1; 1.2; 1.3; 1.4; 1.5; 1.6
	Multimedia Presentation	2.3

Grade: 8 - English Language Arts

Objective	Units/Lessons	Standard(s)
Word Analysis, Fluency, and Systematic Vocabulary Development	Weekly Vocabulary and Assigned Grade Level Reading	1.0; 1.1; 1.2; 1.3
	Word Origin-Daily Exercise	1.2; 1.3
Reading Comprehension: Informational Materials	Daily Newspaper Article/Online Essay-Compare and Contrast	2.2; 2.3; 2.4; 2.7
	Weekly Literature Magazine	2.2; 2.4
	Product Information-Reading and Design Integration with Technology	2.1; 2.4

	Writing summaries (3-directions, summary and mechanical device)	2.6; 2.5; 2.4; 2.7
Literary Response and Analysis: Focus on	Non-Fiction (Integration with History)	3.0
	Paper on Structural Elements of Novel	3.2; 3.3; 3.4; 3.5; 3.6
	Author Paper: Style	3.5; 3.6
	Forms of Poetry-Focus on American Poetry & <i>Enhancing a Poetry Unit with American Memory</i> (Library of Congress)	3.1
	Historical Context: Characters	3.3
	Plot Development Essay	3.2
	Biographical Approach Essay	3.7
Writing Strategies	Writing included in each activity or lesson	1.0
	Bibliography on Author	1.4;
	Historical Context and Literature Paper	1.1; 1.2; 1.3; 1.4; 1.5; 1.6
	Peer Review of Papers	1.6; 1.5
Writing Applications	Write 2 Short Stories	2.1b; 2.1c; 2.1a
	Write 2 Responses to Literature	2.2a; 2.2b; 2.2c; 2.2d
	Write 1 research report (listed above)	2.3a; 2.3b; 2.3c; 2.3d
	Write 5 persuasive composition	2.41; 2.4b; 2.4c
	Write business letter	2.5a; 2.5b
	Write a basic resume	2.5a; 2.5b
	Integration with Science project-writing a lab report	2.6a; 2.6b; 2.6c
Written and Oral English Language	Evaluation of essays	1.0; 1.1; 1.4
	Portfolio Review and Peer Edit	1.1; 1.2; 1.3; 1.4; 1.5; 1.6
	Computerized topical spelling review	1.6
	Personalized spelling review (Technology)	1.6
	Business Letters	1.3; 1.2; 1.4; 1.5; 1.1; 1.6
Listening and Speaking Strategies	Presentation Evaluation (Instructor's Choice)	1.1; 1.2; 1.8; 1.9
	Portfolio Defense	1.1; 1.2; 1.3

	Presentation (Instructor's Choice)	1.3; 1.4; 1.5; 1.6; 1.7
	Note taking-Other Presentations	1.1; 1.2; 1.8; 1.9
	Note taking-Short Stories	1.1; 1.2; 1.8; 1.9
	Advertisement Claims	1.9
Speaking Applications	Author Biography	2.1
	Book Summary & Review	2.2
	Research Presentation	2.3
	Author Defense	2.4
	Poetry recitation (Students may use Technology integration) as part of multimedia presentation	2.5

Social Sciences

Grade: 6 – World History: Ancient Civilizations

Curriculum units of study will be based on geography. The National Geographic Society curriculum will be used as the foundation for study. Cultures will be studied by viewing the every day lifestyle of peoples. Online pen pal websites will allow students to exchange email with students from other countries.

Objective	Units/Lessons	Standard(s)
Archaeological Studies	Hunter Gatherer Societies Mapping (Integration Science)	6.1.1; 6.1.2; 6.1.3
	Guest Speaker	
	Interactive Computer Dig	
Mesopotamia, Egypt, Kush	Mapping-National Geographic Society	6.2.1; 6.2.2; 6.2.3; 6.2.4; 6.2.5
	Farming Game	6.2.2; 6.2.6; 6.2.8
	Biographical Interview Questions	6.2.7; 6.2.4
	Egyptian Art-Getty Museum	6.2.5
Evolution of Language	My Own Language Lesson	6.2.9
	Slang and Regionalisms	
	Integration into Language Arts Vocabulary Unit	
Ancient Hebrews	Guest Speaker/Biographical Presentation	6.3; 6.3.3
	Judaism-Laws-High Holy Days	6.3
	Map Activity and Reporting	6.3.4
Early Greek Civilizations	Field Trip-Getty Museum	6.4.8
	Greek Law-Panel Discussion	6.4; 6.4.6
	Mapping-National Geographic Society Materials	6.4
	Myths and gods/Masked Play	6.4.4
	Role Playing-Scientists and Mathematicians	6.4.8
Early Indian Civilizations	Rolling on the River: Map Unit	6.5.1; 6.5.2; 6.5.6
	Guest Speaker	6.5.3-6.5.5
	Medical, Math and Scientific Advances-Role Playing	6.5.7
Early Chinese Civilization	Take the High Road: Map Unit on the Silk Roads	6.6.7; 6.6.1; 6.6.2
	Teachings of Confucius-Panel	6.6.4
	Spreadsheet of Dynasties/technology Integration	6.6.8; 6.6.6; 6.6.5; 6.6.2

Roman Empire-Beginning	Field Trip-Getty Museums	6.7.1; 6.7.2; 6.7.8
	Biography-Research/Bibliography	6.7.4; 6.7.6; 6.7.7
	Map Game	6.7.3; 6.7.5

Grade: 7 - World History: Medieval to Early Modern Times

Objective	Units/Lessons	Standard(s)
Expansion and the Fall of the Roman Empire	Online Museum-Art	
	Online Mapping-Expansion	7.1.2
	Mini-History	7.1.1; 7.1.3;
China in the Middle Ages	Field Trip-Getty Museum	7.3.5; 7.3.6
	Guest Speakers-Religions	7.3.3; 7.3.4
	Farming Techniques	7.3.4; 7.3.2
Islam in the Middle Ages	Online Museums	7.2.3; 7.2.6
	Mapping-National Geographic Society	7.2.1; 7.2.2; 7.2.4; 7.2.5; 7.2.6
Medieval Africa	Online Museums	7.4.5
	African Folktale Project	7.4.5; 7.4.4
	Guest Speaker	7.4.1; 7.4.2; 7.4.3; 7.4.4
Medieval Japan	Screen Drawing Project	7.5.5; 7.5.4; 7.5.3; 7.5.2
	Guest Speaker-LAMA	7.5.5; 7.5.6
	Panel Discussion-Royal Japan	7.5.1; 7.5.2; 7.5.3; 7.5.4
Medieval Europe	Online Museums	7.6.6; 7.6.2
	The Castle Unit	7.6.3; 7.6.2; 7.6.4
	Mapping Activities	7.6.1; 7.6.2; 7.6.7; 7.6.9; 7.6.6; 7.6.9
Meso-America and Andean Civilizations	Mapping-National Geographic Society	7.7.1; 7.7.3
	Popcorn Unit	7.7.2; 7.7.3; 7.7.4; 7.7.5
Renaissance	Spreadsheet of one area (Math/Science/Arts)	7.8.5; 7.8.4; 7.8.2; 7.8.1
Reformation	Biography-Timeline	7.9.1; 7.9.2; 7.9.7; 7.9.5
	Mapping Activities	7.9.4; 7.9.6; 7.9.7
	Panel Discussions	7.9.1; 7.9.3
Scientific Revolution	Inventor Reports-Written	7.10
16 th , 17 th & 18 th Centuries	Multimedia Presentations-Group Activity (Class in Three Sections)	7.11
	Readings from Magna Carta, English Bill of Rights and the American Declaration of	7.11.6

	Independence	
	Oral Presentation of Multimedia Project-Peer Critiques	7.11

Grade: 8 - United States History: Independence to 1914

The focus for the first semester is the development of America's democratic institutions and the development of American politics, society, culture and the economy. The origins of regional differences will be stressed. The events leading up the Civil War and the consequences of that struggle will be explored. The rise of industrialization and contemporary social and economic conditions will be the last unit of the year.

Objective	Units/Lesson	Standard(s)
Major events preceding the founding of the nation and relationship to the development of American constitutional democracy	Personalities of the Great Awakening	8.1.1
	The Declaration of Independence	8.1.2
	France or England: War!	8.1.3
	America's Democratic Heritage	8.1.4
The Political Principles of the US Constitution: Enumerated and Implied Powers	In Congress Assembled	8.2.1; 8.2.2; 8.2.3; 8.2.4; 8.2.5; 8.2.6; 8.2.7
	We the People Unit	8.2.1; 8.2.2; 8.2.3; 8.2.4; 8.2.5; 8.2.6; 8.2.7
	Spreadsheet of Continental Congress	8.2.1; 8.2.2; 8.2.3; 8.2.4; 8.2.5; 8.2.6; 8.2.7
		8.2.1; 8.2.2; 8.2.3; 8.2.4; 8.2.5; 8.2.6; 8.2.7
Foundations of the American Political System	Project Vote-Smart Curriculum	8.3.1; 8.3.2; 8.3.3; 8.3.4; 8.3.5; 8.3.6; 8.3.7
	We the People Unit	8.3.1; 8.3.2; 8.3.3; 8.3.4; 8.3.5; 8.3.6; 8.3.7
Aspirations and Ideals of the People	History Firsthand (Library of Congress)	8.4.1; 8.4.2; 8.4.3; 8.4.4
	Colonization and Settlement, 1585-1763 Tinker, Tailor, Farmer, Sailor (LofC)	8.4.1; 8.4.2; 8.4.3; 8.4.4
	Diaries	8.4.1; 8.4.2; 8.4.3; 8.4.4
US Foreign Policy in the Early Republic	Sea Changes: A Study of a New England Industry	8.5.1; 8.5.2; 8.5.3
Challenges of the American People from 1800 to 1850	Marco Paul's Travels on the Erie Canal: An Educational Voyage (LofC) and America Dreams, (LofC)	8.6.1; 8.6.2; 8.6.3
	Women's Movement: Voices for Votes: Suffrage Strategies (LofC) and Women:	8.6.6; 8.6.5; 8.6.4

	Struggle and Triumph (LofC)	
	American Art:	8.6.7; 8.6.4
Divergent Path of the South: 1800-1850	Images of Our People (LofC)- North, Middle and Southern Colonial readings, images and import and export records	8.7.1; 8.7.2; 8.7.3; 8.7.4
Divergent Path of the West: 1800-1850	Gene Autry Heritage Visit & Curriculum Unit	8.8.1; 8.8.2; 8.8.3; 8.8.4; 8.8.5; 8.8.6
	Journeys West (LofC) and Lewis & Clark (LofC)	8.8.1; 8.8.2; 8.8.3; 8.8.4; 8.8.5; 8.8.6
	Tracking Down the Real Billy the Kid (LofC)	8.8.1; 8.8.2; 8.8.3; 8.8.4; 8.8.5; 8.8.6
Slavery Issue	Created Equal? (Library of Congress)	8.9.1; 8.9.2; 8.9.3; 8.9.4; 8.9.4; 8.9.5; 8.9.6
	North/South Panel	8.9.1; 8.9.2; 8.9.3; 8.9.4; 8.9.4; 8.9.5; 8.9.6
Causes, key events and consequences of the Civil War	Civil War Panel Debate: Research Skills	8.10.1; 8.10.2; 8.10.3; 8.10.4; 8.10.5; 8.10.6; 8.10.7
	Photojournalism (LofC) Matthew Brady-Journals and Mathew Brady Bunch (LofC)/Guest Speaker- Photojournalist	8.10.1; 8.10.2; 8.10.3; 8.10.4; 8.10.5; 8.10.6; 8.10.7
	National Expansion and Reform, 1815-1860 America Dreams (LofC)	8.10.1; 8.10.2; 8.10.3; 8.10.4; 8.10.5; 8.10.6; 8.10.7
	The Civil War through a Child's Eye (Library of Congress)	8.10.1; 8.10.2; 8.10.3; 8.10.4; 8.10.5; 8.10.6; 8.10.7
Reconstruction	Reconstruction Spreadsheet	8.11.1; 8.11.2; 8.11.3; 8.11.4; 8.11.5
Transformation of the American Economy and the Social and Political Influences of the Industrial Revolution	Research Project: Boat to Ellis Island	8.12.5; 8.12.7
	Kings of Capitalism: Research online (Department of Commerce)	8.12.1; 8.12.3; 8.12.4; 8.12.5; 8.12.6
	Just Folks: Living in Cities and on Farms	8.12.3; 8.12.1
	Inventors and their Inventions: Research Paper	8.12.9
	Indian Boarding Schools: Civilizing the Native Spirit (LofC)	8.12.2
	The Grange and Populist Party: Panel Presentation	8.12.8

Elective Courses

The following courses are also part of the comprehensive education program and may be offered depending on student needs/demands and availability of teachers and resources:

LANGUAGES OTHER THAN ENGLISH

In grades 6 through 8, students may be offered languages other than English as elective courses depending on student needs/demands and availability of teachers and resources.

Spanish 1

(Annual Course)

Prerequisite: None

Text: Realidades-Level 1, Pearson Prentice Hall

Spanish 2

(Annual Course)

Prerequisite: Spanish 1

Text: Realidades-Level 2, Pearson Prentice Hall

Course Description

This course is designed to teach students about the language and culture of the Spanish and Latin American people. The first-year course emphasizes communication, basic grammar and syntax, and simple vocabulary so that students can read, write, speak, and comprehend on a basic level. The second-year course enables students to expand upon what they have learned, increasing their skills and depth of knowledge. The course teaches students to appreciate the Spanish and Latin American cultures by acquainting students with art, literature, customs, and history of the Spanish-speaking people.

References for Foreign Language

<i>Foreign Language Content Standards for California Public Schools, Kindergarten Through Grade Twelve</i>
--

VISUAL AND PERFORMING ARTS

In grades 6 through 8, students may be offered visual and performing arts courses as elective based on student needs/demands and availability of teachers and resources.

Art Appreciation

(Annual Course)

Prerequisite: None

Text: Laurie Schneider Adams, *The Making and Meaning of Art*, Pearson/Prentice Hall

Course Description

This yearlong course will emphasize the study and appreciation of art in all forms. The first year will introduce the study of art. Students may visit local museums and use online virtual museums as part of their course curriculum. The Getty Museum education curriculum will play an important part in the structure of the units.

Objectives

- Overview of Western and non-Western art through form, content, and cultural context
- Application of art theories
- Critiquing works of art
- Understanding styles of art
- Oral critiques of art forms
- Written report on artist
- Themes and purposes of art
- The vocabulary of art

Units

- What is Art?
- Visiting the Museum
- The Virtual Museum Experience
- Media Techniques and Art Process
 - Drawing
 - Printmaking
 - Photography
 - Watercolor and Tempera
 - Oil and Acrylic Painting
 - Sculpture (Hard and Soft)
 - Casting
 - Relief
- Murals

Students will:

- Identify and use principles of design
- Write about visual aspects in the environment
- Describe principles of design
- Research and analyze the work of an artist
- Analyze materials used by the artist
- Compare and contrast similar styles of works
- Analyze electronic media
- Discuss the ways an artist solved a visual arts problem
- Prepare an Art Appreciation portfolio
- Understand historical contributions and cultural dimensions of visual arts
- Analyze the role and development of the visual arts and how it relates to past a present cultures around the world
- Identify similarities and differences in the purpose of art created in different cultures

- Identify and describe the role and influence of new technologies on contemporary works of art
- Articulate how personal beliefs, cultural traditions, current social, economic, and political contexts influence the interpretations of the meaning or message in a work of art
- Compare the ways in which the meaning of a single work of art has been affected over time because of changes in interpretation and context. Emphasis will be on cross-curricular links with the Social Science and Language Arts curriculums. Banned works from the Nazi period, the Armory Show, and Renaissance works will be discussed and viewed in this course.
- Employ conventions of art criticism in writing and speaking about art
- Connecting and applying what is learned in the visual arts to other art forms and subject areas and careers. Guest artists and museum workers will speak to classes about careers in art.

Standard Alignment

Objective	Units/Lessons	Standard(s)
Artistic Perception	What is Art?	1.0
	Guest Speakers-Artists	1.0; 2.0; 3.0; 4.0
	Vocabulary of Art	1.0; 4.0
Creative Expression	Basic Techniques and the Art Process: Drawing, Printmaking, Photography, Watercolor and Tempera, Oil and Acrylic Painting, Sculpture (Hard and Soft), Casting, Relief and Murals	2.0
Historical and Cultural Context	Visiting the Museum	3.0
	Movements and Periods and Artists: Panels and Written Report	3.0
	Geographic Differences	3.0
	Art as Culture	3.0
Connections, Relationships and Applications	Art Theory	4.0
	Portfolio on Artist or Period	4.0
	Evaluation of Art	4.0
	Purposes of Art	4.0
	Art in History	4.0

Music Appreciation

(Annual Course)

Prerequisite: None

Text: Charles B. Fowler, *Music: Its Role and Importance in Our Lives*

Course Description

This yearlong course will emphasize the study and appreciation of music in all forms. The first year of music appreciation will introduce the study of music (with an emphasis on all forms of music). Students may have the opportunity to attend music performances and use online performance sites as part of their course curriculum. Guest speakers will play an important role in this class. Local symphonies and orchestras may also provide a rich resource for this study.

Units:

- What is Music?
- Music that Tells a Story
- Instruments of the Orchestra
- Four Sections of the Orchestra
- Role of the Conductor
- What Does the Composer Do?
- What is a Music Score and How is it Read?
- Four Important American Composers
- Four Important American Conductors
- Four Important Symphony Musicians
- Rhythm in Music
- Melody in Music
- Basic Harmony in Music
- Tone Color: Why Don't All Instruments Sound Alike?
- World Music
- Music as Culture

Curriculum:

Students will understand music through:

- Overview of Western and non-Western music through form, content, and cultural context
- Application of music theories
- Critiquing works of music
- Understanding styles of music
- Oral critiques of music pieces
- Written report on composer, musician or conductor
- Themes and purposes of music
- The vocabulary of music
- Students will be able to:
 - Identify and use basic rhythm, melody, harmony
 - Write about musical aspects in the environment
 - Describe principles of written music
 - Research and analyze the work of a composer
 - Analyze instruments used by the musician
 - Compare and contrast similar styles of works
 - Analyze electronic music
 - Discuss the ways an artist solved a music problem
 - Prepare a Music Appreciation portfolio
 - Understand historical contributions and cultural dimensions of music
 - Analyze the role and development of music and how it relates to past a present cultures around the world
 - Identify similarities and differences in the purpose of music created in different cultures
 - Identify and describe the role and influence of new technologies on contemporary works of music
 - Articulate how personal beliefs, cultural traditions, current social, economic, and political contexts

- influence the interpretations of the meaning or message in a work of music
- Compare the ways in which the meaning of a single work of music has been affected over time because of changes in interpretation and context. Emphasis will be on cross-curricular links with the Social Science and Language Arts curriculums. Banned works from the Nazi period, 1960s, rap music, and WWI and WWII.
- Employ conventions of music criticism in writing and speaking about music
- Connecting and applying what is learned in music to other art forms and subject areas and careers. Instrument designers and makers, conductors, composers and musicians will speak to classes about careers in music.

Students may elect to take Music Appreciation more than once. Lessons and Activities will be different each year. Unit formatting and themes will remain the same but composers and selection of music will rotate every three years.

Each musical era will be placed into the appropriate cultural context relating to the arts, society, economics, and scientific and mathematical exploration.

Standard Alignment

Objective	Units/Lessons	Standard(s)
Artistic Perception: Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music	Reading Music	1.1, 1.2, 1.3
	Music Critic	1.4, 1.5, 1.6
	Reading the Critics	1.4, 1.5, 1.6
	What is Music? /Definitions	1.0
	Description of Written Work	1.0
Creative Expression: Creating, Performing, and Participating in Music	Explore technological innovations in music	2.0
	Identify and use basic rhythm, melody and harmony	2.0
	Solving a Problem in Music	2.0
	Selection of Instruments or Technology	2.0
Historical & Cultural Context: Understanding the Historical Contributions and Cultural Dimensions of Music	Movements and Eras of Music	3.0
	Western and Non-Western Music	3.0
	Influence Over Time	3.0
Aesthetic Valuing: Responding to, Analyzing, and Making Judgments About Works of Music	Collection of Music Reflections including one Critique	4.0
	Music Criticism in written and oral presentations	4.0
Connections, Relationships, Applications: Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers	Careers in Music (Science Related)	5.0
	Diversity in Music/World Music	5.0
	Portfolio of Projects and Papers	5.0
	Music and History	5.0

Drama

(Annual Course)

Prerequisite: None

Text: Selection will be by the instructor for the units of study. Instructors will select texts from state, district and department approved textbooks.

Course Description

This is a performance course which includes the training of classical and modern monologues, scene study, learning terminology and theatre history, and includes an end-of-semester performance. Students are exposed to the dramatic arts and given opportunities to investigate the discipline to discover and develop their talents in this area. Through a variety of methods, students communicate in a dramatic form, make artistic choices, solve problems, build positive self-concepts and relate interpersonally.

Curriculum

- Theatre History
 - Historical Timeline
 - Beginning of theatre
 - Greeks and Romans
 - Middle Ages
 - Eastern Theatre
 - Commedia dell' arte
 - Shakespeare
 - Modern Theatre and Realism
 - Stanislavski and The Moscow
- Art Theatre
 - Early Theatre in the U.S.
 - Musical Theatre
 - The American Regional Theatre
- Contemporary Theatre: A world and Theatre Change
 - Puppetry and Masks
- Theatre Appreciation
 - Theatre Conventions
 - Audience Etiquette
 - Comparing Theatre with
- Careers in Theatre
 - Playwrights
 - Actors/Resume Writing
 - Producers
 - Directors
 - Designers
 - Stage Management
 - Teaching
- Technical Theatre
 - Types of Stages
 - Stage Terminology
 - Stage Directions
- Stage/Backstage
 - The Structure of Plays
 - Preparing a Part
- Production Procedure
 - Selecting the Play
 - Audition Process
 - Rehearsal Procedure
 - Behind the Scenes
- Production Teams
 - Stage Crew
 - Designers
 - Director
 - Producer

- Property Master
 - Costume
 - Wardrobe
 - Makeup
- Acting Skills
 - Physical and Vocal Warm ups
 - Articulation
 - Pantomime
- Techniques
 - Define the Mechanics of Pantomime
 - Range of motion/Isolations
 - Improvisation
 - Define purpose of study for the actor
 - Various improvisational exercises
 - Monologues

PHYSICAL EDUCATION/HEALTH

(Annual Course)

Prerequisite: None

Text: Selection will be by the instructor for the units of study. Instructors will select texts from state, district and department approved textbooks.

Course Description

Courses offered in the Physical Education department are designed to help the students' develop psychomotor skills such as fundamental movement patterns, sports skills, and the five components of physical fitness. In addition, students' will develop a positive self-image and the ability to work with other classmates. The curriculum includes sports such as basketball, volleyball, football, soccer, track and field, softball, cooperative/teamwork games, mile run/mile and a half run, anaerobic activities, warm-up (Jogging or J.J.), stretching, push-ups, abdominal exercises, jump-rope, fun trust/games.

The Physical Education program consists of students in grades six through eight. Students will participate in skill building activities, introduction to sports and activities, and physical activities that link to the exploration of culture and history. The goal of the program is to develop a lifelong program of activity to develop and maintain healthy habits and wellness.

Units:

Quarter One	Quarter Two	Quarter Three	Quarter Four
Stretching Yoga Individual Sport Running	Choice of: Stretching Yoga Folk Dance Gymnastics Team Volleyball Basketball Football Soccer Track and Field Softball	Choice of: Stretching Yoga Folk Dance Gymnastics Team Volleyball Basketball Football Soccer Track and Field Softball	Choice of: Stretching Yoga Folk Dance Gymnastics Team Volleyball Basketball Football Soccer Track and Field Softball

Curriculum:

Students will demonstrate:

- Proficiency and motor skills necessary to perform a list of tasks related to the units offered in the school program
- Perform physical tasks meeting the requirements of common occupations
- The formation of a personal life-long plan of physical activity for wellness
- Knowledge of psychological and sociological concept, principles and strategies that are applicable to the activity and learning experience
- An ability to adapt leadership roles in group activity, performance or play
- Recognize the role of cooperation in team activity
- An understanding of diversity in group play
- An understanding of the link between group sports play, family, and occupations
- By writing a one-month physical fitness plan
- Using computerized calendar program, an exercise plan that meets personal goals and needs
- Through a written research project, students will understand the role of adequate nutrition in a healthy lifestyle. This project will involve integration of a menu into the one-month exercise calendar
- Demonstrate independent learning of movement skills and motions
- Discuss the types of movements and the training impact of each movement

Standard Alignment

Objective	Units/Lessons	Standard(s)
Wellness	Link Exercise and Health	CA PE Framework
Exercise and Diet	Weekly Record of Exercise One Month Plan	
Lifelong Plan for Health	Computerized Exercise Plan	
Nutrition	Food Groups	
	Eating for Exercise	
	Food Pyramid	
Physical Proficiency	Single Participant	
	Team Activity	
	Leader	
Movement	Link Movement	
	Independent Learning of Skills & Motions	
	Understand Diversity in Movement and Play	
Exercise	Sports and Dance Units	

COMPUTERS AND TECHNOLOGY

(Annual Course)

See Appendices titled “Technology Integrated Education” and “Computer Science Program” for detailed information about these courses.

A+ (ADVANCED STEM) PROGRAM

(Annual Course)

Prerequisite: None

Course Description

As explained in section titled “Accelerated Academic Achievement” in the charter petition, A+ is BayTech’s program for gifted/highly gifted students. This condensed training program helps students develop their critical and analytical thinking skills while providing them with a motivational and challenging environment by utilizing prestigious math, science and computer competitions at the regional, national and international level.

A+ can be offered as an elective class and after school club at BayTech. Students may have the opportunity to meet after school, over the weekends and at camps throughout the year to continue their advanced studies where they get coached by Accord Institute’s A+ program coaches.

Please see Appendix titled “A+ (Advanced STEM) Program” for detailed information including the curriculum, guidelines, and handbooks.

MATH/ELA ENRICHMENT/INTERVENTION CLASSES

As explained in section titled “Data Driven Design” in the charter petition we believe that early intervention is a must. BayTech quickly identifies the low-achieving students in the first weeks of the academic year, and implements an early intervention program. Students who are achieving substantially below grade level are identified through multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education’s website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests.

For students achieving substantially below grade level in math or English, BayTech offers Math/ELA Enrichment/Intervention classes. Teachers use educational materials that provide review and re-teach programs. McGraw Hill’s Acuity program, Holt McDougal Publisher’s resources, Kuta software, Khan Academy, Accelerated Reader and Accelerated Math program allow teachers to monitor the progress of students who are achieving below grade level and provides software generated tests and personalized instructional materials based on California content standards/framework which have not been achieved.

GET READY FOR LIFE

(Annual Course)

Prerequisite: None

Course Description

This program contains topics on Life Skills, Study Skills, Test Taking Skills, Drug Prevention, Environmental Issues, College and Career Awareness and Character Education.

The GRFL course offered at BayTech is one period per week in each grade of middle school. During the year, a well-structured character education plan is put into practice through the GRFL class, announcements, quotes displayed on the board, special events and activities, and curriculum integration. The GRFL program addresses the following issues/topics as part of the curriculum:

- Patterns of Success (Essential skills to prepare for College & Academic Success)
- Respect
- Conflict Resolution (Addressing teen issues including: Bullying, Cyber bullying, Peer Pressure)
- Making Responsible Choices (Ethics, Drug/Alcohol Awareness/Prevention)
- Citizenship (Democratic Values)
- Human Relations (Social Interactions)
- Personal Qualities (Core Values)
- Self-Discipline (Developing a positive attitude)

GRFL is an enrichment course that provides students with valuable skills to excel academically and socially in the 21st century. Students participate in activities/projects to demonstrate their understanding of the values/lessons. Guest speakers and various forms of technology engage students in the course content.

Lesson plans include exemplary stories, effective PowerPoint presentations on character traits such as trustworthiness and integrity, skits by students and community activities such as nursing home visits. Parents are regularly informed about the topic of the week to ensure that they also be involved in our effort to inspire positive principles of conduct in our future leaders. Approximately every month there is a different topic that is discussed.

Please see Appendix titled "Get Ready For Life Program" for an illustration of the "Get Ready For Life (GRFL)" course content through a weekly schedule.

SUSTAINED SILENT READING (SSR)

BayTech provides daily Sustained Silent Reading (SSR)^{1,2} and utilizes the Accelerated Reader © program by Renaissance Learning. The classrooms are equipped with libraries to provide access to a wide variety of books at appropriate reading levels. In addition, students who are struggling academically participate in the English enrichment/intervention programs during the day and after-school.

Accelerated Reader is a computer program that helps teachers to manage and monitor a student's independent reading practice. Unlike other reading programs, students select a book at their level and read it during SSR. Once completed, the student is administered an online assessment to provide feedback for the teacher on whether the student understood the content. The assessment results are used to select a more appropriate leveled book, and ask more probing questions as the student is reading the book.

In order to determine the student's reading level, the STAR Reading Test, a computerized reading assessment that utilizes computer-adaptive technology is administered. The questions on the assessment continually adjust according to the student's responses. For example, if the response is correct, the difficulty level is increased, if the response is incorrect, the difficulty level is reduced. The assessment is comprised of multiple-choice questions and takes approximately 10 minutes. The results include a Zone of Proximal Development (ZPD), which is a range of books that will challenge the student without causing frustration.

Students' reading comprehension skills are monitored via their participation in the Accelerated Reader program. If a student continually obtains low scores while reading at his or her level, intervention is immediately implemented.

For BayTech, the goals of the STAR Reading and AR programs are:

- 100% student and staff participation
- Students' average 90% comprehension on AR quizzes
- 20 minutes minimum reading per day (the primary expectation is that students read in SSR)
- 10% increase in ZPD range annually
- Maintain consistent testing conditions for maximally accurate data
- Recognition of students by staff for exemplary effort and performance
- Assessment results are used to inform Response to Intervention (RTI) strategies by all teachers.

¹ Yoon, Jun-Chae, "Three Decades of Sustained Silent Reading: A Meta-Analytic Review of the Effects of SSR on Attitude toward Reading" Reading Improvement, v39 n4 p186-95 Win 2002

² Akmal, Tariq T. "Ecological Approaches to Sustained Silent Reading: Conferencing, Contracting, and Relating to Middle School Students" Clearing House, v75 n3 p154-57 Jan-Feb 2002

HIGH SCHOOL CURRICULUM AND COURSE DESCRIPTIONS

One of the cornerstones of BayTech's academic vision is the understanding that science is a central factor in understanding the world. Science has the power to help students discover interesting and exciting facts about the world and also about themselves. As college-preparatory schools, BayTech consider the various factors that lead to post-secondary success. Two reliable predictors are high school achievement in advanced science and math courses and writing ability.

High school curriculum will offer courses in core subjects of Mathematics, Science, English, and History/Social Science. In addition to the core subjects, students are required to take two years of Physical Education, at least two years of Languages Other Than English (three years recommended), one year of Visual & Performing Arts, one year of Computers & Technology courses, and six semesters of electives for a standard diploma. Please see the "Graduation Requirements" below for a list of required high school courses for graduation.

Courses Explained

BayTech's high school curriculum meets all California State Minimum Course Requirements for high school graduation and the a-g requirements of the University of California system.

A. History/Social Science

In high school, students are required to take at least three years of History/Social Science, including U.S. History, World History, American Government/Economics.

B. English

In high school, students are required to take four years of approved courses in English.

C. Mathematics

In high school, students are required to take at least three years of approved courses in Mathematics; four years are recommended. Students need to complete Algebra I, Geometry, and Intermediate Algebra (Algebra II) before graduation.

D. Science

In high school, students are required to take at least two years of Science, two of which are laboratory courses chosen from Biology, Chemistry, and Physics; three years are recommended.

E. Languages Other Than English

In high school, students are required to take at least two years of a language other than English in the same language; three years are recommended.

F. Visual and Performing Arts

In high school, students are required to take at least one year of visual and performing arts chosen from the following categories: dance, drama/theater, music, or visual art.

G. Electives

In high school, students will be offered a variety of elective courses depending on student needs/demands and availability of teachers and resources. Students are required to take at least six semesters of electives for a standard diploma. The electives will be offered in the areas of Social Science, English, Mathematics, Science, Language Other Than English, Visual and Performing Arts, Life Skills/Health, and Computer and Technology.

H. Physical Education/Health

In high school, students are required to take two years of Physical Education before graduation unless exempted pursuant to the provisions of the related Education Code.

During Physical Education courses students will be given the opportunity to engage in an array of physical activities that are fun, culturally appropriate, and challenging. In the Health portion of the curriculum, students will have the opportunity to develop the skills necessary for maintaining a healthy lifestyle.

I. Computers and Technology

In high school, students are required to take one year of Computers and Technology courses before graduation.

I.1 TIE Curriculum

TIE Curriculum covers the technology skills that are essential for a 4-year S&E major and the basic skills that lead to various IT related careers. The curriculum not only covers the technology skills but also integrates them with Math, Science, English, and History/Social Science through hands-on activities.

The set of essential technology skills are derived from the syllabus of International Computer Driving License (ICDL). The ICDL is the world's largest end-user computer skills certification program, with more than 20,000 test centers, 7 million students and 2 million certificate holders in 146 countries including the United States. It is a globally recognized credential that certifies an individual as competent in using computers and covers all the computer skills that students need to have to be successful in college and at work. It provides a superior syllabus that is uniquely validated to ensure that it is always relevant, up-to-date, and meaningful.

Majority of students –especially from minority backgrounds- start 6th grade with almost no significant technology skills. As they progress into 8th grade and high school, they gain autonomy in choosing and advancing in the right tools for their projects.

The 8th grade curriculum briefly introduces the topics that are taught at high school level through entry-level projects.

High school TIE/Computer Science courses include Digital Arts, Web Authoring, Desktop Publishing, Introduction to Programming, AP Computer, and Advanced Office, which aims to provide students with perspective to understand the IT careers such as Computer Programmer, Graphic Designer, Web Developer, Computer Scientist, etc.

In addition, Accord's A+ (Advanced STEM) Program offers in-depth advanced algorithms and programming studies for more interested and gifted students. The A+ program inspires students to pursue graduate studies in Computer Science as well as other S&E areas since through this unique program students already master most undergraduate-level computer science topics in high school and start taking advanced level or masters courses even in the beginning of their college education.

Design

6th and 7th Grades

Students will work on TIE activities that teach essential technology skills through integration with content from Math, Science, English, and Social Science.

8th Grade

Students will work on entry-level projects that introduce the topics of high school computer courses, as well as integration projects that involve content from core classes. After completing these classes, students make informed decisions on selecting high school computer courses.

High School

High school computer courses introduce advanced topics that relate to IT careers. At high school level, integration continues at an advanced level using skills such as programming, animation, and web authoring as cognitive tools.

Integrating Computers into Core Classes

As mentioned above, integration projects address NETSS and California content standards and will lead students to higher order learning. For example;

- students create a flash animation of DNA replication
- students create an interactive flash simulation of springs in a space with gravity
- students use digital art to make a poster of complex molecules
- students use online survey tools to collect information about other students' favorite celebrities and form a database to analyze their roles in students' way of dressing
- students collect data from recent census records into a database and plot demographic and other changes on maps using colors
- students write a program that simulates spread of a disease
- students write a program that produces pattern images of multiple-slit light interference through simulation of light as particles based on parameter values given by the user

I.2 Computer Science Curriculum

In conjunction with the Technology Integrated Education (TIE) instruction, Magnolia Science Academy-Santa Clara implements the Accord Institute Computer Science curriculum, which complies with Computer Science Teachers Association (CSTA)'s 'A Model Curriculum for K-12 Computer Science.' This model has four levels:

<u>Recommended Grade</u>	<u>Level</u>
▪ K-8	Level I-Foundations of Computer Science
▪ 9 or 10	Level II-Computer Science in the Modern World
▪ 10 or 11	Level III-Computer Science as Analysis and Design
▪ 11 or 12	Level IV-Topics in Computer Science

BayTech Computer Science curriculum is one step ahead of the above chart since Level I and a big portion of the Level II topics are already covered in the middle school TIE program. Level III and IV topics are covered in high school. For the gifted students who are ready for an accelerated program, BayTech offers the A+ (Advanced Computer) curriculum in middle school where topics in Level III, IV and above are covered.

The following summarizes Accord's Computer Science curriculum:

- Middle school curriculum aims to provide strong skills in computer literacy and fundamentals of computational thinking. Programming and Discrete Math topics are infused into the curriculum. Programming topics will be more intense in the 6th and 7th grades with the higher results in the assessment exam.
- 8th grade curriculum serves a transition between middle school and high school. Hence, 8th grade topics focus on the conceptual understanding of high school electives.
- High school curriculum is composed of elective courses and AP Computer Science course. Accord Institute currently provides the following elective course packages:
 - Introduction to Programming
 - Digital Arts
 - Web Authoring
 - Desktop Publishing
- Elective courses can be given in any grade; however, the recommended sequence is as provided above. 'Introduction to Programming' course, developed by the Accord Institute, corresponds to the 'Computer Science: Principles' course, which is currently a pilot course being developed by the College Board as an AP course. This introductory course will be a prerequisite for the 'AP Computer Science' course.

Please see Appendix B2 for more information about BayTech's "Computer Science Program."

J. A+ (Advanced STEM) Program

As explained in section titled "Accelerated Academic Achievement," A+ is BayTech's program for gifted/highly gifted students. This condensed training program helps students develop their critical and analytical thinking skills while providing them with a motivational and challenging environment by utilizing prestigious math, science and computer competitions at the regional, national and international level.

A+ may be offered both as an elective class and after school club at BayTech. Students have the opportunity to meet after school, over the weekends and at camps throughout the year to continue their advanced studies where they get coached by Accord Institute's A+ program coaches.

Please see Appendix titled "A+ (Advanced STEM) Program" for detailed information including the curriculum, guidelines, and handbooks.

K. Advanced Placement (AP) Courses

As explained in section titled "Accelerated Academic Achievement," BayTech will offer Advanced Placement (AP) classes in high school. AP courses are college-level courses, taught with college textbooks and exams that can give students college credit in the form of advanced standing when they enter their freshman year. Students have to pass the corresponding AP test in order to get college credit.

BayTech may offer AP Language and Composition, AP Calculus, AP Biology, AP Chemistry, AP Physics, AP Computer Science, AP World History, AP US History, AP American Government, AP Economics, AP Spanish and other courses depending on student needs/demands and availability of teachers and resources.

L. Math/ELA Enrichment/Intervention Classes

As explained in section titled “Data Driven Design” in the charter petition, we believe that early intervention is a must. BayTech quickly identifies the low-achieving students in the first weeks of the academic year, and implements an early intervention program. Students who are achieving substantially below grade level are identified through multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education’s website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests.

For students achieving substantially below grade level in math or English, BayTech offers Math/ELA Enrichment/Intervention classes. Teachers use educational materials that provide review and re-teach programs. McGraw Hill’s Acuity program, Holt McDougal Publisher’s resources, Kuta software, Khan Academy, Accelerated Reader and Accelerated Math program allow teachers to monitor the progress of students who are achieving below grade level and provides software generated tests and personalized instructional materials based on California content standards/framework which have not been achieved.

M. Sustained Silent Reading (SSR)

BayTech provides daily Sustained Silent Reading (SSR)^{1,2} and utilizes the Accelerated Reader © program by Renaissance Learning. The classrooms are equipped with libraries to provide access to a wide variety of books at appropriate reading levels. In addition, students who are struggling academically participate in the English enrichment/intervention programs during the day and after-school.

Accelerated Reader is a computer program that helps teachers to manage and monitor a student’s independent reading practice. Unlike other reading programs, students select a book at their level and read it during SSR. Once completed, the student is administered an online assessment to provide feedback for the teacher on whether the student understood the content. The assessment results are used to select a more appropriate leveled book, and ask more probing questions as the student is reading the book.

In order to determine the student’s reading level, the STAR Reading Test, a computerized reading assessment that utilizes computer-adaptive technology is administered. The questions on the assessment continually adjust according to the student’s responses. For example, if the response is correct, the difficulty level is increased, if the response is incorrect, the difficulty level is reduced. The assessment is comprised of multiple-choice questions and takes approximately 10 minutes. The results include a Zone of Proximal Development (ZPD), which is a range of books that will challenge the student without causing frustration.

Students’ reading comprehension skills are monitored via their participation in the Accelerated Reader program. If a student continually obtains low scores while reading at his or her level, intervention is immediately implemented.

For BayTech, the the goals of the STAR Reading and AR programs are:

¹ Yoon, Jun-Chae, “Three Decades of Sustained Silent Reading: A Meta-Analytic Review of the Effects of SSR on Attitude toward Reading” Reading Improvement, v39 n4 p186-95 Win 2002

² Akmal, Tariq T. “Ecological Approaches to Sustained Silent Reading: Conferencing, Contracting, and Relating to Middle School Students” Clearing House, v75 n3 p154-57 Jan-Feb 2002

- 100% student and staff participation
- Students' average 90% comprehension on AR quizzes
- 20 minutes minimum reading per day (the primary expectation is that students read in SSR)
- 10% increase in ZPD range annually
- Maintain consistent testing conditions for maximally accurate data
- Recognition of students by staff for exemplary effort and performance
- Assessment results are used to inform Response to Intervention (RTI) strategies by all teachers.

O. Community Service

BayTech students will engage in community service to develop and demonstrate crucial life skills. This will help students gain "real life" experience and develop responsibility, caring and respect for others.

Students will be required to earn 40 hours (or the equivalent of 10 hours per each year of enrollment) of community service for an advanced or honors diploma. Students may begin to earn these hours once they complete their 8th grade year.

Graduation Requirements

BayTech believes that students need to have physical and mental experience in high school, which includes academic, life skills, and applied experiences. BayTech meets and exceeds the admission requirements of all four-year universities including University of California.

Currently, every student must earn a total of 210 semester credits in grades 9 through 12 in order to receive a high school diploma. Each high school course at BayTech is semester based and worth 5 credits. Students need to have an end-of-the-semester final grade of at least a "C" (=2.0) to earn credit for the course. Credit is awarded on the basis of student participation, mastery of subject matter, and/or attainment of skills.

The table on the following pages lists courses required in order to graduate from BayTech. BayTech offers three different high school diploma types: standard, advanced, and honors. Each diploma has minimum requirements that meet and exceed the state graduation requirements and the "a-g" subject requirements of California's four-year public universities. Students are always welcome, and often encouraged, to exceed these minimum requirements. (The advanced and honors diploma types will apply to the class of 2017 – students who are entering the 9th grade during the 2013-14 school year.)

Students will be required to pass the California High School Exit Exam (CAHSEE) in order to receive a BayTech Diploma. Letter of completion will be given to students who do not pass the CAHSEE.

BayTech math requirements are threefold:

- Credit requirements: BayTech requires at least 30 semester credits of math for a standard diploma and 40 semester credits of math for an advanced or honors diploma. Some of these credits can be earned in middle school.
- Year requirements: BayTech requires students to be enrolled in a math course for at least two years in grades nine through twelve for a standard diploma (state requirement) and at least three years in grades nine through twelve for an advanced or honors diploma. For example; a student may take Algebra-I in seventh grade, Geometry in eighth grade, and Algebra II in ninth grade. The student still needs to take one more year of math for a standard diploma and two more years of math for an advanced or honors diploma.
- Course requirements: Students need to complete Algebra I, Geometry, and Intermediate Algebra (Algebra II) before graduation.

BayTech encourages students to engage in community service to develop and demonstrate crucial life skills. This will help students gain "real life" experience and develop responsibility, caring and respect for the community. Therefore, students will be required to earn 40 hours of community service before graduation for an advanced or honors diploma. Students may begin to earn these hours once they complete their 8th grade year.

In order for students to participate in any senior activities they must have a total of 150 credits at the beginning of the first semester and/or 180 credits at the beginning of the second semester of their senior year. In addition, students have to fulfill all the graduation requirements to participate in the Graduation Ceremony.

Table 1 – BayTech Graduation Requirements

Subject Area	Minimum Course Requirements	Sample Elective Courses*	STANDARD Diploma	ADVANCED Diploma	HONORS Diploma
(a) History/Social Science	Three years, including World History US History American Government and Civics (1/2) Economics (1/2)	Sociology AP Psychology AP World History AP US History AP US Government & Politics	30	30	30
(b) English	Four years of approved courses English 9 English 10 English 11 English 12	Creative Writing Journalism Public Speaking AP English Language and Composition AP English Literature and Composition	40	40	40
(c) Mathematics	Three years, including Algebra I Geometry Intermediate Algebra (Algebra II) <i>(Four years recommended)</i>	Trigonometry Probability and Statistics Pre-Calculus AP Calculus AB AP Calculus BC AP Statistics	30	40	40
(d) Science	Two years with lab required; lab chosen from Biology Chemistry Physics <i>(Three years recommended)</i>	Earth Science Environmental Science Marine Biology AP Biology AP Chemistry AP Physics B AP Physics C	20	30	40
(e) Language Other Than English	Two years in same language required. <i>(Three years recommended)</i>	Spanish-1, Spanish-2, Spanish-3, Spanish-4, AP Spanish Language, Other world languages offered by the School	20	20	30
(f) Visual & Performing Arts	One year of visual and performing arts chosen from the following: dance, drama/theater, music or visual art	Art Drama Multimedia Music Photography Web Design & Graphic Arts	10	10	10
(g) Electives*	20 or 30 credits of electives required depending on diploma type.	Additional courses in History/Social Science, English, Mathematics, Science, Language Other Than English, Visual & Performing Arts and Computers & Technology	30	30	20

Physical Education	Two years required.		20	20	20
Computers & Technology	One year required.	3-D Modeling Advanced Office Computer Aided Design Computer Literacy-1 Computer Literacy-2 Desktop Publishing Digital Arts Introduction to Engineering Design Introduction to Programming Pre-AP Computers Principles of Engineering Robotics Web Authoring AP Computer Science A	10	10	10
Total Required Credits			210	230	240
AP Course / College Credit Requirements	AP * or college courses can be taken to meet minimum course requirements or as elective.		N/A	20	40
Other Requirements	California High School Exit Exam Minimum Cumulative GPA Required Service Learning Hours		2.00 N/A	3.25 40 hrs	3.50 40 hrs

Course Descriptions

MATHEMATICS

Algebra I

(Annual Course)

Prerequisites: None

Text: Algebra 1, Holt CA

Course Description

Algebra I is a two semester course that provides students with a solid background in algebra and that prepares them for all higher-level math courses.

Curriculum:

Students will be able to:

- Identify and use mathematic properties of subset and integers and rational, irrational and real numbers
- Understand closure properties for the four basic arithmetic operations
- Use properties of numbers to demonstrate whether assertions are true or false
- Understand and use operations of finding the reciprocal, taking a root and the opposite, and raising to a fractional power
- Understand the rules of exponents
- Solve equations and inequities involving absolute values
- Simplify expressions before solving problems
- Solve multi-step problems involving linear equations and linear inequalities in one variable, showing justification
- Graph a linear equation and compute the x- and y- intercepts
- Able to sketch the region defined by linear inequalities
- Verify that a point lies on a line, given an equation of the line
- Derive linear equations by using the point-slope formula
- Concepts of parallel and perpendicular lines and how their slopes are related
- Find the equation of a line perpendicular to a given line that passes through a given point
- Solve a system of two linear equations in two variables algebraically and interpret the answer graphically
- Solve a system of two linear inequalities in two sets and sketch the solution sets
- Add, subtract, multiply and divide monomials and polynomials
- Solve multistep problems, including word problems using subtraction, multiplication and division of monomials and polynomials
- Apply basic factoring techniques to second- and simple third-degree polynomials.
- Simplify fractions with polynomials in the numerator and denominator
- Add, subtract, divide and multiply rational expressions and functions
- Solve a quadratic equation by factoring or completing the square
- Apply algebraic techniques to solve rate and work problems, and percent mixture
- Understand the concepts of relation and a function and how they work in relation to one another
- Determine the domain of independent and dependent variables defined by a graph, a set of ordered pairs or a symbolic expression
- Determine whether a relation defined by a graph, a set of ordered pairs or a symbolic expression is a function and justify the conclusion
- Know the quadratic formula and are familiar with its proof
- Can complete the square with a quadratic formula
- Can use the quadratic formula to find the roots of a second-degree polynomial and how to solve quadratic equations
- Graph quadratic functions
- Understand the root of quadratic function graphing is at the x-intercepts
- Use quadratic formula or factoring technique (or both) to determine whether the graph of a graph of a quadratic function will intersect the x-axis in zero, one, or two points

- Apply quadratic equations to physical problems, such as the motion of an object under the force of gravity. Students will visit with a guest speaker from JPL to discuss the use of Algebra in Space Science.
- Use and know the simple steps of a logical argument. This study will integrate into their Social Science and Language Arts classes in the study of logical proofs and political arguments.
- Use the properties of the number system to judge the validity of the results, to justify each step of the procedure, and to prove or disprove statements

Geometry

(Annual Course)

Prerequisites: Algebra I

Text: Geometry, Holt CA

Course Description

Geometry introduces students to the study of basic figures and shapes in the plane and in space. Students will apply simple deductive reasoning to points, lines, and planes while developing relations and applications to other geometric figures. Teachers will use space science to motivate students in the practical application of the study.

Units:

Common Geometric Figures Inductive and Deductive Reasoning Proofs	Volumes and Surface Areas Proofs Congruency and Similarity Triangle Inequality Theorem	Relationships Proofs Parallel Line Problems Properties of Quadrilaterals Properties of Circles	Constructions Proofs Perimeter, Circumference, Area, Volume, Lateral Area and Surface Problems
---	---	--	--

Curriculum:

Students will demonstrate:

- Understanding by identifying and giving examples of undefined terms, axioms, theorems and inductive and deductive reasoning
- The ability to use magazine advertisements to create statements of inductive and deductive reasoning claims
- Write geometric proofs, including proofs by contradiction
- Construct and judge the validity of a logical argument and give counterexamples to disprove a statement
- Prove basic theorems involving congruence and similarity
- Prove that triangles are congruent or similar
- Use the concept of corresponding parts of congruent triangles
- Know and are able to use the triangle inequality theorem
- Prove and use theorems involving the properties of parallel lines cut by a transversal
- Understand and use the properties of quadrilaterals
- Understand and use the properties of circles
- Know, derive and solve problems involving the perimeter, circumference, area, volume, lateral area and surface area of common geometric figures
- Compute the volumes and surface areas of prisms, pyramids, cylinders, cones and spheres and have the formula for these operations committed to memory
- Compute areas of polygons and be able to apply this knowledge to work in planning the school garden
- Determine how changes in dimensions affect the perimeter, area and volume of common geometric figures and solids
- Find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems
- Prove relationships between angles in polygons by using properties of complementary, supplementary, vertical, and exterior angles
- Be able to prove the Pythagorean theorem and be able to determine distance and find missing lengths of sides of right triangles
- Perform basic constructions with a straightedge and compass
- Prove that the standard construction of the perpendicular from a point to a line

- Prove theorems by using coordinate geometry
- Know the definitions of the basic trigonometric functions defined by the angles of a right triangle
- Able to use elementary relationships between angles of a right triangle to explain the larger angle and explain the rationale
- Use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side
- Know and are able to use angle and side relationships in problems with special right triangles
- Prove and solve problems regarding relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles
- Know the effect of rigid motions on figures in the coordinate plane and space, including rotations, translations, and reflections
- Use rigid motions to prove the side-angle-side criterion of triangle congruence

Algebra II

(Annual Course)

Prerequisites: Algebra I, Geometry

Text: Algebra 2, Holt CA

Course Description

Algebra II expands the content and concepts of Algebra I and Geometry.

Curriculum:

Students will know and be able to use:

- Solve equations and inequalities involving absolute value
- Solve systems of linear equations and inequalities in two or three variables by substitution, with graphs, or with matrices
- Adept at operations on polynomials, including long division
- Factor polynomials representing the difference of squares, perfect square trinomials, and the sum and difference of two cubes
- How real and complex numbers are related both arithmetically and graphically
- Plot complex numbers as points in the plane
- Add, subtract, multiply and divide complex numbers
- Add, subtract, multiply and divide, reduce and evaluate rational expressions with monomial and polynomial denominators
- Simply complicated rational expressions
- Solve and graph quadratic equations by factoring, completing the square, or using the quadratic formula
- Apply the above techniques in solving word problems
- Solve quadratic equations in the complex number system
- Demonstrate and explain the effect that changing a coefficient has on the graph of quadratic functions
- Graph quadratic functions (determining the maxima, minima, and zeros of the function)
- Prove simple laws of logarithms
- Laws of fractional exponents
- Exponential functions involved in growth and decay
- Define logarithms to translate between logarithms in any base
- Properties of logarithms to simplify logarithmic numeric expressions and to identify their approximate values
- Truth of a specific algebraic statement involving rational expressions, radical expressions or logarithmic or exponential functions
- Geometry of the graph of a conic section depends on the coefficients of the quadratic equation representing it
- Method for completing the square to put equations into standard form
- Fundamental counting principles to compute combinations and permutations and probabilities
- Binomial theorem to expand binomial expressions that are raised to positive integer powers
- Apply method of mathematical induction to prove general statements about positive integers
- Find the general term and the sums of arithmetic series and of both finite and infinite geometric

- series
- Derive summation formulas for arithmetic series and for both finite and infinite geometric series
- Solve problems involving functional concepts, such as composition, defining the inverse function and performing arithmetic operations on functions.
- Justify steps in combining and simplifying functions using properties from number systems

Trigonometry- Elective

(Semester Course)

Prerequisite: Geometry 1

Text: Larson, Algebra and Trigonometry, McDougal Littell

Course Description

Trigonometry utilizes skills and techniques from geometry and algebra. Use of trigonometric functions and the ability to prove basic identities regarding them is a major component of this course. This class is a prerequisite of calculus. Students may be taking this course concurrently with physics.

Curriculum:

Students will understand:

- Graphs of the sine and cosine functions
- How to use fundamental counting principles to compute combinations and permutations
- Half-angle and double angle formulas for sines and cosines
- DeMoivre's theorem and can give the n th roots of a complex number given in polar form
- Polar coordinates
- Complex numbers

Students will understand and be able to use:

- Use half-angle and double angle formulas to prove and/or simplify other trigonometric identities
- Notion of angle and how to measure it in degrees and radian
- How to convert between degrees and radians
- Definition of sine and cosine of points on a unit circle
- Pythagorean theorem and other proofs of trigonometric identities
- Simplification using identities provided
- Graph functions using amplitude, frequency, period and phase shift
- Definitions of tangent and cotangent functions and can graph them
- Definitions of secant and cosecant functions and can graph them
- Relationship of the tangent of the angle that a line makes with the x-axis and the slope of the line
- Definitions of inverse trigonometric functions and can graph the functions
- Standardize a quadratic equation to complete a square
- Recognize the above as an ellipse, circle, parabola or hyperbola and graph the equation
- Combinations and permutations to compute probabilities
- Use the binomial theorem to expand binomial expressions that are raised to positive integer powers
- Apply the method of mathematical induction to prove general statements about the positive integers
- Find the general term and the sums of arithmetic series and of both finite and infinite geometric series
- Derive the summation formulas for arithmetic series and for both finite and infinite geometric series
- Solve problems involving functional concepts, such as composition, defining the inverse function and performing arithmetic operations on functions
- Use properties from number systems to justify steps in combining and simplifying fractions
- Compute, by hand, values of the trigonometric functions and inverse trigonometric functions at various standard points
- Use laws of sines and the laws of cosines to solve problems
- Determine the area of a triangle, given one angle and the two adjacent sides
- Can determine polar coordinates of a point given in rectangular coordinates and vice versa
- Represent equations given in rectangular coordinates in terms of polar coordinates
- Represent complex numbers in a polar form
- Able to multiply complex numbers in their polar form
- Adept at using trigonometry in a variety of applications and word problems

Probability and Statistics- Elective

(Semester Course)

Prerequisite: None

Text: TBA

Course Description

Students at SCP will be encouraged to take this course to understand probability and enhance their abilities in processing statistical information. Classes will utilize real world examples as a foundation for study.

Units:

Probability	Interpretation of Data	Problem Solving	Problem Solving
-------------	------------------------	-----------------	-----------------

Curriculum:

Students know and can use:

- Notion of independent events
- Rules of addition, multiplication and complementation to solve for probabilities or particular events in finite sample spaces
- Definition of conditional probability and use it to solve for probabilities in finite sample spaces
- Discrete random variables and solve for the probabilities of outcomes
- Standard distributions and solve for events in problems in which the distribution belongs to those families
- Mean and the standard of deviation of a normally distributed random variable
- Mean, median and mode of distribution of data
- Organize and describe distributions of data by using a number of different methods
- Apply knowledge to real world examples in the study of history, sociology, and science

Pre-Calculus- Elective

(Semester Course)

Prerequisite: Algebra 2

Text: Graphical Numerical Algebraic-Addison Wesley

Course Description

This course offers students an introduction to Calculus. Students will work advanced problems in the Calculus course, but this class provides a forum where students are able to work in a more relaxed atmosphere, due to the limited amount of content covered. Few high school classes have time to work through all of the material that a college-level Calculus course requires, but in offering two courses SCP will provide a Calculus class meeting the same standards of a college-level Calculus course.

Curriculum:

Students will be able to identify:

Maxima, minima, inflection points, intervals in which the function is increasing and decreasing on a function graph

Students will understand and be able to demonstrate:

- Continuity of a function
- Intermediate value theorem
- Extreme value theorem
- Derivative of a function at a point
- Notion of differentiability
- Formal definition and graphical interpretation of limit of values of function
- Definition of convergence and divergence of a function as the domain variable approaches either a number or infinity
- Chain rule and its proof and applications
- Differentiation to solve optimization in a variety of pure and applied contexts
- Mean Value of a theorem

- Differentiation to sketch, by hand and calculator, graphs of function
- Definite integrals in problems involving area, velocity, acceleration, volume of a solid, area of a surface of revolution, length of a curve and work
- Techniques of integration (substitution, parts and trigonometric substitution) and compute these by hand and with a calculator
- Apply knowledge to real world examples in the study of history, sociology, and science

Students will know and understand the importance of:

- Newton's method for approximating zeros of a function
- Rolle's Theorem
- L'Hopital's Rule
- Simpson's Rule
- Improper integrals as limits of definite integrals
- Taylor polynomials
- Taylor series of basic functions
- Elementary differential equations and applications to growth-and-decay problems

Calculus- Elective

(Semester Course)

Prerequisite: Pre-Calculus

Text: Applied Calculus- Houghton-Mifflin

Course Description

This college entry-level course will cover one variable calculus. Individual instructors will work with the school curriculum advisor and/or assistant principal in charge of curriculum to determine topics covered in one year. The College Board syllabi for Calculus AB and Calculus BC of the Advanced Placement Mathematics will serve as a guideline for curriculum coverage.

Units:

Differential equations
Infinite sequences and series
Intrinsic Theory
Form
Theory

Curriculum

Students will understand and be able to demonstrate:

- Continuity of a function
- Intermediate value theorem
- Extreme value theorem
- Derivative of a function at a point
- Notion of differentiability
- Formal definition and graphical interpretation of limit of values of function
- Definition of convergence and divergence of a function as the domain variable approaches either a number or infinity
- Chain rule and its proof and applications
- Differentiation to solve optimization in a variety of pure and applied contexts
- Mean Value of a theorem
- Differentiation to sketch, by hand, graphs of function
- Use of Riemann sums (to approximate integrals)
- Definite integrals in problems involving area, velocity, acceleration, volume of a solid, area of a surface of revolution, length of a curve and work
- Techniques of integration (substitution, parts and trigonometric substitution) and compute these by hand
- Properties of inverse trigonometric functions and express these as indefinite integrals

- Convergence and divergence of sequences and series of real numbers
- Using the comparison and ratio test and the alternate series test, determine series convergence.

Students will understand and be able to compute:

- Derivatives of higher orders
- Derivatives of parametrically defined functions
- Implicit differentiation in a wide variety of problems in physics, chemistry, economics, sociology and health
- Definition of the integral to model problems in physics and economics (obtaining the results in terms of integrals)
- Fundamental theorem of calculus and use it to interpret integrals as antiderivatives
- Integrals of rational functions by combining techniques of substitution, integration of parts, trigonometric substitution, with algebraic techniques of partial fractions and completing the square (by hand)
- Compute integrals of trigonometric functions using techniques of substitution, integration of parts, trigonometric substitution
- Radius (interval) of the convergence of power series

Students will be able to identify and use:

- Maxima, minima, inflection points, intervals in which the function is increasing and decreasing on a function graph

Students will know and understand the importance of:

- Rolle's Theorem and demonstrate application
- L'Hopital's Rule and demonstrate application

References for Mathematics

Mathematics Framework for California Public Schools, Kindergarten Through Grade Twelve, 1999
--

Resources for Mathematics

National Network of Eisenhower Regional Consortia Saxon Math Online
--

AP Calculus (AB or BC)- Elective

(Semester Course)

Prerequisite: Calculus

Text: AB- Calculus: Graphical, Numerical, Algebraic, Addison Wesley/ Pearson, BC- Calculus: Concepts and Applications, Key Curriculum

Course Description:

AP Calculus includes all of the traditional concepts, skills and applications from integral and differential calculus, studied according to the syllabus constructed for the course by the College Board. The BC syllabus - which is usually (but not always) offered as a course option- adds additional topics not found in the AB course syllabus. In both courses, a national standardized exam is taken in the spring for possible college credit.

AP Statistics- Elective

(Semester Course)

Prerequisite: Calculus

Text: Statistics – Modeling the World, Pearson/Addison-Wesley

Course Description:

AP Calculus includes all of the traditional concepts, skills and applications from integral and differential calculus, studied according to the syllabus constructed for the course by the College Board. The BC syllabus - which is usually (but not always) offered as a course option- adds additional topics not found in the AB course syllabus. In both courses, a national standardized exam is taken in the spring for possible college credit.

SCIENCE

Biology

(Annual Course)

Prerequisite: Life Science

Text: Glencoe Biology, CA edition

Course Description

The basis of the biology course will begin with a brief review of the content standard requirements for the eighth grade. Experimentation and exploration using computerized and laboratory projects will be the core to test student made hypothesis and thesis.

Units:

Study of Cells Molecular Biology Biotechnology Homeostasis Meiosis and Fertilization Population Genetics Speciation Ecology Infection and Immunity
--

Curriculum:

Cell Biology

Students will:

- Understand cell construction and workings including: enzymes proteins and biochemical reactions, pH balance, and chemical reactions of cells.
- Be able to explain the nature of and how prokaryotic and eukaryotic cells and viruses work
- Know the central dogma of molecular biology and how RNA and DNA facilitates the follow of information
- Understand the role of ER and Golgi apparatus
- Be able to replicate by computer model how usable energy is captured from sunlight by chloroplasts and how it is stored
- Understand the nature and role of mitochondria in making stored chemical-bond energy available to cells and how macromolecules in cells in organisms are synthesized from precursors
- Know how chemiosmotic gradients in mitochondria and chloroplast store energy for ATP production

Genetics (Molecular Biology)

Students will experiment with native plants in the school garden to explore genetics.

Students will:

- Understand how to predict probable outcomes of phenotypes in a genetic cross from the genotypes of the parents and mode of inheritance
- Be able to predict mode of inheritance (autosomal or X-linked and dominant or recessive)
- Be able to explain the genetic basis for Mendel's law of segregation and independent assortment
- Know how to predict the probable mode of inheritance from a pedigree diagram showing phenotypes
- Be able to use data on frequency of recombination at meiosis to estimate genetic distances between loci and to interpret genetic maps of chromosomes by using laboratory models and computer mapping programs
- Students will debate current issues from scientific journals to explore the controversy of DNA manipulation. Through debate, computer models and article examination, students will:
- Understand the role of genes and DNA sequencing
- Be able to explain the general pathway by which ribosomes synthesize proteins and know how to apply the genetic coding rules to predict the sequencing of amino acids form a sequence of codons in RNA
- Understand how mutations in the DNA sequence of a gene may or may not affect the expression of the gene or the sequence of amino acids in the ended protein
- Understand specialization of cells in multicellular organisms, know how proteins can differ, and understand the differences in shapes and chemical properties of unique proteins

Genetics (Biotechnology)

Students will understand:

- The general structures and functions of DNA, RNA and protein
- How to apply base-pairing rules to explain precise copying of DNA
- How biotechnology is used to produce novel biomedical and agricultural products through examination of every day products that can be purchased in the supermarket. Students will take a field trip to the supermarket to identify genetically altered products and then will research online to determine “truth in advertising” packaging claims.
- How basic DNA technology is used to construct recombinant DNA molecules
- How exogenous DNA is inserted into bacterial cells by reading appropriate articles and interviewing guest speaker experts

Physiology (Homeostasis)

Through the biological study of Claude Bernard, **students will know:**

- How the complementary activities of major body systems provide cells with oxygen and nutrients and removes toxic waste products.
- How the nervous system mediates communication between different parts of the body and how this relates to the environment
- How feedback loops in the nervous and endocrine systems regulate conditions in the body
- The functions of the nervous system and the role of neurons
- How sensory neurons, interneurons and motor neurons work
- The individual functions and the sites of secretion of digestive enzymes, stomach acid, and bile salts
- How the homeostatic role of the kidneys, removal of nitrogenous wastes, and the role of the liver in blood detoxification and glucose balance. This study will incorporate the examination of how excessive use of alcohol influences the function of the kidney
- How the cellular and molecular basis of muscle contraction
- How hormones provide internal feedback mechanisms for homeostasis at the cellular level in whole organisms

Genetics (Meiosis and Fertilization)**Students will:**

- Understand how organisms reproduce offspring of their own kind and that organisms of the same species resemble each other. Students will examine the differences between asexual cell reproduction and formation of male or female gamete cells.
- Explore the concepts of mutation and sexual reproduction leading to genetic variation by using the school garden and native plantings
- Understand that meiosis is an early step in sexual reproduction and that only certain cells undergo this process
- Understand random chromosome segregation and results
- Explain how new combinations of alleles may be generated in a zygote through the fusion of male and female gametes
- Understand why nearly half of the DNA sequence comes from each parent through the use of manipulative lab models
- Know the role of chromosomes in determine the sex of an individual
- Be able to predict possible combinations of alleles in a zygote from the genetic makeup of the parents

Evolution (Population Genetics)

Biological evolution will be the basis of study in this unit. Historical readings will focus on the development of scientific theory and the nature of hypothesis or reasonable guessing. Students will research the latest fossil discoveries and their impact on the theory of evolution.

Students will understand:

- Why natural selection acts on phenotype rather than genotype
- Frequency of an allele in a gene pool of a population depends on stable and unstable factors
- Why lethal alleles may be carried in a heterozygote
- Understand that new mutations are constantly generated in a gene pool and the influence of variation within a species increases likelihood of survival in changed environmental conditions
- Be able to explain the Hardy-Weinberg equilibrium, its likelihood to occur, and how to solve the equation to predict the frequency of genotypes in a population with limitations

Evolution (Speciation)

This unit will be taught in conjunction with the Evolution unit. Students will select one constantly changing geographic environment to investigate the adaptations of species. A written research project will be assigned for students working in pairs. Students will also read current event reports on recently discovered geographically isolated populations.

Students will:

- Understand the genetic changes that result from a constantly changing environment and how natural selection works
- Understand the influence of a great diversity of species
- The effects of genetic drift on a population
- How reproductive or geographic isolation affect speciation
- Know how to analyze fossil evidence and experiment with fossil representation and simulated computer programs
- Understand how biological diversity, episodic speciation and mass extinction occur
- How to use comparative embryology, DNA or protein sequence comparisons
- How to use independent sources or data to create a branching diagram showing probable evolutionary relationships

How molecular clocks operate and the significance of such devices

Ecology

Study of this unit will include guest speakers (from industry and environmental groups) and viewing of the video series produced by PBS to illustrate the concepts in this unit. Students will debate global warming, recycling, and legal limits for three types of air pollutant, various pollutants in water and the manner of refuse disposal. Students will also focus on the school garden composting system to make conclusions for this unit.

Students will:

- Understand what creates stability in an ecosystem
- Know how to analyze changes in an ecosystem and determine possible influences for the changes
- Be able to determine reasons for fluctuation in a population size
- Understand the water, carbon and nitrogen cycle by use of composting pile in the school garden
- Be aware that a vital part of an ecosystem is the stability of the producers and decomposers
- Understand how the food web works in relation to an energy pyramid
- Be able to distinguish between accommodation and adaptation through genetic change

Physiology (Infection and Immunity)

Students will be assigned to debate topics related diseases and public policy. These debates will require research in online newspaper databases and will incorporate scientific findings and the degree that public policy reflects the scientific findings. Topics for 1997-1998 will include: Bird Flu, SARS, AIDS, and TB

Student research will involve:

- Studying the components of the immune system and how vaccines and antibiotics are used to combat diseases
- Integration of current events relating to potentially pandemic diseases (bird flu and SARS) and historical and diseases currently facing medical workers today that compromise the immune systems (AIDS), will be examined in detail
- The variety of body mechanisms to combat diseases
- The role of the skin in protecting the body and the role of antibodies
- How vaccinations work and when they are effective in combating disease
- Understand the differences between bacteria and viruses
- Know why someone with a compromised immune system is unable to survive usually benign microorganism infections
- Know the roles of phagocytes, B-lymphocytes and T-lymphocytes in the immune system

Chemistry

(Annual Course)

Prerequisite: Physical Education

Text: Glencoe Chemistry: Matter and Change, CA edition

Course Description

Chemistry instruction will include intensive experimentation in the laboratory and use of computerized lab programs. Laboratory reports will be presented in both written and oral formats. Students will be expected to defend report conclusions using data from their experimentation.

Units:

Atomic and Molecular Structure Chemical Bonds Gasses Solutions Chemical Equilibrium Nuclear Processes Organic and Biochemistry Chemical Thermodynamics Acids and Bases Conservation of Matter Stoichiometry (National student surveys show that this topic is most relevant to college Chemistry and the unit will reflect the importance to college study) Reaction Rates

Curriculum:

Atomic and Molecular Structure

Students will understand:

Use of the periodic table including the following:

- How to relate the position of an element on the table
 - Understand the use of atomic number and mass
 - How to use the table to identify metals, semimetals, nonmetals and halogens
 - How to use the table to identify alkali metals, alkaline earth metals and transition metals, trends in ionization energy, electronegativity, and the relative sizes of ions and atoms
 - How to use the table to determine the number of electrons available for bonding
 - Understand the relative mass of the atom and the nucleus
 - Be able to identify lanthanide, actinide, and transactinide elements
 - Know how the transuranium elements were synthesized and identified
 - How to relate the position of an element in the table to its quantum electron configuration and reactivity to other table elements
- Know the experimental basis for Thomson's discovery, Rutherford's nuclear atom, Milikan's experiment and Einstein's explanation of the photoelectric effect. These will be taught integrated into a biographical study of each man.
- Know the experimental basis for the development of the quantum theory of atomic structure and the historical importance of the Bohr model of the atom. These will be taught using the PBS series on the discovery of the atom.
- Understand the nature and principles of spectral lines and know the reasoning underscoring Planck's relationship.

Chemical Bonds

After study of this unit, students will understand:

- Biological, chemical, and physical properties of matter and the resulting bonds and forces between electrons and protons and between atoms and molecules
- How atoms combine to form molecules
- Chemical bonds between atoms in molecules
- Understand biological molecular covalency
- The nature of repeating patterns in salt crystals
- The force of electrostatic attraction
- Behavior of atoms and molecules in liquids and solids
- How to draw Lewis dot structures
- How to predict the shape of simple molecules and their polarity using Lewis dot structures
- How electronegativity and ionization energy relate to bond formation
- How to identify solids and liquids held together by van der Waals forces or hydrogen bonding
- How to relate the van der Waals forces to volatility and boiling/melting point temperatures

Gases and Their Properties

Students will enhance their knowledge of chemistry and mathematical skills by understanding:

- The random motion of molecules
- The effect of molecular collisions with surfaces
- Kinetic molecular theory of the motion of atoms and molecules
- The properties of gases
- The random motion of molecules and the relationship with the diffusion of gases
- How to apply gas laws to relations between pressure, temperature, and volume in any amount of an ideal gas or any mixture of ideal gases
- The values and meanings of standard temperature and pressure
- How to convert between Celsius and Kelvin temperature scales
- The history and personalities behind the Celsius and Kelvin scales
- The absolute concept of absolute zero
- How kinetic theory of gases and how it relates to the absolute temperature of a gas
- How to solve problems by using the ideal gas law in the form $PV = nRT$
- How to apply Dalton's law of partial pressure
- How to use Graham's law to predict diffusion of gasses
- Biographical details of both Dalton and Graham

Solutions

Students will understand:

- The physical sets of matter and corresponding properties
- Molecules and ions
- Mathematical unit conversions
- Calculate mass and volume in a variety of units
- How to work with ratios, percentages and moles
- Links between the concepts of electronegativity, covalent bonding, shapes of molecules and ionic compounds with the knowledge of mixtures
- The nature of solutions
- Definitions of solute and solvents
- How to describe the dissolving process at the molecular level
- How temperature, pressure and surface influence the dissolving process
- How to calculate the concentration of a solute
- The relationship between the molality of a solute in a solution and the solution's depressed freezing point or elevated boiling point and how molecules in a solution are separated and purified by methods of chromatography and distillation. These two will be done through experimentation.

Chemical Equilibrium

Students understand:

- The dynamic process of chemical equilibrium at the molecular level
- Le Chatelier's principle and his experiments
- How to predict the effects of changes in concentration, temperature, and pressure
- How equilibrium is established

- How to write and calculate an equilibrium constant expression for a reaction

Nuclear Processes

Students understand:

- The basis of nuclear processes including naturally occurring radioactive decay
- The difference between nuclear fission and fusion
- How protons and neutrons are held together in the nucleus
- The formula for change in mass and the significance over chemical of nuclear reactions over chemical reactions
- And identify some naturally occurring radioactive isotopes
- And identify the three most common forms of radioactive decay
- How the nucleus changes in types of decay
- The types of radiation and the amount of human damage each can achieve. Students will place this knowledge within a historical context of World War II experimentation and use of the nuclear bomb as a weapon.
- How to calculate the half-life of a radioactive substance. Students will be able to identify and map geographic locations of nuclear testing. Panels will debate current hazards of above ground and underground nuclear testing.
- The nature of quarks

Organic and Biochemistry

Students understand:

- The bonding characteristics of carbon and how it allows formation of organic molecules
- The nature of polymers
- The bonding characteristics of carbon through computerized and lab experimentation
- The properties of amino acids and proteins
- The naming system for the ten simplest linear hydrocarbons and isomers that contain single bonds
- The naming system for simple hydrocarbons with double and triple bonds
- The naming system for simple molecules that contain a benzene ring
- How to identify functional groups that form the basis of alcohols, ketones, ethers, amines, esters, aldehydes, and organic acids
- The R-group structure of amino acids
- How R-group structures combine

Chemical Thermodynamics

Students will experiment with heat and temperature to discover:

- How energy is exchanged or transformed in chemical reactions
- The physical changes of matter
- How to describe temperature and heat flow in terms of the motion of molecules (or atoms)
- How chemical processes can either release or absorb thermal energy
- How energy is released when a material condenses or freezes
- The manner in which energy is absorbed when a material evaporates or melts
- How to solve problems involving heat flow and temperature changes using known values of specific, latent or phase heat change
- How to apply Hess's law to calculate enthalpy change in a reaction
- How to use Gibbs free energy equation

Acids and Bases

Students will understand and be able to explain:

- Aqueous acid-base reactions
- Observable properties of acids and bases
- How to use the pH scale as a measure of acidity and basicity
- The Arrhenius, Bronsted-Lowry and Lewis acid-base definitions
- How to calculate pH from the hydrogen-ion concentration
- How buffers stabilize pH in acid-base reactions
- The Aqueous dissolving process
- Concentration calculations and units
- Balanced chemical reactions
- Interpretation of periodic trends in electronegativity for the upper two rows of the periodic table
- How the positive hydrogen ion is forms
- Charge and formula of the hydroxide ion
- Polar covalent bonding
- The difference between two important types of neutral molecular compounds that dissolve in an

aqueous solution (those that remain almost completely as neutral molecules and those that partially or almost completely produce charged ions)

Conservation of Matter and Stoichiometry

Students will integrate mathematical and technology skills in this unit. After study, students will be able to:

- Describe chemical reactions by writing balanced equations
- Explain the principles of conservation of matter in chemical reactions
- Calculate the mass of products and reactants
- Explain the quantity "one mole"
- Be able to use "Avogadro's Number"
- How to determine the molar mass of a molecule from its chemical formula and a table of atomic masses
- How to convert the mass of molecular substance to moles, number of particles, or volume of gas at standard temperature and pressure
- How to calculate the masses of reactants and products in a chemical reaction from the mass of one of the reactants or products and the relevant atomic masses
- How to calculate percent yield in a chemical reaction
- How to identify reactions that involve oxidation and reduction and how to balance oxidation-reduction reactions

Reaction Rates

After experimentation and study of this unit, students will understand and be able to describe:

- Rates of chemical reactions
- Factors affecting rates
- Energy changes involved in chemical reactions
- Formation of products in chemical reactions
- The chemical reactions at the molecular level
- How kinetic energy is measured by temperature
- Reinforce how the knowledge of pressure and volume relationships for gasses can plot potential energy versus course of reaction for endothermic and exothermic reactions
- The calculations of rates of change from slopes of line and curves
- Frequency factors related to chemical reaction rates in collision of reactant molecules
- The effect of concentration, temperature and pressure on reaction rates
- The role of a catalyst in increasing the reaction rate
- A definition and the role of activation energy in a chemical reaction

Students will be able to explain:

- The factors influencing chemical reaction rates by participation in chemistry labs and team experimentation during class periods
- The role a catalyst plays in increasing the reaction rate
- The definition and role of activation energy in a chemical reaction

Physics

(Annual Course)

Prerequisite: Physical Science

Text: *Glencoe Physics: Principles and Problems, CA edition*

Course Description

Students enrolled in Physics will be involved in laboratory experimentation and reporting as a regular part of their course work. Guest speakers will discuss theories and real life integration of the field with career paths.

Units:

Motion and Forces
Conservation of Energy
Momentum
Heat Thermodynamic
Waves
Electric Phenomena
Magnetic Phenomena

Curriculum:**Motion and Forces****Students will understand:**

- Newton's laws of motion of objects
- How to solve problems that involve constant speed and average speed
- The relationship between the universal law of gravitation and the effect of gravity on an object at the surface of the Earth
- When applying force to an object perpendicular to the direction of its motion causes the object to change direction, but not speed
- Circular motion requires the application of constant force directed toward the center of the circle
- That Newton's laws are not exact, but a good approximations unless an object is moving close to the speed of light or is small enough that quantum effects are important
- How to solve two-dimensional trajectory problems
- How to resolve two-dimensional vectors into their components and calculate the magnitude and direction of a vector from its components
- How to solve two-dimensional problems involving balanced forces (statics)
- How to solve problems in circular motion by using the formula for centripetal acceleration. This will be done by laboratory experimentation.
- The basics of Coulomb's law and how it relates to universal gravitation

Conservation of Energy and Momentum**Students will understand:**

- The laws of conservation of energy and momentum
- How to predict and describe the movement of objects
- How to calculate kinetic energy
- How to calculate changes in gravitational potential energy near the earth. Guest speakers for this lab will relate how this formula relates to working engineers and space science.
- How to solve problems involving conservation of energy in simple systems. Lab reports for this experimentation will be reported using computer programs.
- How to calculate momentum as the product of mv
- That momentum is a separately conserved quantity different from energy
- Why an unbalanced forces produces a change in its momentum
- How to solve problems involving elastic and inelastic collisions in one dimension and also in simple systems with various sources of potential energy. Students will demonstrate labs involving capacitors and springs to other science students as part of an oral laboratory demonstration.

Heat and Thermodynamics**Students will be able to explain:**

- The reasons that energy cannot be created or destroyed
- How energy is transferred to the environment as heat. The school garden composting system will be used as part of this exploration.
- How heat flow and work are two forms of energy transfer between systems
- The cycle of heat engines and how it works
- The elements of the internal energy of an object (thermal energy)
- The reasons for the uniform distributions of energy levels in the processes in a system
- The reasons that the statement "Entropy tends to increase" is true
- The second law of thermodynamics
- How to solve problems involving heat flow, work, and efficiency in a heat engine
- That all real engines lose some heat to their surroundings through lab experimentation and reporting

Waves**Students will understand:**

- The characteristics properties of waves
- Waves carry energy from one place to another
- How to identify transverse and longitudinal waves in mechanical media (after laboratory experimentation with springs and ropes)
- How to solve problems involving wavelength, frequency, and wave speed
- Understand sound is a longitudinal wave and the properties of sound. This laboratory experiment will integrate the physics of sound with experimentation with various musical instruments including guitars, bass and cello
- The differences between radio waves, light and x-rays. This concept will be illustrated by visiting a

- college laser lab.
- How to identify the characteristic properties of waves. Students with either take a field trip to a Doppler radar station or interview a local meteorologist in this lesson.

Electric and Magnetic Phenomena

Students will understand:

- The practical applications of electric and magnetic phenomena and how they are related
- How to predict voltage or current in DC and electric circuits constructed from batteries, wires, resistors and capacitors. Students will be involved in construction of a simple circuit board.
- The properties of Ohm's law and how it can be applied
- How to calculate the power in any resistive circuit using a standard formula
- The properties of transistors and the role in electric circuits. Students will interview an electrical engineer to determine how both are involved in Los Angeles commercial industries
- The basic elements of electrical fields and how this phenomenon can be applied to industry
- How to determine the direction of a magnetic field through experimentation with straight wires and coils
- The nature of magnetic fields from different sources
- The basic properties of plasmas (the fourth state of matter) and how ions react in a plasma field
- How vector force fields work
- How to determine the force on a charged particle in an electric field
- How to calculate the electric field resulting from a point charge
- How static electric fields operate
- The magnitude of force on a moving particle in a magnetic field using a standard formula
- How to apply the concepts of electrical and gravitational potential energy to solve problems involving conservation of energy

References for Science

Science Content Standards for California Public Schools, Kindergarten Through Grade Twelve

Suggested Resources for Science

NASA Science Curriculum

ENGLISH

English 9

(Annual Course-Grade 9)

Prerequisite: None

Text: McDougal Littell California Literature

Course Description

English 9 is the first course in the high school sequence. The focus of reading activities is on fiction as well as on Greek, Roman, and Norse mythology as sources for word derivations and topics for discussion. Reading comprehension focuses on developing critical-thinking skills, such as synthesizing content and ideas from several sources, paraphrasing texts and connecting them to other sources, and original analysis. Students develop a solid understanding of workplace documents, such as business letters, memos, and manuals. Literary analysis continues the development of analytical skills developed in earlier grades, with attention to character, setting, theme, plot, and point of view. Writing activities emphasize the structural and rhetorical features of academic discourse, with particular attention to documentation, evidence, and audience. Specifically, students practice using the two major documentation formats, APA and MLA; they develop clear, nontrivial research questions requiring use of primary and secondary sources; they synthesize information from multiple sources to provide support for arguments; and they analyze and assess research information.

Themes: The World of Myths and Legends, Short Story as Art Form, World Issues

Units:

Quarter One:	Quarter Two:	Quarter Three:	Quarter Four:
Fable, folktales, myth, and fairy tales Poetry Speech organization Patterns and elements Paraphrasing and notetaking	The Epic Expository writing: Process analysis Poetry Persuasive essay using cause and effect organization pattern Short story elements	Drama Expository writing: Compare and Contrast Sonnet Listening to poetry Character development	Novel Descriptive essays Multimedia presentation (Outline, script, storyboarding, and technology skills combined) Written business letter

Curriculum:

Reading:

Student assignments, projects and portfolio inclusion will focus on:

- Knowledge of word origins
- Ability to determine meaning of new words in reading materials
- Use of new vocabulary words accurately
- Use of technology, scientific and mathematic terms
- Identify and use literal and figurative meanings of words
- Understanding of word derivations, particularly words from Latin
- Identification of Greek, Roman, and Norse mythology and how the myths relate to word usage
- Reading grade-level-appropriate material from *Recommended Literature, Kindergarten Through Grade Twelve*
- Reading one and one-half million words each year during the ninth and tenth grade years from a variety of classic and contemporary sources
- Reading and response to historically or culturally significant works of literature that align with themes in social study curriculum
- Understanding graphics, headers, and workplace documents
- Preparation of a bibliography of reference materials as part of a report or paper
- Preparation of a bibliography of reference materials as part of a science and math report or paper
- Generate relevant questions about issue pieces
- Determine appropriate questions from an essay or editorial
- Extend issues from primary and secondary sources by presentation in written and oral presentations. Portfolio rubrics will examine original thinking, evaluation, elaboration, and appropriate use of various forms of support to bolster thesis or argument.
- Demonstration of sophisticated learning tools by following technical directions including use of

graphic calculators, specialized software programs, access guides to the World Wide Web, college Internet and resources available at the school and at local colleges and universities. Senior-level students will request library cards from a local college or university where classes will be taken for project research at least one time each semester.

- Accurate review and critique of functional documents presenting sequencing of information and procedures
- Read and analyze professional science, social science, psychological journals using a rubric asking for evaluation of evidence used, affects of organization structure, comprehensiveness of evidence, tone of text and author's qualifications

Writing and Literary Response and Analysis:

Student assignments, projects and portfolio inclusion will focus on:

- Reading and responding to historically or culturally significant works of literature that reflect or enhance the school curriculum in social science, history, current events and world cultures
- Articulation of the relationship between the expressed purpose and the characteristics of different forms of dramatic literature including comedy, tragedy, drama, and dramatic monologue. This dramatic literature will include classical and modern works.
- Comparison and the contrasting nature of similar themes or topics across genres
- Understand how selection of genre shapes the themes or topics of works
- Explanation of how interactions between main and subordinate characters in a literary text interact to affect the plot
- Determination of character traits from dialogue, dramatic monologue, soliloquy and narration of the work
- Comparison of works that express a universal theme and provide evidence to support the ideas expressed in each work
- Ability to analyze and trace an author's development of time and sequence, including the use of complex literary devices
- Recognition and understanding of the significance of various literary devices, including figurative language, imagery, allegory, and symbolism
- Explain the appeal of the same literary devices
- The ability to interpret and evaluate the impact of ambiguities, subtleties, contradictions, ironies and incongruities in texts
- Understanding the use of voice, persona, and the choice of narrator
- Identification and description of the function of dialogue, scene designs, soliloquies, asides, and character foils in dramatic literature
- Written and verbal evaluation of aesthetic qualities of style
- Use of correct literary criticism terminology in written and verbal assignments
- Ability to use the Historical approach in evaluation of literature
- Writing coherent and focused essays that convey well-defined perspectives and use tightly reasoned arguments
- Writing essays that have clear understanding and awareness of audience and purpose using the writing process and rubrics designed for specific purposes
- Support of a clear thesis in at least one major written reports or papers each year that include written research notes, outlines including supporting materials, and at least two revisions before the final draft
- Synthesis of information from a variety of sources that include both primary and secondary sources
- Design and publish documents by using advanced publishing software and graphic programs
- Utilization of conventionally accepted style manuals for documentation of text, notes and bibliography. While the APA will be the style manual for the school, students will be aware of other types of citations used in fields other than the field of Science.
- Demonstrate proper integration of quotation and citations into a written text while maintaining the flow of ideas
- Utilize precision in word choice, tone and perspective
- Write at least one biographical and one autobiographical narrative, one short story, a response to literature, one research report with a bibliography, two expository compositions, two analytical essays, and two persuasive compositions each year.
- Student grading and peer evaluation rubrics will include the use of visual aids, critique of support and evidence used in the speech, appropriate sequencing, use of concrete sensory details, appropriate pacing, effective use of description, grasp of significance in literary works, appropriate use of details from the work, understanding of the author's use of stylistic devices, use technical

- terms and notations accurately, and use of specific rhetorical devices to support assertions.
- Use of precise and relevant evidence that address counterclaims, biases and expectations
- Understand the elements of effectively-written business letters and technical documents

Listening and Speaking

Portfolio rubric and samples of student work submitted in portfolio will reflect high standards that:

- Formulate and deliver focused and coherent presentations that convey clear and distinct perspectives and solid reasoning. Presentations will be documented by written evaluation, peer review and digital and video storage.
- Presentations will illustrate appropriate gestures, tone and vocabulary
- Understand and demonstrate elementary debate technique and support of ideas through outlines, briefs and digital and video submissions
- Compare and contrast media coverage through various genres
- Select logical organization patterns and appropriate introductions and conclusions
- Recognition and use of classical speech form elements in formulation of arguments and panel discussions and debate demonstrations.
- A minimum of one panel or debate presentation will be required each year.
- Require the use of visual aids during speaking or panel presentation
- Ask for notes for extemporaneous delivery
- Understand the elements of rhetoric and public address including classical and modern presentations, with an emphasis on historically and culturally significant speeches
- Illustrate the impact of audience, mood and setting on a speaking event
- Identification of the aesthetic effects of a media presentation and evaluate the techniques used to create them. Shakespeare's plays will be used in both the freshman and sophomore year in both folio and film formats.
- Students will present or participate in a minimum of two of the following during the year: a narrative presentation, expository speech, interview or panel discussion, oral response to literature, presentation of a position on a hypothesis related to math or science, Science project demonstration, and a panel or debate on a topic related to math or science.

Grade 9 Literature Selections:

Paton, <i>Cry the Beloved Country</i> Potter/Globe, <i>Myths and Folktales around the World</i> Homer, <i>The Odyssey</i> Huong, <i>Paradise of the Blind</i> Shakespeare, <i>Romeo and Juliet</i> Achebe, <i>Things Fall Apart</i> Rosenberg, <i>World Mythology</i> Keene, ed. <i>Anthology of Japanese Literature</i> Angus, ed., <i>The Best Short Stories of the Modern Age</i> Sabin, ed., <i>Classical Myths That Live Today</i> McNess, ed., <i>Contemporary Latin American Short Stories</i> Bellow, ed., <i>Great Jewish Short Stories</i> Carreras de Zapata, ed., <i>Short Stories by Latin American Women: The Magic and the Real</i> Shulman, <i>West Side Story</i> Tharu and Lalita, eds., <i>Women Writing in India</i> Sophocles, <i>Oedipus Rex</i> Rexroth, ed., <i>One Hundred Chinese Poems</i> Fitzgerald, "Bernice Bobs Her Hair" Minatoya, <i>Talking to High Monks in the Snow</i> Momaday, <i>House Made of Dawn</i>	Warren, ed., <i>Short Story Masterpieces</i> Howes, ed., <i>Eye of the Heart: The Short Stories of Latin America</i> Birch, ed., <i>Anthology of Chinese Literature, Volumes I & II</i> Marquez, <i>Chronicle of a Death Foretold</i> Connel, <i>The Most Dangerous Game</i> Buck, <i>The Good Earth</i> Malamud, <i>The Magic Barrel</i> Homer, <i>The Odyssey</i> Alvarez, Julia, <i>How the Garcia Girls Lost Their Accent</i> Carter, Forrest, <i>The Education of Little Tree</i> Shaw, George Bernard, <i>Pygmalion</i> Potok, Chaim, <i>The Chosen</i> Bronte, Emile, <i>Wuthering Heights</i> Dickens, Charles, <i>Great Expectations</i> Bradbury, Ray, <i>The Martian Chronicles</i> Tennyson, <i>Idylls of the King</i> Homer, <i>Iliad</i> Shakespeare, <i>Julius Caesar</i> Waugh, <i>The Loved One</i> Moore, ed., <i>Modern Poetry from Africa</i> Hershey, <i>A Single Pebble</i> McCullers, <i>The Heart is a Lonely Hunter</i> Steinbeck, <i>Of Mice and Men</i> or <i>The Pearl</i> Hinton, <i>The Outsiders</i> Anaya, Rudolfo, <i>Bless Me Ultima</i>
--	--

English 10

(Annual Course-Grade 10)

Prerequisite: English 9

Text: McDougal Littell California Literature

Course Description

English 10 continues the work of English 9 (the continuation is so seamless that the state standards conflate the two courses into a single description). The course stresses independent reading, and state guidelines quantify the amount of independent reading, specifying 1–1.5 million words annually. The course continues the focus on documentation, evidence, and audience in written discourse, but paper length increases to 1,500 words. With regard to oral discourse, the focus is on longer, more complex presentations that use a variety of delivery techniques involving gestures, intonation, eye contact, and so forth. Students are expected to use various visual aids and electronic media to enhance their oral presentations.

Themes: Diversity, Slavery and Freedom, Decision Making, Life's Challenges

Units:

Quarter One:	Quarter Two:	Quarter Three:	Quarter Four:
Drama Comedy, dramatic monologue, tragedy Classic tragedy and Shakespearean tragedy Soliloquy and narration Symbols, allegory, figurative language, imagery	Public address Rhetoric Narrative essay Non-Fiction work Biography and autobiography	Argument and persuasion The Essay form Drama and tragedy Poetry Symbols, allegory, figurative language, imagery	Research paper World literature-fiction World Literature-poetry Multimedia presentations (planning, outlining, script, storyboard, and technology skills combined)

Curriculum:

Reading

Student assignments, projects and portfolio inclusion will focus on:

- Enhancement of knowledge of word origins
- An ability to determine meaning of new words in reading materials, with a focus on scientific documents and reports
- Accurate use of new vocabulary words
- Correct use of technology, scientific and mathematic terms
- Continue to enrich the ability to identify and use literal and figurative meanings of words
- Understanding of word derivations, particularly words from Latin
- Identification of Greek, Roman, and Norse mythology and how the myths relate to word usage
- Reading grade-level-appropriate material from *Recommended Literature, Kindergarten Through Grade Twelve* (suggested reading list)
- Reading and response to historically or culturally significant works of literature that align with themes in social study curriculum
- Understanding graphics, headers, and workplace documents
- Preparation of a bibliography of reference materials as part of a report or paper
- Preparation of a bibliography of reference materials as part of a science and math report or paper
- Generate relevant questions about issue statements
- Determine appropriate questions from an essay or editorial
- Extend issues from primary and secondary sources in written and oral presentations. Portfolio rubrics will examine original thinking, evaluation, elaboration, and appropriate use of various forms of support to bolster thesis or argument.
- Continue demonstrations of sophisticated learning tools by following technical directions including use of graphic calculators, specialized software programs, access guides to the World Wide Web, college Internet and resources available at the school and at local colleges and universities. Senior-level students will request library cards from a local college or university where classes will be taken for project research at least one time each semester.
- Accurate review and critique of functional documents presenting sequencing of information and

- procedures
- Read and analyze professional science, social science, psychological journals using a rubric asking for evaluation of evidence used, affects of organization structure, comprehensiveness of evidence, tone of text and author's qualifications

Writing and Literary Response and Analysis

Student assignments, projects and portfolio inclusion will focus on:

- Reading and responding to historically or culturally significant works of literature that reflect or enhance the school curriculum in social science, history, current events and world cultures
- Articulation of the relationship between the expressed purposed and the characteristics of different forms of dramatic literature including comedy, tragedy, drama, and dramatic monologue. This dramatic literature will include classical and modern works.
- Comparison and the contrasting nature of similar themes or topics across genres
- Explanation of how interactions between main and subordinate characters in a literary text interact to affect the plot
- Determination of character traits from dialogue, dramatic monologue, soliloquy and narration of the work
- Comparison of works that express a universal theme and provide evidence to support the ideas expressed in each work
- Ability to analyze and trace an author's development of time and sequence, including the use of complex literary devices
- Explaining the appeal of the significance of various literary devices, including figurative language, imagery, allegory, and symbolism
- The ability to interpret and evaluate the impact of ambiguities, subtleties, contradictions, ironies and incongruities in texts
- Understanding the use of voice, persona, and the choice of narrator
- Identification and description of the function of dialogue, scene designs, soliloquies, asides, and character foils in dramatic literature
- Written and verbal evaluation of aesthetic qualities of style
- Use of correct literary criticism terminology in written and verbal assignments
- Ability to use the Historical approach in evaluation of literature
- Writing coherent and focused essays that convey well-defined perspectives and use tightly reasoned arguments
- Writing essays that have clear understanding and awareness of audience and purpose using the writing process and rubrics designed for specific purposes
- Support of a clear thesis in at least two major written reports or papers each year that include written research notes, outlines including supporting materials, and at least two revisions before the final draft
- Synthesis of information from a variety of sources that include both primary and secondary sources
- Design and publish documents by using advanced publishing software and graphic programs
- Utilization of conventionally accepted style manuals for documentation of text, notes and bibliography. The APA will be the style manual for the school, but students will understand other types of citations used in fields other than the field of Science.
- Demonstrate proper integration of quotation and citations into a written text while maintaining the flow of ideas
- Utilize precision in word choice, tone and perspective
- Write at least one biographical and autobiographical narrative, two short stories, two responses to literature, one major research report, two expository compositions, two analytical essays and two persuasive compositions each year. Student grading and peer evaluation rubrics will include the use of visual aids, coherent use of support and evidence, appropriate sequencing, use of concrete sensory details, appropriate pacing, effective use of description, grasp of significance in literary works, appropriate use of details from the work, understanding of the author's use of stylistic devices, use technical terms and notations accurately, and use of specific rhetorical devices to support assertions.
- Use of precise and relevant evidence that address counterclaims, biases and expectations
- Written business letters and technical documents

Listening and Speaking

Portfolio rubric and samples of student work submitted in portfolio will reflect high standards that:

- Formulate and deliver two focused and coherent presentations that convey clear and distinct perspectives and solid reasoning. Presentations will be documented by written evaluation, peer review and digital or video storage.
- Require an in-depth analysis of a taped presentation that evaluates the speaker's use of gestures, use of tone and vocabulary
- Understand and demonstrate elementary debate technique and support of ideas through outlines, briefs and digital and video submissions
- Compare and contrast media coverage through various genres
- Recognition and use of classical speech form elements in formulation of arguments and panel discussions and debate demonstrations.
- Require participation in a debate on a policy issue
- Demonstrate sophisticated use of visual aids during speaking or panel presentation
- Ask for notes for extemporaneous delivery
- Listen with a rubric for elements of rhetoric and public address including classical and modern presentations, with an emphasis on historically and culturally significant speeches
- Identification of the aesthetic effects of a media presentation and evaluate the techniques used to create them
- Students will present or participate in a minimum of one of the following during the year: narrative presentation, expository speech, interview or panel discussion, oral response to literature, presentation of a position on a hypothesis related to math or science, Science project demonstration, and a panel or debate on a topic related to math or science.

Grade 10 Literature Selections:

Randall, ed., <i>Black Poets</i>	Shakespeare, William, <i>Macbeth</i>
Brucheeas, ed., <i>Breaking Silence: An Anthology</i>	Douglas, Frederick, <i>Narrative of the Life of Frederick Douglas</i>
Crow, Dog, <i>Lakota Woman</i>	Ibsen, Henrik, <i>Hedda Gabler</i>
Wilson, <i>Fences</i>	Anonymous, <i>Beowulf</i>
Potok, <i>The Chosen</i>	Euripides, <i>Medea</i>
Wang & Zhae, eds., <i>Chinese American Poetry</i>	Knowles, John, <i>A Separate Peace</i>
Chapman, ed., <i>Black Voices</i>	Bronte, Charlotte, <i>Jane Eyre</i>
Tan, Amy, <i>The Joy Luck Club</i>	Hammett, Dashiell, <i>The Maltese Falcon</i>
Baldwin, James, <i>Go Tell It on the Mountain</i>	Selection of historic speeches from world leaders
King, Martin Luther, Jr., <i>I Have a Dream</i>	Selection of speeches from today's leaders
Alexie, <i>The Lone Ranger and Tonto Fistfight in Heaven</i>	(<i>Congressional Record</i>)
Cather, Willa, <i>My Antonia</i>	<i>The Canterbury Tales</i>
White, <i>The Once and Future King</i>	Mallory, <i>Morte D'Arthur</i>

English 11

(Annual Course—Grade 11)

Prerequisite: English 10

Text: McDougal Littell California Literature

Course Description

The focus in English-Language Arts 11 is on helping students develop analytical and evaluative skills. The course continues the emphasis on etymology and morphology but concentrates more on vocabulary common to disciplines other than English. Reading activities focus on public documents such as policy statements, speeches, and debates. Point-of-view essays from newspapers and magazines are rich sources of instructional materials at this level. In addition, English 11 continues the focus on literature and literary genres, with a new emphasis on subgenres such as satire and parody. Students are expected to contrast the major literary forms and characteristics of certain literary periods, relate literary works and authors to major themes and historical issues, and analyze the philosophical, political, religious, ethical, and social influences that have shaped literature in certain periods. With regard to writing, students are expected to demonstrate full knowledge of the basic elements of written discourse. They are expected to write well-structured arguments with good support and to employ rhetorical devices and visual aids to enhance meaning. Their use of language is expected to be fresh. In addition, students are required to deliver polished formal

and extemporaneous reflective presentations, oral reports on historical investigations, oral responses to literature, multimedia presentations, and recitations of poems, selections from speeches, or dramatic soliloquies.

Themes: Change Over Time in America, Continuity of Life, Themes of American History, Heritage of the American People, Irony and Satire

Units:

Quarter One:	Quarter Two:	Quarter Three:	Quarter Four:
Satire, parody and allegory Poetry Short story Exposition Listening Skills Notetaking Business letter Reports and technical papers	Drama Poetry and figurative language Poetry recitation Literary movements Archetype Symbols, allegory, figurative language, imagery	Fiction Literary movements Elements of short stories Poetry and figurative language Autobiographical essay (college essay)	Essays Listening to logical appeals Etymology of political science and historical terms Non-Fiction Multimedia presentation (Outline, script, research, storyboard and multimedia elements combined) Argument/Persuasion: Fallacies and persuasive organization patterns Workplace writing

Curriculum:

Reading

Student assignments, projects and portfolio inclusion will focus on:

- Continued development of vocabulary and application of knowledge of word origins to determine the meaning of new words
- Tracing the etymology of key terms used in political science and history
- Application of Greek, Latin, and Anglo-Saxon roots and affixes to draw inferences on math and scientific terminology
- The meanings of analogies
- Reading and understanding grade-level-appropriate *Recommended Literature, Kindergarten Through Grade Twelve* (suggested literature included for this grade level)
- Reading two-million words each year that includes classic and contemporary literature, magazines, newspapers and online information
- Demonstrate the ability to analyze both the features and rhetorical devices of different types of public documents
- Verification of facts presented in expository texts
- The ability to make reasonable assertions about author's arguments
- Determine the truthfulness of public arguments by critiquing the power, validity of arguments
- Read and respond to historically or culturally significant works of literature that reflect and enhance social science themes
- Analyze characteristics of the subgenres of satire, parody, allegory, pastoral that are used in poetry, prose, plays, novels, short stories, essays and other genres
- Understanding the ways in which the theme or meaning of a selection represents a view or comment on life using examples and textual evidence to support claims
- Discuss the ways in which irony, tone, mood, style and language achieve rhetorical or aesthetic purposes or both
- Identify and analyze ways poets use imagery, personification, figures of speech and sounds relate to reader's emotions
- Analyze recognized works of American literature from the colonial period until today and be able to contrast the major periods, themes, styles and trends within the historical period that shaped characters, plots and settings
- Understand the use of archetypes drawn from myth and tradition in literature, film, political speeches, and religious writings

- Analyze recognized works of world literature from a variety of authors by contrasting major literary forms, techniques, and characteristics of the major literary periods (Homeric Greece, medieval, romantic, neoclassic, modern)
- Analyze the clarity and consistency of political assumptions in a literary works and essays
- Use the Philosophical Approach to analyze literary works

Writing

Student assignments, projects and portfolio inclusion will focus on:

- Written work that presents a well-defined perspective and tightly reasoned argument that is coherent and focused
- Demonstrate an understanding of the elements of discourse when writing
- Use point of view, style and characterizations for specific rhetorical and aesthetic purposes
- Use sophistication in structuring ideas in arguments
- Use rhetorical devices to enhance meaning
- Development of a natural and fresh style
- Ability to write with a specific tone
- Understand and utilize clear research design in approaching research and outlines for projects and assignments
- Use systematic online strategies to organize and record information
- Demonstrate ability to integrate databases, graphics and spreadsheets into word processed documents
- Revise text to highlight individual voice, improve sentence variety and style and enhance subtlety of meaning and tone
- Student work in narration, exposition, persuasion and description in texts of at least 1,500-words using standard American English
- Portfolio assignments will include: fictional, autobiographical or biographical narratives, responses to literature, reflective compositions, historical investigation, job applications and resumes, and multimedia presentations

Speaking and Listening

Portfolio rubric and samples of student work submitted in portfolio will reflect high standards for:

- Demonstration use of Standard English in writing and speaking
- Improvement in oral communication over previous years as documented in peer and faculty rubric evaluations
- Identify strategies used by the media and the effect the messages have on the democratic process
- Interpret and evaluate manner events are presented

English 11 Literature Selections:

Chief Joseph, <i>I Will Fight No More Forever</i>	Hurston, Zora Neale, <i>Their Eyes Were Watching God</i>
Franklin, Benjamin, <i>Autobiography</i>	Lee, Harper, <i>To Kill a Mockingbird</i>
Chopin, Kate, <i>The Awakening</i>	Thoreau, Henry David, <i>Walden</i>
Ibsen, Henrik, <i>A Doll's House</i>	Steinbeck, John, <i>The Grapes of Wrath</i>
Heller, Joseph, <i>Catch 22</i>	Williams, Tennessee, <i>The Glass Menagerie</i>
Steinbeck, John, <i>Tortilla Flat</i>	Donne, <i>Death Be Not Proud</i>
Wright, Richard, <i>Native Son</i>	O'Conner, Flannery, Selection of short stories
Kerouac, Jack, <i>On the Road</i>	Whitman, Walt, Selection of poems
Franklin, Benjamin, <i>Poor Richard's Almanac</i>	Twain, Mark, <i>Life on the Mississippi</i>
London, Jack, <i>The Sea Wolf</i>	Rowland, Mary, "A Narrative of the Captivity"
Allende, Isabelle, <i>The House of the Spirits</i>	Edwards, Jonathan, "Sinners in the Hands of an Angry God"
Camus, Albert, <i>The Guest</i>	Henry, Patrick, "Speech to the Virginia Convention"
Hawthorne, Nathaniel, <i>The Scarlet Letter</i>	King, Martin Luther, Jr., "I Have a Dream"
Crane, Stephen, <i>The Red Badge of Courage</i>	Steinbeck, John, Nobel Prize Acceptance Speech
Wilder, Thornton, <i>Our Town</i>	Hemingway, Ernest, Nobel Prize Acceptance Speech
Shakespeare, William, <i>Midsummer Night's Dream</i>	
Bradbury, Ray, <i>Fahrenheit 451</i>	
Gaines, Ernest, <i>A Lesson Before Dying</i>	
Faulkner, William, Nobel Prize Acceptance Speech	

English 12

(Annual Course-Grade 12)

Prerequisite: English 11

Text: McDougal Littell California Literature

Course Description

English 12 continues the focus on developing students' analytical and evaluative skills. The course continues the emphasis on etymology and morphology and vocabulary common to disciplines other than English. Reading activities focus on public documents such as policy statements, speeches, and debates. Point-of-view essays from news papers and magazines are rich sources of instructional materials at this level. In addition, English 12 continues the focus on literature and literary genres and subgenres such as satire and parody. The course also focuses on the historical genres and literary traditions of American and world literature. At a more sophisticated level, students are expected to contrast the major literary forms and characteristics of certain literary periods, relate literary works and authors to major themes and historical issues, and analyze the philosophical, political, religious, ethical, and social influences that have shaped literature in certain periods. With regard to writing, students are expected to demonstrate full knowledge of the basic elements of written discourse. They are expected to write well-structured arguments with good support and to employ rhetorical devices and visual aids to enhance meaning. They should integrate databases, graphics, and spreadsheets into word processing documents. Their use of language is expected to be fresh. In addition, students are required to deliver polished formal and extemporaneous reflective presentations, oral reports on historical investigations, oral responses to literature, multimedia presentations, and recitations of poems, selections from speeches, or dramatic soliloquies.

Themes: Dealing with Challenges, Life Examined and Choices, Power and Challenging Power, Government and the Governed, Satire and the Essay

Units:

Quarter One:	Quarter Two:	Quarter Three:	Quarter Four:
College essay Resume Autobiographical essay Poetry Interview questions and answers College essay	Business letter Chronological summary of event Laboratory narrative report College essay	Persuasive speech outline Biography of scientist or mathematician Research on current event Outline of current event issues Critique of persuasive speech/political speech	Multimedia presentation (Research, outline, script, storyboard and technology elements combined) Storyboard and script for presentation Letter to the editor Letter of request Persuasive speech, research, outline

Curriculum:

Reading

Student assignments, projects and portfolio inclusion will focus on:

- Continued development of vocabulary and application of knowledge of word origins to determine the meaning of new words
- Application of Greek, Latin, and Anglo-Saxon roots and affixes to draw inferences on math and scientific terminology
- Reading and understanding grade-level-appropriate *Recommended Literature, Kindergarten Through Grade Twelve* (Suggested reading list included)
- Reading two-million words each year that include classic and contemporary literature, magazines, newspapers and online information
- Demonstrate the ability to analyze both the features and rhetorical devices of different types of public documents
- Verification of facts presented in expository texts
- The ability to make reasonable assertions about author's arguments
- Determine the truthfulness of public arguments by critiquing the power, validity of arguments
- Read and respond to historically or culturally significant works of literature that reflect and enhance economic and governmental themes

- Analyze characteristics of the subgenres of satire, parody, allegory, pastoral that are used in poetry, prose, plays, novels, short stories, essays and other genres
- Understanding the ways in which the theme or meaning of a selection represents a view or comment on life using examples and textual evidence to support claims
- Discuss the ways in which irony, tone, mood, style and language achieve rhetorical or aesthetic purposes or both
- Analyze recognized works of American literature from the colonial period until today and be able to contrast the major periods, themes, styles and trends within the historical period that shaped characters, plots and settings
- Understand the use of archetypes drawn from myth and tradition in literature, film, political speeches, and religious writings
- Analyze recognized works of world literature from a variety of authors by contrasting major literary forms, techniques, and characteristics of the major literary periods (Homeric Greece, medieval, romantic, neoclassic, modern)
- Analyze the clarity and consistency of political assumptions in a literary works and essays

Writing

Student assignments, projects and portfolio inclusion will focus on:

- Written work that presents a well-defined perspective and tightly reasoned argument that is coherent and focused
- Demonstrate an understanding of the elements of discourse when writing
- Use point of view, style and characterizations for specific rhetorical and aesthetic purposes
- Use sophistication in structuring ideas in arguments
- Use rhetorical devices to enhance meaning
- Development of a natural and fresh style
- Demonstrate an ability to write with a specific tone
- Utilize clear research design in approaching research and outlines for projects and assignments
- Use systematic online strategies to organize and record information
- Demonstrate ability to integrate databases, graphics and spreadsheets into word processed documents
- Revise text to highlight individual voice, improve sentence variety and style and enhance subtlety of meaning and tone
- Student work in narration, exposition, persuasion and description in texts of at least 2,000-words using Standard American English
- Portfolio assignments will include: fictional, autobiographical or biographical narratives, responses to literature, reflective compositions, historical investigation, job applications and resumes, and multimedia presentations

Speaking and Listening

Portfolio rubric and samples of student work submitted in portfolio will reflect high standards for:

- Demonstration use of Standard English in writing and speaking
- Improvement in oral communication over previous years as documented in peer and faculty rubric evaluations
- Identify strategies used by the media and the effect the messages have on the democratic process
- Identify the use of inductive and deductive reasoning and use of syllogisms and analogies in works of literature
- Use technical language in topical math and science assignments
- Use rubric to critique taped presentation in the areas of logical, ethical and emotional appeals, research, diction and syntax, pronunciation and enunciation
- Identify logical fallacies used in oral presentation and news coverage
- Analyze four basic types of persuasive speech, including policy
- A polished formal and extemporaneous presentation
- Deliver at least one oral report during each semester of the junior and senior year on historical investigations, reflective presentation and/or a response to literature
- Deliver a multimedia presentation that meets rubric requirements for an effective program. This presentation must include research, a written outline, storyboard and research.
- Demonstration of mastery of rubric critique to evaluate dramatic performances of literature by using critique rubric each semester during the junior and senior years

Grade 12 Literature Selections:

<p>Kesey, Ken, <i>One Flew Over the Cuckoo's Nest</i> Burgess, Anthony, <i>A Clockwork Orange</i> Garcia Marquez, Gabriel, <i>One Hundred Years of Solitude</i> Nafisi, Azar, <i>Reading Lolita in Tehran</i> Rodriguez, Richard, <i>Hunger for Memory</i> Albom, Mitch, <i>Tuesdays with Morrie</i> Hosseini, Khaled, <i>Kite Runner</i> Marquez, <i>Love in the Time of Cholera</i> Conrad, <i>Heart of Darkness</i> Camus, Albert, <i>The Plague</i> Stoppard, <i>Rosencrantz and Guildenstern Are Dead</i> Hardy, <i>The Mayor of Casterbridge</i> Shakespeare, <i>King Lear, Othello or Hamlet</i> Emerson, Ralph Waldo, <i>Self Reliance</i> Fitzgerald, F. Scott, <i>The Great Gatsby</i> Levy, Cesar Chavez, <i>Autobiography of La Causa</i></p>	<p>Orwell, <i>1984 or Animal Farm</i> Huxley, <i>Brave New World</i> Golding, William, <i>Lord of the Flies</i> Orwell, George, <i>Shooting an Elephant</i> Hesse, Herrmann, <i>Siddhartha</i> Camus, Albert, <i>The Stranger</i> Swift, Jonathan, <i>A Modest Proposal</i> Auden, WH, <i>The Unknown Citizen</i> Shelley, "Ozymandias" Dostoevsky, <i>Crime and Punishment</i> Tolstoy, <i>The Death of Ivan Ilych</i> Remarque, E., <i>All Quiet on the Western Front</i> Vonnegut, Kurt, <i>Slaughterhouse-Five</i> Cisneros, Sandra, <i>The House on Mango Street</i> Baldwin, Alex, <i>The Fire Next Time</i> Miller, Henry, <i>Death of a Salesman</i> Albee, Edward, <i>The American Dream and Zoo Story</i></p>
--	---

References for Language Arts Curriculum

Reading/Language Arts Framework for California Public Schools, California Department of Education

Recommended Literature Grades Nine Through Twelve, California State Department of Education

Strategic Teaching and Learning: Standards-Based Instruction to Promote Content Literacy in Grades Four Through Twelve, California State Department of Education

Recommended Resources for Language Arts Curriculum

Teach Tolerance.org

National Council for the Teachers of English/Exxon Mobil Masterpiece Theater Literature Curriculum

SOCIAL SCIENCES

World History

(Annual Course)

Prerequisite: None

Text: Modern World History: Patterns of Interaction, McDougal Littell

Course Description

This course is designed to promote an appreciation, understanding and enjoyment of past events within world history, as well as to appreciate the current events that will become history. This course will focus on developing or enhancing each student's thinking process, reading writing and commenting on the history.

Course will integrate the study of world geography and cultures with current events. Students will use online newspapers and news magazine for the core readings in this class. The study will enhance objectives of the Language Arts curriculum for grades 6-9 by examination of motivation and source credibility, creation of solid reasoning and discovery of the use of fallacies of logical arguments. Students will write position papers on topics related to current events using Internet and print resources. APA will be used as the required style manual in this course.

Themes: Change Over Time, Diversity and Similarities, Culture

Units:

Quarter One	Quarter Two	Quarter Three	Quarter Four
Panel Discussion: Finding Issues-Great Britain and the Colonies Transportation and Travel Primary Sources	Panel Discussion: Finding Issues-Native Americans and Westward Expansion The Office of the President Research Skills	Panel Discussion: Finding Issues-Slavery and the Civil War The Power of Congress Style Sheets	Panel Discussion: Finding Issues- America First or World War The Role of the Supreme Court Secondary Sources Multimedia Presentation

Curriculum:

Western Political Thought:

- Students will understand the relationship with the ethical and moral principles of Judaism, Greek and Roman philosophy, and Christianity.
- Guest speakers will contribute a significant amount of discussion to this unit.

Glorious Revolution, French and American Revolutions:

- **Students will understand how each revolution** differed and resembled each other
- Major philosophers will be the subjects of biographical study
- Students will list the principles of the major documents influence the development of the United States government by reading elements of each online at the Library of Congress and on the Gutenberg Project
- Students will also understand the unique nature of the American Revolution
- Students will know how the French Revolution lead to changes leading to the Age of Napoleon
- Napoleon will be studied as a biographical figure
- The spread of nationalism across Europe will be traced from the rise of Napoleon through the Revolutions of 1848

Industrial Revolutions of England, France, Germany, Japan and the US:

Students will understand:

- **These resolutions** will be examined in detail using a spreadsheet to chart similarities and differences
- Emphasis will be made on new forms of energy and this will be integrated into the study of science this year
- Biographies of famous inventors will be part of the multimedia presentation this school year
- Students will be able to describe, using maps and routes, the growth of population, migrations and growth of cities

- Students will research in the US Departments of Population, Commerce and Labor to develop thesis statements for this research
- Links between natural resources and industry will be linked to the recycling project and the school garden projects
- Students will debate the merits and disadvantages of Utopianism, Social Democracy, Socialism and Communism
- Students will understand the differences in Communistic systems
- Romantic art and literature will be explored through short readings and online visits to world museums including Japanese, German, French and British museums and portrait galleries
- Language Arts will integrate assignments for this unit

New Imperialism in Africa, Southeast Asia, China, India, Latin America, and the Philippines:

Students will understand:

- Two areas will be studied each year and these will rotate with the Language Arts reading curriculum in short stories and poetry
- The rise of economics, political power, use of technology and land resources, national hegemony, colonial rule and struggles for independence will be major themes for study

The causes of the First World War:

Students will understand:

- World War I will be analyzed and debated in a panel format
- Students will be required to do research and create electronic note cards for their research
- Students will map major campaigns and turning points
- The Russian Revolution will be examined through a biographical study of the Romanoff Family and their demise
- The America First and Peace Movement will be the focus of discussion centered on intervention or isolationism
- Human rights will be studied in this time period and linked to human rights work today

Effects of First World War:

Students will understand:

- The effects will be discussed and debated
- Biographical study of Woodrow Wilson
- The goals of a League of Nations will be the focus
- Students will design their own world court and international forum
- The Arts during this period will be explored online at virtual museums

The rise of totalitarian governments after World War I:

Students will understand:

- **The reasons for the rise** will be the focus of study for one unit that includes the Russian Revolution
- Stalin's rise to power
- The human costs of totalitarian regimes in Germany, Italy and the Soviet Union
- This unit will ask students to trace the world opinion regarding leaders of this movement
- The focus on the Nazi Party and Hitler will provide an opportunity for deep analysis since Hitler was voted *Time* Magazine's man of the year for more than one year before World War II
- Students will examine Amnesty International's site and debate, using violations of human rights and degree of public suppression, current countries meeting the criterion of "totalitarian regimes."

The reasons for World War II and the Consequences of that War:

Students will:

- Compares the drive for empire in the world during the 1930s and 1940s
- Options of intervention appeasement and isolationism will be debated
- Biographies of key figures will be included as assignments in this unit
- Students will debate in a world court the decision to drop the atomic bomb
- Discussion of the Nazis and the Holocaust will include instructional materials from the US Holocaust Museum
- The effects, human and economic, will be discussed and students will hear guest speakers talking about the effects of war
- Field trips to the local Japanese and Holocaust museums will be part of the curriculum

- Students will work with curriculum materials from the Southern Poverty Leadership Center on this period of time

International development post-WWII:

Students will understand:

- Economic and military power shifts caused by the war
- Causes and effects of the Cold War, Truman Doctrine and the Marshall Plan
- Fear of Communism
- Causes of the Chinese Civil War
- Reasons for the uprisings in eastern European countries
- Forces of nationalism in the Middle East
- Reasons for collapse of the Soviet Union
- Students will use educational materials from the United Nations to discuss the advantages and disadvantages of the organization
- US membership in other pacts and organizations will be debated as a class.
- The transformation of the Soviet Union from 1945 until today
- Guest speakers will be the core of the curriculum dealing with the human costs of war, totalitarian rule, and civil unrest

Nation building in the contemporary world:

- **New nations** will be the subject of this revolving unit of study.
- Middle East will be the focus for each year
- The second unit will rotate with Africa, Mexico, Latin American countries and China. The challenges of the region, recent history, and important trends will be featured. Students will be assigned topics and create oral presentations that will be viewed and collected as part of a school library.

The World Economy and the information, technological and communications revolutions:

Students will:

- Create a timeline or information, technology and communications that will be placed in the classrooms as a reference point for literature and cultural study

AP World History

(Annual Course)

Prerequisite: None

Text: Ways of the World: A Brief Global History with Sources, Combined Volume, Bedford/St. Martin's

Course Description

This course is designed to offer students a comprehensive look at the development of the modern world, tracing its origins back to the rise of agricultural societies and following its development into the contemporary era of globalization.

Themes: Change Over Time, Diversity and Similarities, Culture

Units: Major civilizations, events, figures, and historical themes will be covered in detail. Students will practice chronological and spatial thinking, historical interpretation, and research. Students will gain an understanding of how history relates to our contemporary world as the causal relationship between historical and current events is explored. The Advanced Placement course requires a course project and requires that the student take the AP examination. Students will write compare and contrast essays based on unit study in preparation for the AP exam.

Quarter One	Quarter Two	Quarter Three	Quarter Four
Panel Discussion: Finding Issues-Great Britain and the Colonies Transportation and Travel Primary Sources	Panel Discussion: Finding Issues-Native Americans and Westward Expansion The Office of the President Research Skills	Panel Discussion: Finding Issues-Slavery and the Civil War The Power of Congress Style Sheets	Panel Discussion: Finding Issues- America First or World War The Role of the Supreme Court Secondary Sources Multimedia Presentation

Curriculum:**Western Political Thought:**

- Students will understand the relationship with the ethical and moral principles of Judaism, Greek and Roman philosophy, and Christianity
- Guest speakers will contribute a significant amount of discussion to this unit

Glorious Revolution, French and American Revolutions:

- **Students will understand how each revolution** differed and resembled each other
- Major philosophers will be the subjects of biographical study
- Students will list the principles of the major documents influence the development of the United States government by reading elements of each online at the Library of Congress and on the Gutenberg Project
- Students will also understand the unique nature of the American Revolution
- Students will know how the French Revolution lead to changes leading to the Age of Napoleon
- Napoleon will be studied as a biographical figure
- The spread of nationalism across Europe will be traced from the rise of Napoleon through the Revolutions of 1848

Industrial Revolutions of England, France, Germany, Japan and the US:**Students will understand:**

- **These resolutions** will be examined in detail using a spreadsheet to chart similarities and differences
- Emphasis will be made on new forms of energy and this will be integrated into the study of science this year
- Biographies of famous inventors will be part of the multimedia presentation this school year
- Students will be able to describe, using maps and routes, the growth of population, migrations and growth of cities
- Students will research in the US Departments of Population, Commerce and Labor to develop thesis statements for this research
- Links between natural resources and industry will be linked to the recycling project and the school garden projects
- Students will debate the merits and disadvantages of Utopianism, Social Democracy, Socialism and Communism
- Students will understand the differences in Communistic systems
- Romantic art and literature will be explored through short readings and online visits to world museums including Japanese, German, French and British museums and portrait galleries
- Language Arts will integrate assignments for this unit

New Imperialism in Africa, Southeast Asia, China, India, Latin America, and the Philippines:**Students will understand:**

- Two areas will be studied each year and these will rotate with the Language Arts reading curriculum in short stories and poetry
- The rise of economics, political power, use of technology and land resources, national hegemony, colonial rule and struggles for independence will be major themes for study

The causes of the First World War:**Students will understand:**

- World War I will be analyzed and debated in a panel format
- Students will be required to do research and create electronic note cards for their research
- Students will map major campaigns and turning points
- The Russian Revolution will be examined through a biographical study of the Romanoff Family and their demise
- The America First and Peace Movement will be the focus of discussion centered on intervention or isolationism
- Human rights will be studied in this time period and linked to human rights work today

Effects of First World War:**Students will understand:**

- The effects will be discussed and debated
- Biographical study of Woodrow Wilson

- The goals of a League of Nations will be the focus
- Students will design their own world court and international forum
- The Arts during this period will be explored online at virtual museums

The rise of totalitarian governments after World War I:

Students will understand:

- **The reasons for the rise** will be the focus of study for one unit that includes the Russian Revolution
- Stalin's rise to power
- The human costs of totalitarian regimes in Germany, Italy and the Soviet Union
- This unit will ask students to trace the world opinion regarding leaders of this movement
- The focus on the Nazi Party and Hitler will provide an opportunity for deep analysis since Hitler was voted *Time* Magazine's man of the year for more than one year before World War II
- Students will examine Amnesty International's site and debate, using violations of human rights and degree of public suppression, current countries meeting the criterion of "totalitarian regimes."

The reasons for World War II and the Consequences of that War:

Students will:

- Compares the drive for empire in the world during the 1930s and 1940s
- Options of intervention appeasement and isolationism will be debated
- Biographies of key figures will be included as assignments in this unit
- Students will debate in a world court the decision to drop the atomic bomb
- Discussion of the Nazis and the Holocaust will include instructional materials from the US Holocaust Museum
- The effects, human and economic, will be discussed and students will hear guest speakers talking about the effects of war
- Field trips to the local Japanese and Holocaust museums will be part of the curriculum
- Students will work with curriculum materials from the Southern Poverty Leadership Center on this period of time

International development post-WWII:

Students will understand:

- Economic and military power shifts caused by the war
- Causes and effects of the Cold War, Truman Doctrine and the Marshall Plan
- Fear of Communism
- Causes of the Chinese Civil War
- Reasons for the uprisings in eastern European countries
- Forces of nationalism in the Middle East
- Reasons for collapse of the Soviet Union
- Students will use educational materials from the United Nations to discuss the advantages and disadvantages of the organization
- US membership in other pacts and organizations will be debated as a class.
- The transformation of the Soviet Union from 1945 until today
- Guest speakers will be the core of the curriculum dealing with the human costs of war, totalitarian rule, and civil unrest.

Nation building in the contemporary world:

- **New nations** will be the subject of this revolving unit of study.
- Middle East will be the focus for each year
- The second unit will rotate with Africa, Mexico, Latin American countries and China. The challenges of the region, recent history, and important trends will be featured. Students will be assigned topics and create oral presentations that will be viewed and collected as part of a school library.

The World Economy and the information, technological and communications revolutions:

Students will:

- Create a timeline or information, technology and communications that will be placed in the classrooms as a reference point for literature and cultural study

United States History

(Annual Course)

Prerequisite: None

Text: The Americans: Reconstruction to 21st Century

Course Description

This course is designed to offer students a comprehensive look at the development of from the Reconstruction through the 21st Century. Students will practice chronological and spatial thinking, historical interpretation, and research. Students will gain an understanding of how history relates to our contemporary world as the causal relationship between historical and current events is explored.

Review the major themes from grade eight and continue with the study of United States History and its position in world affairs will cover the first quarter or less. Concentrated study will focus on the Industrial Revolution through current history to discover threads that run from 1900 until today. Extended readings will tie literature from the Language Arts course to events in American History.

Themes: Democracy, Change over Time, War and Peace

Units:

Quarter One	Quarter Two	Quarter Three	Quarter Four
Panel Discussion: Finding Issues-Great Britain and the Colonies Transportation and Travel Primary Sources	Panel Discussion: Finding Issues-Native Americans and Westward Expansion The Office of the President Research Skills	Panel Discussion: Finding Issues-Slavery and the Civil War The Power of Congress Style Sheets	Panel Discussion: Finding Issues- America First or World War The Role of the Supreme Court Secondary Sources Multimedia Presentation

Curriculum:

Review of the Ideals and Philosophical Foundation for the US:

- Enlightenment and rise of democratic ideals
- Ideological origins of the American Revolution and debate of these issues in today's world
- Federal vs. state's rights
- Growing democratization
- Effects of the Civil War and Reconstruction and the effects of racism and discrimination
- Effects of the Industrial Revolution

Rise of Industrialism:

Students will understand:

- **The reasons for** large-scale rural-to-urban migration and massive immigration from Southern and Eastern Europe
- Immigration will be studied through a research project that requires each student to research online one family. Students will pair with one researching a family in a rural area and the other researching a separate family in an urban area. Pairs will then compare and contrast the experiences of their topics.
- Readings from *The Jungle* and evaluate the working conditions of this period with those of today
- Track industrialization using Department of Commerce and Labor records
- The significance of trusts, cartels, political parties, laws and regulations on local, state and federal levels
- Natural resources used during this period and the reasons for use
- The Progressive, Social Darwinist, and Populist agendas
- The role of geography in the industrial world
- Curriculum materials from the National Geographic Society

Religion will be studied and understood through:

- Analysis of religious contributions
- Examination of religious revivals and their leaders
- Examination of CA in the twentieth century
- Discussion of the religious liberties expanded through First Amendment challenges to the US Supreme Court.

Rise of US as World Power:**Students will study and understand:**

- The Open Door policy
- Spanish American War
- US territorial expansion
- Revolution in Panama
- TR's Big Stick policy
- Dollar Diplomacy and Moral Diplomacy
- The two policies above will be compared and contrasted using a spreadsheet
- The Home Front in WWI will be done through reading selections from Studs Terkel
- Role of Great Britain in the world will be taught through a comparison of the country today
- The recycling project and school garden will assist in demonstrating home front activities in both WWI and in WWII.

The 1920s: Study will emphasize the large grey area in historical interpretation and encourage students to make their own interpretations of key events. Written reports and oral presentations will be judged on use and quality of supporting materials, rather than on "political correctness" in interpretation.

Students will know and understand:

- Policies of Harding, Calvin Coolidge and Hoover
- International and domestic events and philosophies. Students will debate the events of the 1920s using the events of today.
- Eighteenth and Nineteenth Amendments
- Harlem Renaissance will integrate study with Language Arts, Music and Art Appreciation courses
- Influence of radio and movies on popular culture
- Mass production techniques, growth of the cities, and impact of new technologies. Students will visit history exhibits at the LA County Museum of Natural History to examine LA in this period.
- Fine art will be used to illustrate this unit. Students will visit online museums to view works.

The Great Depression and New Deal:**Students will:**

- Explain causes and understand effects
- Debate government intervention policies
- Human effects including Dust Bowl and the impact on California
- Debate the role of government alphabet programs
- Understand the rise of organized labor and debate the effectiveness of the movement
- Cesar Chavez and the United Farm Workers will be the focus of the union research

US participation in WWII**Students will understand:**

- Events prior to the attack on Pearl Harbor
- US and Allied war strategy and map the major campaigns
- Contributions of fighters and the role of specialized forces
- FDR's foreign policy during WWII
- Constitutional infringement during the war and compare and contrast these actions to current events
- Debate decisions of the US Supreme Court over WWII policies and human rights
- Advancements of war weaponry and the significance of these weapons
- Debate the decision to drop the atomic bomb
- US aid to Western Europe

Post-WWII America**Students will study and understand:**

- Change in labor and labor practices
- Immigration
- Truman's labor policy
- Federal spending and program development
- Increase in the powers of the presidency
- Diverse environmental regions of North America
- Technological developments since 1945 and their significance. These reports will be added to the timeline from earlier study.
- Forms of popular culture. Students will use the American Memory Collection from the Library of Congress to do research in photographic images.

US Foreign Policy Since WWII**Students will understand:**

- Development and significance of the United Nations, International Monetary Fund, World Bank, GATT Treaty and the International Declaration of Human Rights
- Role and significance of military alliances
- Origins and geopolitical consequences of the Cold War and containment policy
- Effect of foreign policy on domestic policies and in reverse. These include: McCarthyism, blacklisting, deportation, spy trials, Bay of Pigs, Korean War, Berlin Blockade, Vietnam War, Latin American Policy, Cold War, atomic testing and disarmament policies, and Vietnam protests. Guest speakers will provide a wealth of personal information for students. Government produced films from this period will be used in this portion of the unit
- US and Middle East foreign policy
- US and Mexico foreign policy

Civil and Voting Rights:

Students will study and understand:

- Curriculum materials from Teach Tolerance.org will form the basis of this unit. PBS *Eyes on the Prize* will present visual images to accompany study including:
- Development of the Civil Rights Movement and key figures of the movement
- Key legal decisions advancing civil rights
- Film and audio recordings from leaders regarding strategy and policy choices
- Biographical study of non-violent leaders as well as radical leaders
- Role of churches in the movement
- Influence of laws and the effect on voting
- Radical resistance from the American Indian Movement
- Resistance from the Latin community and its effect today
- Women's Rights Movement and the significance on issues and policies today

Contemporary Issues:

Since contemporary issues are incorporated in the context of earlier lessons, students will be asked to select two important social and/or domestic issues facing contemporary society and write a position paper explaining possible options for action. These papers will require research and will integrate with the Language Arts curriculum by asking students to interview and write for positions from local political figures and leaders.

AP United States History

(Annual Course)

Prerequisite: None

Text: The American Pageant, Fourteenth Edition

Course Description

The AP program in United States History is designed to provide students with the analytical skills and factual knowledge necessary to deal critically with the problems and materials in United States history. The program prepares students for intermediate and advanced college courses by making demands equivalent to those made by full-year introductory college courses. Students will learn to assess historical material, the relevance of the materials to a given interpretive problem, the reliability of the historical material, and the importance of documents. Students will be charged with weighing evidence and interpretations presented in historical scholarship. Students enrolling in this course will be required to complete individual unit projects and take the Advanced Placement exam and this necessitates less emphasis on integration of current events. Content in this course differs from the non-AP course due to the testing requirements. Test dates require students to complete unit study by May and unit planning reflects this timeline. After testing, students will complete a multimedia presentation summarizing key events from one decade of United States History. These will focus on digital image capture and appropriate music for the period. These presentations will be collected in a digital library to be used in subsequent semesters as review for the AP classes and as an introduction to units in the non-AP US History classes.

Themes: Continuity and Change Over Time

Units:

Quarter One	Quarter Two	Quarter Three	Quarter Four
Colonial America to the Civil War	Civil War to World War I	World War I to Vietnam War	Vietnam to Today Essay Outlining Unit Multiple Choice Testing Strategies

Curriculum:**Great Britain and Colonies****Students will understand:**

- Goals and objectives of English rulers
- The purpose of colonization
- Divine Rights of Kings and British Constitutional Law
- Triangular Trade and economic development
- England and her neighbors

War in Europe**Students will understand:**

- The causes and results of war in Europe
- How European wars affected colonials

The American Colonies**Students will understand:**

- Background for colonial settlement
- Geographical differences and how geography influenced settlement
- Rise of self-rule
- Taxes and English regulations

Rise of Colonial Rule**Students will understand:**

- Colonial trade and European relations
- Home grown leadership

The Revolutionary War**Students will understand:**

- Reasons for war
- Major battles and leaders
- Significance of the war

Articles of Confederacy**Students will understand:**

- Dissent and agreement
- Basic elements of rule
- Constitutional Conventions
- Rise of American Leadership
- Hamiltonian and Jeffersonian Democracy

The New Republic and the Constitution**Students will understand:**

- Theory and key elements of the Constitution
- Importance of the Bill of Rights
- Balance of Power
- Key early Supreme Court decisions and their significance
- The rise of political parties

Trials of the New Republic**Students will understand:**

- Political diversity
- Development of a new nation
- Banking and farming

The Age of Jackson**Students will understand:**

- Reasons for the movement West
- The significance of President Jackson and the Indian Policy
- Democratic Democracy under Jackson
- Jackson and banking

Industry and Growth**Students will understand the significance of:**

- New inventions
- Rise of industry
- Geographic movement
- Economic issues facing North and South

Westward Expansion**Students will understand the significance of:**

- The Slavery Question
- Gold and westward movement
- Frederick Jackson Turner and the Frontier Thesis
- New territories and states

Antebellum South

Students will understand the importance of:

- Southern differences
- State's Rights
- Compromise and new statehood

Era of Reform

Students will understand:

- Social movements of the time
- Just folks and the American experience
- Era of immigration

Civil War and Reconstruction

Students will study and understand:

- Causes of the Civil War
- Advantages and Disadvantages of each side
- The role of other nations
- Significance of Reconstruction
- Role of Lincoln
- Impeachment and compromise
- End of Reconstruction
- Legacy of Reconstruction

Rise of Industry and Labor Unions

Students will understand the significance of:

- New inventions and industrialization
- Protection of the environment and use of resources
- Social and cultural changes in America
- Rises of unionism

Immigration

Students will understand the significance of:

- Reasons for immigration
- Life of immigrants
- Limits on immigration
- Significance of immigration

Rise of Industrialism:

Students will understand:

- **The reasons for** large-scale rural-to-urban migration and massive immigration from Southern and Eastern Europe
- Immigration will be studied through a research project that requires each student to research online one family. Students will pair with one researching a family in a rural area and the other researching a separate family in an urban area. Pairs will then compare and contrast the experiences of their topics.
- Readings from *The Jungle* and evaluate the working conditions of this period with those of today
- Track industrialization using Department of Commerce and Labor records
- The significance of trusts, cartels, political parties, laws and regulations on local, state and federal levels
- Natural resources used during this period and the reasons for use
- The Progressive, Social Darwinist, and Populist agendas
- The role of geography in the industrial world
- Curriculum materials from the National Geographic Society

Religion will be studied and understood through:

- Analysis of religious contributions
- Examination of religious revivals and their leaders
- Examination of CA in the twentieth century
- Discussion of the religious liberties expanded through First Amendment challenges to the US Supreme Court.

Rise of US as World Power:

Students will study and understand:

- The Open Door policy
- Spanish American War
- US territorial expansion
- Revolution in Panama
- TR's Big Stick policy
- Dollar Diplomacy and Moral Diplomacy
- The two policies above will be compared and contrasted using a spreadsheet
- The Home Front in WWI will be done through reading selections from Studs Terkel
- Role of Great Britain in the world will be taught through a comparison of the country today
- The recycling project and school garden will assist in demonstrating home front activities in both WWI and in WWII.

The 1920s: Study will emphasize the large grey area in historical interpretation and encourage students to make their own interpretations of key events. Written reports and oral presentations will be judged on use and quality of supporting materials, rather than on "political correctness" in interpretation.

Students will know and understand:

- Policies of Harding, Calvin Coolidge and Hoover
- International and domestic events and philosophies. Students will debate the events of the 1920s using the events of today.
- Eighteenth and Nineteenth Amendments
- Harlem Renaissance will integrate study with Language Arts, Music and Art Appreciation courses
- Influence of radio and movies on popular culture
- Mass production techniques, growth of the cities, and impact of new technologies. Students will visit history exhibits at the LA County Museum of Natural History to examine LA in this period.
- Fine art will be used to illustrate this unit. Students will visit online museums to view works.

The Great Depression and New Deal:

Students will:

- Explain causes and understand effects
- Debate government intervention policies
- Human effects including Dust Bowl and the impact on California
- Debate the role of government alphabet programs
- Understand the rise of organized labor and debate the effectiveness of the movement
- Cesar Chavez and the United Farm Workers will be the focus of the union research

US participation in WWII

Students will understand:

- Events prior to the attack on Pearl Harbor
- US and Allied war strategy and map the major campaigns
- Contributions of fighters and the role of specialized forces
- FDR's foreign policy during WWII
- Constitutional infringement during the war and compare and contrast these actions to current events
- Debate decisions of the US Supreme Court over WWII policies and human rights
- Advancements of war weaponry and the significance of these weapons
- Debate the decision to drop the atomic bomb
- US aid to Western Europe

Post-WWII America

Students will study and understand:

- Change in labor and labor practices
- Immigration
- Truman's labor policy
- Federal spending and program development
- Increase in the powers of the presidency
- Diverse environmental regions of North America
- Technological developments since 1945 and their significance. These reports will be added to the timeline from earlier study.
- Forms of popular culture. Students will use the American Memory Collection from the Library of Congress to do research in photographic images.

US Foreign Policy Since WWII

Students will understand:

- Development and significance of the United Nations, International Monetary Fund, World Bank, GATT Treaty and the International Declaration of Human Rights
- Role and significance of military alliances
- Origins and geopolitical consequences of the Cold War and containment policy
- Effect of foreign policy on domestic policies and in reverse. These include: McCarthyism, blacklisting, deportation, spy trials, Bay of Pigs, Korean War, Berlin Blockade, Vietnam War, Latin American Policy, Cold War, atomic testing and disarmament policies, and Vietnam protests. Guest speakers will provide a wealth of personal information for students. Government produced films from this period will be used in this portion of the unit
- US and Middle East foreign policy
- US and Mexico foreign policy

Civil and Voting Rights:

Students will study and understand:

- Curriculum materials from Teach Tolerance.org will form the basis of this unit. PBS *Eyes on the Prize* will present visual images to accompany study including:
- Development of the Civil Rights Movement and key figures of the movement
- Key legal decisions advancing civil rights
- Film and audio recordings from leaders regarding strategy and policy choices
- Biographical study of non-violent leaders as well as radical leaders
- Role of churches in the movement
- Influence of laws and the effect on voting
- Radical resistance from the American Indian Movement
- Resistance from the Latin community and its effect today
- Women's Rights Movement and the significance on issues and policies today

American Government and Civics

(Semester Course)

Prerequisite: World History, US History

Text: Civics in Practice: Principles of Government and Economics

Course Description

Students will learn about the foundations of American government, the political behavior of the American people, the legislative branch, the executive branch, the judicial branch, and the organization of state and local government. Special emphasis will be placed on the Constitution and its creation and on the concept of Federalism as it applies to the United States.

This senior level course takes an in-depth look at the development of the three branches of the American government. The roots of democracy will be examined in detail and readings from the senior level Language Arts class will link social science themes with literature of the various periods. Class will require a field trip to the courthouse to view a trial in progress. Course will read classic essays and literature available on the *Gutenberg Project*.

Themes: Change Over Time, Democracy, Natural Rights, and Balance of Power

Semester Units:

Quarter One	Quarter Two
Foundations of Government Constitution Branches of Government Federalism States Rights	Current Events Constitutional Issues Debate State Government Local Government

Curriculum:**Fundamental principles and moral values of American Democracy****Students understand:**

- And can explain the influence of Greek, Roman, English documents and philosophers on the development of the American government
- Character of American democracy as described by Alexis de Tocqueville
- The balance of classical republican concern with the promotion of the public good
- The balance of classical liberal concern with the protection of individual rights
- How the liberal constitutionalism and democracy are joined in the Declaration of Independence
- Views of Founding Fathers and separation of powers
- Bill of Rights and limits on powers
- Scope and limits of rights and obligations as democratic citizens
- Bill of Rights and the amendments
- Economic rights and how they relate to the individual and society
- Individual legal obligations
- Legal route to American citizenship and current day immigration and citizenship requirements
- Debate key issues related to fundamental values and principles of civil society. These will vary from year to year and will be taken from current events and cases facing the US Supreme Court in the year the student takes this course. Students will research topics and submit them for consideration. The class, with direction, will debate the list and vote on the final topics.
- Article I of the Constitution
- Constitutional amendment process
- Interview the current legislative representatives with researched and pre-prepared questions
- Article II of the Constitution
- Article III of the Constitution
- Selection and confirmation of Supreme Court justices
- Interpretations of the Bill of Rights over times
- Judicial activism and judicial restraint
- Key judicial cases including: *Marbury v. Madison*, *McCulloch v. Maryland*, *United States v. Nixon*, *and Bush, et al. v. the United States*, *Plessy v. Ferguson*, *Brown v. Board of Education*, *Miranda v. Arizona*, *Regents of the University of California v. Bakke*, *Adarand Constructors, Inc. v. Peña* and *United States v. Virginia (VMI)*
- Local political campaigns and take a role during election years in the voting process as part of a service learning activity
- Chart voter turnout for the school district
- Reserved powers
- The issue of water and court cases involving Arizona and California
- How public policy is formed. Students will attend a local school board meeting and a civil trial
- Scope of presidential power. This topic will be covered as one of the issues of the debate above.
- Identification of local, state and federal courts and their jurisdiction
- Role of a free press in society including discussion of recent federal court cases dealing with reporter's rights and national security
- How public officials use the media to communicate and change public opinion
- Change of political systems across time. Pairs of students will investigate a party.
- Historical and current world tyrants and the rise to power
- Legitimate and illegitimate power in the world. Students will map current rulers using various sources, including Amnesty International
- Rise of Communism and types of Communism in the world today
- Identify new democracies in Africa, Asia and Latin America

Economics

(Semester Course)

Prerequisite: World History, US History

Text: Institutions & Analysis-Amsco

Course Description

Students will master fundamental economic principles of micro- and macroeconomics. They will begin with an in-depth study of the stock market and its functions. Students will then focus on supply and demand, business organizations, competition and monopolies, the American labor force, measuring the economy's performance, money and banking, and the Federal Reserve System and monetary policy.

This one semester senior course will examine economic theory and practice. Students will be required to develop a personal economic theory that will be defended over the semester. Guest speakers from banking, industry and government will offer opportunities to discuss various theories of economic development. This class will be responsible for operation of a small school student store and will be placed in charge of bookkeeping and filing imaginary income taxes on the business.

Themes: Money and Influence, Change over Time

Semester Units:

Quarter One	Quarter Two
Microeconomics FDIC Money Wise Program Supply and Demand Current Economic Issues related to topics in Quarter One	Macroeconomics Federal Reserve Bank Curriculum Current Economic Issues related to topics in Quarter Two

Curriculum:

Economic Vocabulary:

Students will understand:

- Basic economic terms and vocabulary
- Use appropriate economic terminology

Market Economy in a Global Setting:

Students will understand:

- Key terminology
- Role of China and the Far East
- Historical and present day trade agreements

State, Local and Federal regulations on fiscal policy and the US Labor Market:

Students will:

- Minimum wage requirements
- Labor unions and lobbying
- Key legislation governing US fiscal policy
- Congress, President and the Budget
- Concept of a Balanced Budget
- Line Item Veto

The World Labor Market:

Students will understand the importance of:

- Imported and exported goods
- Major labor US labor legislation
- Outsourcing work
- Goods and services

Economic data collection and accuracy:

Students will:

- Understand major sources to research economic and monetary data
- Write a research paper using these sources on a timely topic

International Trade:

Students will be able to:

- Explain a trade balance and the significance
- Advantages and disadvantages to a trade deficit
- US and major trading parities
- Outsourcing

**World Economic Forces:
Students will understand:**

- Future economic trends
- Discuss impact of trade policies
- Current bills and resolutions in Congress

References for Social Science

History-Social Science Content Standards for California Public Schools: Kindergarten Through Grade Twelve, California State Board of Education, 1998

Course Models for the History-Social Science Framework: Grade Seven-World History and Geography, Medieval and Early Modern Times, California Department of Education, 1994

Literature for History-Social Science, K-8, California Department of Education, 1993

Map Resource Packet, California Department of Education, 1994

The American Indian: Yesterday, Today, and Tomorrow, California Department of Education, 1991

National Council on Social Sciences

National Curriculum Standards for Social Studies

Suggested Resources for Social Sciences

The Library of Congress: American Memory Collection
PBS and Discovery Channel Biography Series (Video and published materials)
National Geographic Society Online Site
Teach Tolerance.org (Digital, posters, online and curriculum materials)
FDIC: Money Wise Program
California Digital Library
Project Vote Smart
PBS Educational Curriculum
Rock and Roll Hall of Fame, Music Curriculum
Smithsonian Museum Online
British Museum Online
Charter Documents at the National Archives
American National Archives
Ad*Access Project
History Matters
Facing History and Ourselves
Best of History
American Social History Project
The History Channel
Modern History Sourcebook
100 Milestone Documents in American History
JSTOR

LANGUAGES OTHER THAN ENGLISH

BayTech may offer different world languages depending on student needs/demands and availability of teachers and resources.

Spanish 1

(Annual Course)

Prerequisite: None

Text: Realidades-Level 1, Pearson Prentice Hall

Spanish 2

(Annual Course)

Prerequisite: Spanish 1

Text: Realidades-Level 2, Pearson Prentice Hall

Course Description

This course is designed to teach students about the language and culture of the Spanish and Latin American people. The first-year course emphasizes communication, basic grammar and syntax, and simple vocabulary so that students can read, write, speak, and comprehend on a basic level. The second-year course enables students to expand upon what they have learned, increasing their skills and depth of knowledge. The course teaches students to appreciate the Spanish and Latin American cultures by acquainting students with art, literature, customs, and history of the Spanish-speaking people.

Spanish 3

(Annual Course)

Prerequisite: Spanish 2

Text: Realidades-Level 3, Pearson Prentice Hall

Course Description

This course typically focuses on having students express more complex concepts both orally and in writing, as well as comprehend and react to native speech. The course teaches students to appreciate Spanish and Latin American cultures by acquainting students with the art, literature, customs, and history of the Spanish-speaking people.

AP Spanish

(Annual Course)

Prerequisite: Spanish 3

Text: *Tesoro literario* McGraw Hill (2007)

Course Description

AP Spanish will include comprehension exercises and intensive conversation and discussion related to Latin literature. Discussions and lectures will be done in Spanish. This course will also involve vocabulary, oral and written exercises and focus on assistance with critical thinking in conversation and written work. Octavio Paz, Isabel Allende, and Federico Garcia Lorca will be the featured authors and their works (in Spanish) will be the core of unit study. Coursework will enable students to take the Advanced Placement Language Exam.

References for Foreign Language

<i>Foreign Language Content Standards for California Public Schools, Kindergarten Through Grade Twelve</i>
--

VISUAL AND PERFORMING ARTS

BayTech may offer different visual and performing arts courses based on student needs/demands and availability of teachers and resources.

Visual Arts

(Annual Course)

Prerequisite: None

Text: Fleming Honour, *The Visual Arts: A History* (7th Edition), 2006
D'Alleva, *Look! Art History Fundamentals*, 2007, Prentice Hall

Course Description

The advanced art appreciation course focuses on providing a framework for prior student study in Social Science and Language Arts classes where art works were used to enhance core content. Students will take field trips to area museums and use the virtual museum sites from the World Wide Web as a basis for study.

Themes: Art as Culture, History and Art

Units:

Public art

Architecture

Arts and crafts

Women artists

Folk/Outsider art

Avant-garde artists

Survey of Art

- Pre-historic
- Non-Western Art
- Ancient
- Medieval
- Renaissance
- Baroque
- Eighteenth Century
- Nineteenth Century
- Twentieth Century
- Modernism
- Post-Modernism

Curriculum:

Students in Advanced Art Appreciation will:

- Process, analyze, and respond to sensory information through the language and skills unique to the visual arts
- Perceive and respond to works of art
- Develop an advanced vocabulary of visual arts and perceptual skills
- Analyze and discuss complex ideas, such as color, scale, expressive content, virtual works of art, and real works of art during field trips and artist presentations of work.
- Discuss a series of works of art
- Research two periods of painting, sculpture, or other media and discuss their similarities and differences
- Compare how distortion is used in photography or painting
- Describe the use of the elements of art to express a mood in one or more works of art
- Analyze the works of a well-known artist as to the art media selected and the effect of that selection on the artist
- Understand the historical contributions and cultural dimension of the visual arts

- Students analyze the role and development of the visual arts in past and present cultures throughout the world, noting human diversity as it relates to the visual arts and artists.
- Identify contemporary artists worldwide who have achieved regional, national or international recognition and discuss the ways in which their work reflects, plays a role in, and influences present-day culture
- Investigate and discuss universal concepts expressed in works of art from diverse cultures
- Research the methods art historians use to determine the place, context, value and culture that produced a given work. Students will use this technique in visiting two museums.
- Describe the relationship involved in the process, product and the viewer
- Construct a rationale for the validity of a specific work of art artwork that falls outside their own conceptions of art
- Compare and contrast works of art, probing beyond the obvious and identifying psychological content found in the symbols and images
- Develop written criteria for the selection of pieces to put into an Art Appreciation Portfolio. Student will write a written defense of portfolio inclusions.

References for Art Appreciation

Art Work: A Call for Arts Education for All California Students, California Department of Education, 1997

Visual and Performing Arts Framework for California Public Schools, Kindergarten Through Grade Twelve, California Department of Education, 1996

Resources for Art Appreciation I and II

Teach Tolerance.org
 MoMA.org-Red Studio
 Walker Art Center Online
 Birmingham Museum of Art Online
 Learning at Whitney-Whitney Museum of American Art Online (<http://artport.whitney.org/>)
 New York Public Library Digital Gallery
 New Deal Artwork (<http://newdeal.feri.org/default.cfm/>)
 Twentieth-Century Contemporary Visual Artists (<http://the-artist.org/artmovement/welcome.cfm/>)
 American Museum of National History New York
 (http://www.amnh.org/education/resources/special_collections.org)
 Library of Congress: American Memory Collection
 Smithsonian American Art Museum
 National Portrait Gallery Education
 Guggenheim Museum Online
 National Gallery of Art (Kid's Site)
 Alternet.org/wiretap/ (online youth art magazine)
 British Broadcasting Art (<http://www.bbc.co.uk/blast/art/>)
 PBS Contemporary Artists Site (<http://www.pbs.org/art21/>)
 Color is the Keyboard (<http://www.publicandartist.org/color/>)

Music Appreciation

(Annual Course)

Prerequisite: None

Text: Joseph Machlis and Kristine Forney, *The Enjoyment of Music* (W.W. Norton)

Themes: Music as Culture, Form

Units:

What is a Symphony?
 Chamber Music
 Voice Only: Vocal and Choral Music
 The Small Orchestra
 The Big Orchestra
 Baroque Period
 Romantic Period

Important American Composers
Important German/Austrian Composers
Important Russian Composers
Key French Composers
Key English Composers
20th Century Composers

Curriculum:

Students in Advanced Music Appreciation will:

- Process, analyze, and respond to sensory information through the language and skills unique to music
- Perceive and respond to works of music
- Develop an advanced vocabulary of music and performance skills
- Analyze and discuss complex ideas, such as tone color, harmony, melody, and rhythm in works of music during field trips and artist presentations of music.
- Discuss a symphony
- Research two periods of music and discuss their similarities and differences
- Describe the use of the elements of art to express a mood in one or more works of music
- Analyze the works of a well-known composer or musician as to the medium and instruments used and the effect of that selection on the music
- Understand the historical contributions and cultural dimension of the musical arts
- Students analyze the role and development of music in past and present cultures throughout the world, noting human diversity as it relates to the music, composers and artists.
- Identify contemporary musicians worldwide who have achieved regional, national or international recognition and discuss the ways in which their work reflects, plays a role in, and influences present-day culture
- Investigate and discuss universal concepts expressed in works of music from diverse cultures
- Research the methods music historians use to determine the place, context, value and culture that produced a given work. Students will use this technique in visiting two museums.
- Describe the relationship involved in the process, product and the viewer
- Construct a rationale for the validity of a specific work of music that falls outside their own conceptions of music
- Compare and contrast works of music, probing beyond the obvious and identifying psychological content
- Develop written criteria for the selection of pieces to put into a Music Appreciation Portfolio. Student will write a written defense of portfolio inclusions.

References for Music Appreciation

Art Work: A Call for Arts Education for All California Students, California Department of Education, 1997

Visual and Performing Arts Framework for California Public Schools, Kindergarten Through Grade Twelve, California Department of Education, 1996

Resources for Music Appreciation I and II

Teach Tolerance.org
MoMA.org-Red Studio
New York Public Library Digital Gallery
American Museum of Natural History New York
(http://www.amnh.org/education/resources/special_collections.org)
Library of Congress: American Memory Collection
British Broadcasting Art (<http://www.bbc.co.uk/blast/art/>)

PHYSICAL EDUCATION

Physical Education

(Annual Course)

Prerequisite: None

Text: Selection will be by the instructor for the units of study. Instructors will select texts from state, district and department approved textbooks.

Course Description

The Physical Education program consists of a rotation of units in a two-year cycle. Students must take two years to meet graduation requirements.

Units:

Quarter One	Quarter Two	Quarter Three	Quarter Four
Walking	Walking	Walking	Walking
Aerobic Dance	Aerobic Dance	Aerobic Dance	Aerobic Dance
Running	Running	Running	Running
Advanced Yoga	Advanced Yoga	Advanced Yoga	Advanced Yoga
Gymnastics	Gymnastics	Gymnastics	Gymnastics
Two-player Volleyball	Two-player Volleyball	Two-player Volleyball	Two-player Volleyball
Folk Dance	Folk Dance	Folk Dance	Folk Dance
Square Dance	Square Dance	Square Dance	Square Dance
Social Dance	Social Dance	Social Dance	Social Dance
Team Volleyball	Team Volleyball	Team Volleyball	Team Volleyball
Basketball	Basketball	Basketball	Basketball
Football	Football	Football	Football
Soccer	Soccer	Soccer	Soccer
Track and field	Track and field	Track and field	Track and field
Softball	Softball	Softball	Softball

Curriculum:

Students will demonstrate:

- The ability to combine complex movement into a pattern
- Proficient skill movement in sports, dance and activities
- Explain skill-related elements of an activity
- Explain and use the skills of biomechanics
- Evaluate the social, physical and emotional dynamics of participating in a team or individual sport or activity
- Receive feedback and evaluate that feedback to improve performance as an individual or group participant
- Evaluate and explain how condition is important to a specific activity
- Create or modify training plans for an activity to achieve improved results in performance
- Develop strategies to use in solo or team activities or performances
- Assess the effect or outcome of a particular performance strategy
- Evaluate independent learning of movement skills
- Participate in moderate vigorous activity at least four days a week
- Develop a personal fitness plan, a strategy for achieving that plan
- Be able to defend a personal fitness plan based on sound reasoning and research
- Develop a defendable fitness plan for a family member or friend
- Be able to modify a plan for self or others based on physical or emotional changes
- Evaluate products that are sold on the basis of the ability to alter appearance or body shape
- Use the five components of health-related physical fitness to assess oneself
- Identify physical activities that bring personal enjoyment
- Illustrate an ability to incorporate these activities in a regular regime outside school hours and during the summer months
- Develop a list of personal goals and a plan to meet those goals using a spreadsheet

- Encourage others in group sports, regardless of individual ability
- Be able to evaluate a personal role in a team situation
- Illustrate an ability to be a team player by allowing others to assume roles in group play or activity
- Identify leadership roles and understand how physical activity relates to these roles
- Evaluate independent learning of movement skills

Resources for Physical Education

Physical Education Content Standards for California Public Schools, Kindergarten Through Grade Twelve,
California Department of Education

Health and Safety

(Annual Course)

Prerequisite: None

Texts and Instructional Materials:

Holt, Rinehart and Winston, *Holt Decisions for Health* (6-8)
Glencoe Health, *A Guide to Wellness* (Glencoe/McGraw-Hill) (9-12)
Teach Tolerance (Southern Poverty Law Center) (6-12)
World of Difference (B'nai B'rith) (6-9)
FEMA Home Safety Materials (6-12)
National Fire Association Materials (6-12)
American Red Cross Disaster Safety Materials (6-12)
State of California Driver's Manual (9-12)
American Auto Club Safe Driving Educational Materials (9-12)
American Cancer Association (Tobacco Free! Curriculum) (6-12)

Course Description

The curriculum in Health and Safety teaches healthy lifestyles and wellness. Students will use core information to evaluate health and safety issues. Information and resources, including scientific research in the fields of alcohol, nutrition, and diet, dental health, brain research, drugs, and driving safety, will be presented in this course to allow students to make responsible life choices. One course unit will explore choices to resolve conflicts. Peaceful resolution of conflicts will be taught from the Teach Tolerance curriculum from the Southern Poverty Law Center. Life skills and goal setting learned in the Life Skills class will be reinforced with advanced curriculum in this course. Student participation in service learning projects involving health issues at local elementary schools will be a student option. These will include health walks, dental care demonstrations and healthy eating programs. Guest speakers will play an important part in health instruction. Speakers from law enforcement, hospital emergency rooms, nutritionists, nurses, doctors and dentists will speak as part of projects assigned each semester.

[Course curriculum will be updated with the adoption of the California Health Standards in March 2008]

Themes: Fitting In, Risk Taking, Life Choices, Wellness, and Fitness

Units:

Wellness and Behavior:	Nutrition
Recovery from Illness	Dieting
Life Planning	Healthy Eating
Homeland Security	Sleep
Driving	Healthy Snacking
Sex	Food for Thought
Dental Health	Drugs and Alcohol

Curriculum:

Wellness (MS & HS)

Students will understand and demonstrate behaviors that prevent disease and speed recovery from illness including:

- Recognition of the symptoms of common illnesses
- Cooperation in treatment and management of diseases
- Taking prescription and over-the counter medicines properly
- Understanding medical instructions
- Developing and using effective coping strategies
- Focus on a balance of work, exercise and relaxation
- Avoid self-destructive behavior
- Practice good personal hygiene
- Discussion of public health laws and regulations
- Receive regular health screenings, including dental
- Promotion of a positive, active role in personal and family health
- Understanding growth and development
- Identifying assistance from school officials, health officials and government

Nutrition & Diet (MS & HS)

Students understand the importance of:

- Rest, relaxation and sleep to wellness
- Exercise
- Proper diet
- Nutrition pyramid
- Avoiding foods with excessive salt, sugar, additives and preservatives

Dental Health (MS & HS)

Students will understand through study and observation:

- Regular dental screening and care
- Foods related to healthy teeth
- Proper use of teeth
- Guest speaker will relate the relationship of health teeth to general health

Alcohol, Brain Research and Health (MS & HS)

Through presentations of guest speakers and field trips, students will understand:

- Impact of alcohol on the brain
- Impact of alcohol and drugs on driving
- Personality changes resulting from drug use
- Exercising self-control
- Seeking assistance for help with alcohol

Drugs, Brain Research and Health (MS & HS)

Students will study units and understand:

- UCLA, Department of Medicine, brain studies involving drugs and brain function
- Understanding helpful and harmful drugs
- Appropriate use of prescription and over the counter drugs
- Exercising self-control
- Seeking assistance for help with drugs

Safe Driving (HS only)

Students will study units and understand:

- Avoiding risky behavior
- The Physics of Driving
- Obtaining assistance while driving
- Recognizing emergencies
- All weather driving
- Safe auto requirements
- Motorcycles and scooter safety

Choices (Communicable Diseases) (HS only/Parent Permission Required)

Students understand the risks of:

- Unsafe sex
- Transference of bodily fluids
- Sexual encounters
- Incidents of TB, AIDS, Influenza, and Hepatitis in the United States and LA County

Bullies and Fighters (MS)/ Dealing With Difficult People (HS)**Students understand the importance of:**

- Practicing avoidance behavior
- Knowing alternatives to violence
- Avoiding risky behavior
- Working with peers to resolve conflicts
- Exercising self-control
- Developing and using interpersonal and other communication skills
- Seeking assistance for help with risky situations
- Using positive peer pressure
- Methods of making new friends
- Appropriate personal behavior
- Expressing feelings in an acceptable way
- Demonstrating positive actions toward others
- Constructive resolution of conflicts
- Resisting negative peer pressure
- Critical thinking in conflict situations
- Gang avoidance

Homeland Security and School Safety (HS)

- Fire Safety at Home and School
- Earthquake Safety
- Elementary Emergency First Aid
- Disaster Safety
- Family Safety

References for Health Course

<i>Health Framework for California Public Schools, Kindergarten Through Grade Twelve.</i> California Department of Education
--

COMPUTERS AND TECHNOLOGY

(Annual Course)

See Appendices titled "Technology Integrated Education" and "Computer Science Program" for detailed information about these courses.

A+ (ADVANCED STEM) PROGRAM

(Annual Course)

Prerequisite: None

Course Description

As explained in section titled "Accelerated Academic Achievement" in the charter petition, A+ is BayTech' program for gifted/highly gifted students. This condensed training program helps students develop their critical and analytical thinking skills while providing them with a motivational and challenging environment by utilizing prestigious math, science and computer competitions at the regional, national and international level.

A+ can be offered as an elective class and after school club at BayTech. Students may have the opportunity to meet after school, over the weekends and at camps throughout the year to continue their advanced studies where they get coached by Accord Institute's A+ program coaches.

Please see Appendix titled "A+ (Advanced STEM) Program" for detailed information including the curriculum, guidelines, and handbooks.

MATH/ELA ENRICHMENT/INTERVENTION CLASSES

As explained in section titled "Data Driven Design" in the charter petition we believe that early intervention is a must. BayTech quickly identifies the low-achieving students in the first weeks of the academic year, and implements an early intervention program. Students who are achieving substantially below grade level are identified through multiple measure assessments including MAP Tests, sample CST questions (as provided by the California Department of Education's website), Accelerated Reader & Accelerated Math tests, and teacher-designed tests.

For students achieving substantially below grade level in math or English, BayTech offers Math/ELA Enrichment/Intervention classes. Teachers use educational materials that provide review and re-teach programs. McGraw Hill's Acuity program, Holt McDougal Publisher's resources, Kuta software, Khan Academy, Accelerated Reader and Accelerated Math program allow teachers to monitor the progress of students who are achieving below grade level and provides software generated tests and personalized instructional materials based on California content standards/framework which have not been achieved.

LIFE SKILLS

(Semester Course)

Prerequisite: None

Text: Selection will be by the instructor for the units of study. Instructors will select texts from state, district and department approved textbooks.

Course Description:

The Life Skills semester course will focus on study skills, time management and core research materials. Students will also do work in small group and partner assignments in order to develop a sense of teamwork and cooperation. This course will also review the student portfolio and assist in developing a voice for student work and self-assessment. Guest speakers will discuss the demands of college and students will take a career inventory test to assist them in exploring employment options matching their test profile. The concept of "Service" and the school service learning programs will be highlighted in this course. Students will be responsible for scheduling work in the school garden and the battery recycling program. Students will schedule volunteer time in the school peer-tutoring program as part of the course requirements for this course.

Themes: Service Learning, Personal Planning and Budgeting, Time Management, Wellness, Safety

Topical Coverage:

Quarter One	Quarter Two
Leadership, Collaboration and Cooperation	Critical Thinking and Problem Solving
Self-assessment and Reflection	Citizenship
Goal Setting	Money Management and Budgeting
Self-discipline	

Units:

Leadership, Collaboration and Cooperation: Students will know and be able to demonstrate the managerial, adaptive, and associative skills appropriate to their grade level. **Students will:**

- Take responsibility for their actions
- Work cooperatively with others to plan, initiate, and complete a project
- Engage in responsible, compassionate peer relationships
- Develop organizational skills to create and maintain a personal portfolio
- Understand cultural elements in social skills and practices

Self-assessment and Reflection: Students will learn how to assess and be aware of their status and change their behavior and attitudes in an appropriate manner. **Students will:**

- Reflect on his/her role as a community member
- Become aware of his/her ability to affect the community
- Be an active member of the school community
- Reflect on and evaluate their own and others' learning, adaptability, and resourcefulness
- Reflect on academic work and determine areas for advancement and improvement using appropriate rubrics

Goal Setting: Students will learn to set short-term and long-term goals in keeping with the student's own goals and abilities. **They will:**

- Make decisions and choices for the future
- Understand school and testing standards and be able to make their own achievement goals and benchmarks to meet the standards
- Work with family and guardians to create options for themselves
- Use a constructive manner to set and attain personal goals
- Create a positive self-image and be able to visualize self in the future
- Understand the variables of life forces and develop the maturity and flexibility to modify goals as situations change

- Establish both long and short-term academic goals

Self-discipline: Students will learn to control their behavior at all times and will respect and uphold the values of the school community. **Students will:**

- Develop effective study skills and habits, including creation of portfolios, attendance at research field trips, note taking, library research, computer skills, and study strategy groups
- Build skills over grade levels in the following areas: following directions, analyzing complex projects and develop the skills to complete assigned projects
- Evaluate their behavior on a formal and informal level
- Plan and take action on appropriate ways
- Take an active approach in modifying behavior, if school or teacher intervention is necessary
- Develop skills to answer peer pressure, bullying and teasing

Critical Thinking and Problem Solving: Students will learn to be effective problem solvers and will develop advanced critical-thinking skills. Students will:

- Effectively access, evaluate, and integrate information from a variety of sources
- Use a wide variety of thinking processes appropriate for the resolution of complex problems
- Understand the consequences of choices and accept the consequences in a rational manner
- Be able to develop an opinion and defend that opinion with supporting examples in writing or in speech
- Develop a framework for determining fact, opinion and value choices
- Understand the various forms of supporting reasoning
- Understand the basic elements of higher order reasoning through project experience, including laboratory, project and portfolio activities
- Develop sequential reasoning skills and be able to apply them in a real-life situation

Citizenship: Students will learn and enforce their civic rights and responsibilities. They will develop their citizenship values in the following categories. **Students will:**

- Take responsibility for their actions
- Understand the importance of following rules and procedures
- Understand their role in society and participate as part of the community, including taking part in community service at all grade levels
- Understand the importance of maintaining personal and community environments. Students will model environmental planning at the school including recycling and participating in forums to determine safe environmental practices at the school.
- Obey laws and participate in a student court structure to maintain a safe school community
- Voice their opinions as a requirement of democracy. This will include active participation in voting and directed political and social action campaigns at the school.
- Function in cross-cultural interactions at each grade level
- Understand the role of global citizenship
- Take an active role in the school and activities of the local community
- Be aware of peaceful coexistence and practice peace
- Understand citizenship in a national context and be prepared to exercise their duties and utilize their rights

Money Management and Budgeting:

Students will understand:

- Personal budgeting
- Managing credit cards and credit debt
- All students will complete the FDIC Money Smart computerized program of instruction

SUSTAINED SILENT READING (SSR)

BayTech provides daily Sustained Silent Reading (SSR)^{3,4} and utilizes the Accelerated Reader © program by Renaissance Learning. The classrooms are equipped with libraries to provide access to a wide variety of books at appropriate reading levels. In addition, students who are struggling academically participate in the English enrichment/intervention programs during the day and after-school.

Accelerated Reader is a computer program that helps teachers to manage and monitor a student's independent reading practice. Unlike other reading programs, students select a book at their level and read it during SSR. Once completed, the student is administered an online assessment to provide feedback for the teacher on whether the student understood the content. The assessment results are used to select a more appropriate leveled book, and ask more probing questions as the student is reading the book.

In order to determine the student's reading level, the STAR Reading Test, a computerized reading assessment that utilizes computer-adaptive technology is administered. The questions on the assessment continually adjust according to the student's responses. For example, if the response is correct, the difficulty level is increased, if the response is incorrect, the difficulty level is reduced. The assessment is comprised of multiple-choice questions and takes approximately 10 minutes. The results include a Zone of Proximal Development (ZPD), which is a range of books that will challenge the student without causing frustration.

Students' reading comprehension skills are monitored via their participation in the Accelerated Reader program. If a student continually obtains low scores while reading at his or her level, intervention is immediately implemented.

For BayTech, the goals of the STAR Reading and AR programs are:

- 100% student and staff participation
- Students' average 90% comprehension on AR quizzes
- 20 minutes minimum reading per day (the primary expectation is that students read in SSR)
- 10% increase in ZPD range annually
- Maintain consistent testing conditions for maximally accurate data
- Recognition of students by staff for exemplary effort and performance
- Assessment results are used to inform Response to Intervention (RTI) strategies by all teachers.

³ Yoon, Jun-Chae, "Three Decades of Sustained Silent Reading: A Meta-Analytic Review of the Effects of SSR on Attitude toward Reading" Reading Improvement, v39 n4 p186-95 Win 2002

⁴ Akmal, Tariq T. "Ecological Approaches to Sustained Silent Reading: Conferencing, Contracting, and Relating to Middle School Students" Clearing House, v75 n3 p154-57 Jan-Feb 2002

Standard Alignment

Objectives, Units/Lessons and Standards

MATHEMATICS

Algebra I

Objective	Units/Lessons	Standard(s)
Identify and Use Properties and Subsets	Integers	1.0
	Rational and Irrational Numbers	1.0
	Real Numbers	1.0
	Closure Properties	1.0
Operations	Take the Opposite	2.0
	Find the Reciprocal	2.0
	Take the Root	2.0
	Raise to a Fractional Power	2.0
	Rules of Exponents	2.0
Solve Equations and Inequalities	Absolute Value Problems	3.0
Simplify	Expressions and Polynomials	4.0; 12.
Solve Multistep Problems	Word Problems	5.0
	Linear Equations	5.0
	Justification	5.0
Graphing	Linear Equations	6.0
Verify Points	Points on Line	7.0
Point Slope Formula	Linear Equations	7.0
Parallel and Perpendicular Lines	Text Problems	8.0
Monomials and Polynomials	Word Problems and Multistep Problems	9.0; 10.0
Factoring	Common Factor Problems and Squares	11.0
Rational Expressions and Functions	Text Problems	13
Application	Space Mathematics (NASA)	1.0-13.0

Geometry

Objective	Units/Lessons	Standard(s)
Defined Words	Jeopardy Game	1.0
	Basic Trigonometric Functions	18.
Proofs	Geometric proofs	2.0
	Proofs by Contradiction	2.0
	Isoperimetric Geometry (Introduction-Adapted) (NASA)	
Theorems and Properties: Problems in:	Congruence and Similarity	4.0
	Triangle Inequality	6.0
	Parallel Lines	7.0
	Quadrilaterals	7.0
	Circles	7.0
	Pythagorean Theorem	14; 15.
	Coordinate Geometry	17
Validity	Problems and Counter examples	3.0
Geometric Figure Use	Problems involving perimeter, circumference, area, volume, lateral areas and surface area	8.0
Computing Volumes and Surface Areas	Problems involving prisms, pyramids, cylinders, cones and squares [know formulas for each] and polygons, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids	9.0; 10.
	School Garden: Covering trellis decorations	9.0
Classify Figures and Solve Problems	Triangles and Polygon Problems	12.
Use of Equipment	Problems using straightedge and compass	16.
Trigonometric Functions	Problems using unknown length of a side of a right triangle; Angle and side relationships; Elementary relationships between angles of a right triangle	18.; 20.; 19.;18.
Solving Proofs	Relationship problems of: secants, chords, tangents, inscribed angles and inscribed and circumscribed polygons of circles	21.
Practical Application	Space Mathematics (NASA)	

Algebra II

Objective	Units/Lessons	Standard(s)
Solve Problems	Equations and Inequalities Involving Absolute Value (and Graph Functions)	1.0
	Polynomials (including long division; squares and cubes)	3.0
	Real and Complex Numbers (Relationship and points in the plane; add, subtract, multiply and divide)	5.0
	Quadratic Equations (word problems and complex number system)	8.0
	Rational Expressions with monomial and polynomial denominators	
	Simplify complicated rational expressions	7.0
Solve Systems	Linear Equations and Inequalities by Substitution (With Graphs or with Matrices)	2.0
Explanation of Laws	Prove Simple Logarithms and Translations in Any Base and Approximate Values	11.0; 11.1; 11.2; 13.0; 14.0
	Fractional Exponents and the Relationship to Growth and Decay	12.0
Graph	Quadratic Functions (and determine maxima, minima, and zeros of the function) and use of factoring, completing the square or using the quadratic formula	8.0
	Changes in the Coefficient Problems	9.0
Determine Truth	Algebraic Statements	15
Practical Application	Space Mathematics (NASA)	

Trigonometry

Objective	Units/Lessons	Standards
Measuring Angles	Degree and Radian problems and Slope of the Line Problems	1.0; 7.0
Graphing	Sine and Cosine Functions	2.0
Proofs	Problems with the Pythagorean Theorem	3.0
Graphing	Problems involving amplitude, frequency, period and phase shift; secant and cosecant functions; tangent and cotangent functions; inverse trigonometric functions	4.0; 5.0; 6.0; 8.0
Defining	Tangent and Cotangent	5.0
	Inverse Trigonometric Function	8.0
	Secant and Cosecant Functions and Laws and Applications	6.0; 13.0
	Addition Formula	10.
	Half Angle	11.
Trigonometry	Unknown Sides or Angles in Right Triangle Problems	12.
	Variety of Application and World Problems	19
Triangle	Area Problems	14
Polar Coordinates	Rectangular Coordinates; Equations given in rectangular coordinates	15
Complex Numbers	Polar Form Problems	16
Theorems	DeMoivre's theorem	17

Calculus

Objective	Units/Lessons	Standard(s)
Visualizations and Transformation Figures	Radius Problems	24.0
Differential Equations	Graphing with Calculator and by Hand	1.0; 1.2
	Definitions and Use them to Solve Problems	1.3; 2.0; 3.0; 4.0; 5.0; 10.0; 11.0; 12.0; 16.0; 17.0; 18.0; 19.0; 23.0; 25.0; 27.0
Euler's Method		

Models	Rolle's Theorem, L'Hopital's Rule, Riemann Sums, Integrals, Theorem of Calculus, Simpson's Rule and Newton's Method	8.0; 13.0; 14.0; 15.0; 21.0; 22.0;
Taylor's Theory	Polynomials and Taylor Series	26.0
Probability		5.0; 6.0; 8.0; 7.0
Technology		
Application to Real World	Space Science Units	12.0; 14.0; 16.0

Statistics

In an age of rapid communication and immediate access to information and data, students need to understand statistical information. Students will collect, study, and use descriptive statistics in this course. Students will also learn to interpret data and to make decisions based on their interpretations. Probability is a part of this strand and students will explore problems of probability, the study of chance, so that numerical data can be used to predict future events as well as record the past. A command of statistics and probability is essential in all aspects of adult life.

Objective	Units/Lessons	Standard(s)
Definitions	Computer Database	1; 2; 6; 8
Demonstrate Understanding	The Bigger They Are...(SCORE)	3; 4; 5, 7
	Discovering Growth Patterns (SCORE)	
	How Popular Is Your Web Site? (SCORE)	
	NASA Space Units	
	Color Computers and Math (SCORE)	
	Population Ratio (SCORE)	
Project	Statistical Project: Independent Design-Portfolio Project	1; 2; 3; 4; 5; 6; 7; 8

SCIENCE

Biology

Objective	Units/Lessons	Standard(s)
Cell Biology	Cell Biology and Cancer Units (NIH)	1.a-h
	Using Technology to Study Cellular and Molecular Biology	1a-h
	Microscope Lab	1.a-j
Genetics	Human Genetic Variation Units (NIH)	2.a-2.e
	The Human Genome Project-Guest Speaker	1.a-a.j
Ecology	EPA Environmental Units	6.
	Environmental Defense Fund Curriculum Units	6.a; 6.b; 6.c; 6.d, 6.e, 6.f, 6.g
	<i>Project Wild</i>	6
	<i>Project Wet</i>	6
Evolution	Text	7.a-f & 8a-f
Physiology	The Brain: Understanding Neurobiology (Selected Lessons) (NIH)	9.a; 9.b; 9.c; 9.d
	Roles of Acids and Bases in the Body (#AELP-CHMo201 Ed Ref Desk)	9
	Emerging and Re-emerging Infectious Diseases Units (NIH)	10.a-10.f

Chemistry

Objective	Units/Lessons	Standard(s)
Atomic and Molecular Structure	Periodic Table Unit and SMILE Project Unit	1.a-1.j
Chemical Bonds	Expedition 2000 (ISS)	2.a-2.e
Conservation of Matter and Stoichiometry		3.a-3.e
Gases and Their Properties	SMILE Project Units	4.a-4.f
	Charles' Law (#AELP-CHMo202 Ed Ref Desk)	4
Acids and Bases	ChemMatters Units	5.a-5.d
Solutions	ChemMatters Units	6.a-6.d
Chemical Thermodynamics	ChemMatters Units	7.a-7.e

Reaction Rates	SMILE Project Units and Food Chemistry Unit	8.a-8.c
Chemical Equilibrium	SMILE Project Units	9.a & 9.b
Organic Chemistry and Biochemistry	School Garden Unit	10.a-f
	Carbon Dating Lab	10.b
Nuclear Processes	NASA Units and Guest Speakers/Field Trip to JPL	11.a-11.f

Physics

Objective	Units/Lessons	Standard(s)
Motion and Forces	Newton Car Unit (NASA)	1.a; 1.b; 1.c; 1.d; 1.e; 1.f; 1.g; 1.h
	Airplane Gallery Unit (NASA)	1.a; 1.b; 1.c-1.g; 1.k; 1.l
	Weight and Balance Forces Acting on an Airplane (NASA Unit)	1.a-1.l
	Newton's First, Second and Third Laws of Motion (Lessons and Activities) (NASA)	1.1.a-m
	Graphing Data from a Spreadsheet	
Conservation of Energy and Momentum	NASA Glenn History and Missions Problems (NASA Units) and Guest Speaker	2.a-2.h
	Springs and Capacitors Lab	2.h
Heat and Thermodynamics	Stanford SOLAR Series Units and Labs	3.a-3.g
Waves	Stanford SOLAR Series Units and Labs: (Calculating Doppler Shifts and Solar Spectrometry)	4.a-4.f
	Guest Speaker or Trip to Observatory	4.a-4.f
Electric and Magnetic Phenomena	Stanford SOLAR Series Units and Labs and Guest Speaker	5.a-5.o

ENGLISH***English 9-10***

Objective	Units/Lessons	Standard(s)
Word Analysis, Fluency, and Systematic Vocabulary Development	Weekly Vocabulary and Assigned Grade Level Reading	1.0; 1.1; 1.2; 1.3
	Word Origin-Daily Exercise	1.3; 1.2
Reading Comprehension: Informational Materials	Daily Newspaper Article/Online Essays; Interview Questions for Political Figure	2.1; 2.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8; 2.7; 2.8
	Weekly Literature Magazine	2.1; 2.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8
	Work Place Documents-One each week	2.1
	Annotated Bibliography on Top Four College or Universities (Student Selection)	2.1; 2.2; 2.3; 2.4
	Use of WWW sites and graphic calculators integrated into math and science concepts (Integrated assignment)	2.6
Literary Response and Analysis: Focus on	Shakespeare Selection (required)	3.0; 3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9; 3.10; 3.11; 3.12
	Novel (Unit Integration-Created by Grade Level Teaching Group) (2 Minimum)	3.0; 3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9; 3.10; 3.11; 3.12
	Drama Selection	3.0; 3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9; 3.10; 3.11; 3.12
	Novella Selection	3.0; 3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9; 3.10; 3.11; 3.12
Writing Strategies	Writing Included in each activity or lesson	1.1
	Interview-Oral History	1.2; 1.3; 1.9
	Weekly current event summary	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9
	Shakespeare Paper-Tragedy (Technology)	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7; 1.9
	Drama Paper-Tragedy	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9
	Persuasive Paper-Instructor Choice	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9
Writing Applications	Write Short Stories-2	2.1

Genres and Their Characteristics	Responses to Literature-4	2.2
	Analytical Essay	2.3
	Research Paper-Controversial Topic	2.4
	Essay	2.3f; 2.3e; 2.3d; 2.3c; 2.3b; 2.3a
	Write Business Letter	2.5a; 2.5b; 2.5c; 2.5d
	Lab Report (2 required)	2.6a; 2.6b; 2.6c; 2.6d
Written and Oral English Language	Sentence Construction Review	1.1; 1.2
	Portfolio Review and Peer Edit	1.1; 1.2; 1.3; 1.4; 1.5
	Use Word Correct/Editing Feature	1.4; 1.5
	Research Paper (above)	1.4; 1.5; 1.1; 1.2; 1.3
Listening and Speaking Strategies	Presentation: 9- Informative/10-Persuasive	1.1; 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9
	Portfolio Defense	1.1; 1.2; 1.3
	Public Address- 9-2 speeches/10-3 speeches	1.10; 1.11; 1.12; 1.14
	Note taking-Other Presentations	1.1; 1.2
Speaking Applications	Present Informative Speech	2.0; 2.1
	Book Summary & Review	2.2
	Book Panel	2.3
	Interview (Digital-Integration with History)	2.3a; 2.3b; 2.3c; 2.3d; 2.3e; 2.3f; 2.3g
	Speech Critique	2.41; 2.4b; 2.4c; 2.4d
	Present 1 persuasive speech each year	2.5a; 2.5b; 2.5c
	Present 1 descriptive presentation	2.6a; 2.6b; 2.6c
	Deliver Multimedia Presentation (Integration with Technology)	2.6

English 11-12

Objective	Units/Lessons	Standard(s)
Word Analysis, Fluency, and Systematic Vocabulary Development	Weekly Vocabulary and Assigned Grade Level Reading	1.0; 1.1; 1.2; 1.3
	Word Origin-Daily Exercise	1.3; 1.2
Reading Comprehension: Informational Materials	Daily Newspaper Article/Online Essays; Interview Questions for Political Figure	1.1; 1.2; 2.1; 2.2; 2.3; 2.4; 2.5; 2.6
	Weekly Literature Magazine	2.1; 2.2; 2.3; 2.4; 2.5; 2.6
	Expository Texts-One each week (Integration to Social Sciences)	2.1; 2.6; 2.4; 2.5
Literary Response and Analysis: Focus on	Analyze characteristics of subgenres	3.1
	Read Shakespeare-One each year	3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9
	Novel (Unit Integration-Instructor Choice)	3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9
	Short Stories - 3	3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9
	Essay-4	3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9
	Drama-second period	3.1; 3.2; 3.3; 3.4; 3.5; 3.6; 3.7; 3.8; 3.9
Writing Strategies	Writing Included in each activity or lesson	1.1-1.9
	Elements of Discourse-Critique of Writing	1.0; 1.1; 1.2; 1.4; 1.5
	Weekly current event summary	1.1; 1.2; 1.3; 1.4; 1.5; 1.6
	Humorous Writing	1.5
	School Newspaper Articles	1.1; 1.2; 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9
Writing Applications	Autobiographical Essay (College Essay)	2.0; 2.1
	Fictional Essay	2.1
	Biographical Essay on Author	2.1
	Response to Literature-4	2.2
	Reflective Compositions-4	2.3
	Historical Investigation-Topical/Integrated into Social Science Courses	2.4

	Update resume and autobiographical essay	2.5
	Create multimedia presentation	2.6
Written and Oral English Language	Editing Symbols	1.3
	Portfolio Review and Peer Edit	1.1; 1.2; 1.3; 1.4; 1.5
	Computerized topical spelling review	1.4; 1.5
	Personalized spelling review (Technology)	1.4; 1.5
Listening and Speaking Strategies	Presentation: Persuasive	1.4; 1.5; 1.6; 1.7; 1.8; 1.9; 1.10
	Portfolio Defense	1.7; 1.8; 1.9
	Rhetoric: Persuasive Appeals and Advertising In Election Years-Ads	1.1; 1.2; 1.3; 1.14
	Note taking-Other Presentations	1.3
	Speaker Critique	1.11; 1.12; 1.13
	Public Address (Integrated into Social Science)	1.1; 1.2; 1.3; 1.11; 1.12; 1.12; 1.13
Speaking Applications	Present Reflective Presentation	2.1
	Book Summary & Review	2.3
	Book Panel	2.3
	Present Oral Report on Historical Investigation (Integration with Social Sciences)	2.2
	Deliver Multimedia Presentation integrating recitation of literature	2.4; 2.5

HISTORY/SOCIAL SCIENCES

World History

Objective	Units/Lessons	Standard(s)
Development of Western Political Thought	Readings from Text And Primary Sources	10.1 & 10.2.1; 10.2.3
	Biography Assignment-Paper and Panel Presentation "A Meeting of the Minds"	10.1
Revolutions	Glorious Revolution	10.2.1
	French Revolution (CA Framework and DOE Lesson Plans)	10.2.4; 10.2.3
	American Revolution Compare and Contrast Paper	10.2.1; 10.2.4; 10.2.5
Industrial Revolutions	Invention Reports- Oral/Online Research	10.3
	Compare and Contrast Industrial Revolutions-Report Spreadsheet	10.3
New Imperialism	Past, Present and Future -- Class divided into two topic areas	10.4.1; 10.4.2; 10.4.3; 10.4.4
World War I	Debate Entry and Significance	10.5; 10.6
Totalitarian Governments	History Channel and PBS Curriculum Units	10.7
WWII and Significance	Biography Key Figures- Written Paper	10.8; 10.8.4; 10.8.5
	Post-War World-Mapping (Tiger Mapping and National Geographic Society)	10.8.1; 10.8.2; 10.8.3; 10.8.6
International Development	Continent Panel Reports- Research with Current Events Relationship	10.9.1; 10.9.2; 10.9.3; 10.9.4; 10.9.5; 10.9.6; 10.9.7
	Guest Speaker-College State Dept.-Careers	10.9.8
Nation Building	Middle East War-Guest Speakers	10.10.1; 10.10.2; 10.10.3
	UN Debate	10.10
	Embassy Guests for two units	10.10.1; 10.10.2; 10.10.3
Technology Boom	Recent Inventions-Multimedia Presentation	10.11

United States History

Objective	Units/Lessons	Standard(s)
Ideals and Foundations	We the People Curriculum	11.1
Industrialization, Immigration and Growth of the Cities	Child Labor in America (LOC)	11.2; 11.3.1
	Thank You, Mr. Edison (LOC)-biography assignment	11.2.2; 11.2.7
	Who Really Built America? (LOC)& Mapping Unit	11.2.8; 11.2.9; 11.2.6; 11.2.3
	Women, Their Rights & Nothing Less (LOC)	11.2.4; 11.2.8; 11.2.9
	America at the Centennial (LOC)	
	1900 America (LOC)	11.3
	To Market, To Market (LOC)	
	Religion-Guest Speakers	11.3
	Presidential Policies	11.3
A Place in the World and World War I	What Are We Fighting For Over There? (LOC)	11.4
	Exploring Cultural Rituals (LOC)	11.4
	Census Research Paper	11.4
	What Do You See (LOC)	11.4
	Victory Gardens	11.4.5
Progressives	Debate-CA Governor Race	11.2; 11.5.3; 11.5.4; 11.5.2
Society and Culture	Inventions	11.5.7
Great Depression	Studs Terkel Interviews and Literature Connection	11.5; 11.5.5; 11.5.7
	Victory Garden-School Garden Unit	11.6
World War II	Field Trip-Museum of Tolerance	11.7
	Home Front/War Front	11.7
	Debate: Atomic Bomb	11.7
Civil Rights	Teach Tolerance Units	11.8.1; 11.8.2; 11.8; 11.10
	Eyes on the Prize Curriculum	11.8; 11.10
	Understanding History and Ourselves Units	11.8; 11.10
	From Jim Crow to Linda Brown (LOC)	11.8; 11.10
	Jackie Steals Home (LOC) Baseball and Popular Culture	11.8.8
Foreign & Domestic Policy	Guest Speakers: Korean War,	11.9

Since WWII	Vietnam, Women's Movement	
	Diversity and Ignorance through the Teach Tolerance Curriculum	11.9
	Compare and Contrast Eras: Red Scare, Communist Scare and Today	11.9
	Popular Culture Through Radio, Films and TV	11.8
	Fine Art Survey (Integration with Arts Classes)	11.8
Modern America	America Dreams (LOC)	11.11
Current Events	Current Events-Weekly	11.11
	Multimedia Presentation-Decade (1950-1990)	11.11

American Government and Civics (One semester)

Objective	Units/Lessons	Standard(s)
Fundamental Principles and Moral Values of the People	Readings and Summaries	12.1
Balance of Power	Challenges to Each Branch-Multimedia Presentations	12.2; 12.4
Theories of Government	Spreadsheet of theories	12.1
Immigration	Debate: Mexican border	12.2
Bill of Rights	Contemporary Vote	12.1; 12.2
Key Issues	Panel Discussion: Research and Paper	12.7
World View of America	Historical and Current/de Tocqueville and Modern Day France	12.9
The Constitution	Class Project-Article Research-Online	12.3
The President	Mini-Research Projects/Summaries	12.9
Foreign Policy	Field Trip: Embassy	12.9; 12.10
	Mapping-National Geographic Units	12.9
The Judiciary	Court House Visit	12.5
	Guest Speakers Judge and Lawyer	12.5
	Constitutional Challenges	12.5
The Legislature	Interview: Public Official	12.5
Contemporary Issues	School Board Meeting and Vote Smart Project	12.6; 12.10

Economics (One semester)

Objective	Units/Lessons	Standard(s)
Monetary Policy and Theory	Research Paper	12.1; 12e.2; 12e.3
Economic Vocabulary	Game-Weekly	12.1
Market Economy	Simulation	12.1; 12e.4; 12e.5
Fiscal Policy and Government	Panel Scenarios	12.1; 12e.2; 12e.3
World Labor Market	Guest Speaker-Outsourcing	12.1; 12e.4
Economic Data	Truth or Fiction: Evaluation of Statistics	12.1; 12e.2; 12e.4
International Trade	Online Data Collection	12.1; 12e.6
World Banking/Online Banking	Guest Speaker	12e.6
	FDIC Curriculum MoneySmart	12.1; 12e.2
World Economic Forces	Mapping and Projections	12.1; 12e.2; 12e.4
	Stock Market Project	12e.6
If Time Permits:	Field Trip: World Bank	12e.6
	Field Trip: Bank	

VISUAL AND PERFORMING ARTS

Visual Arts (elective)

Students may elect to take Advanced Art Appreciation more than once. Lessons and Activities will be different each year. Unit formatting and themes will remain the same but composers and selection of art will rotate every four years. Each era of study will be placed into the appropriate cultural context relating to the arts, society, economics, and scientific and mathematical exploration.

Objective	Units/Lessons	Standard(s)
Artistic Perception	Public Art	1.0
	Guest Speakers-Artists	1.0; 2.0; 3.0; 4.0
	Vocabulary of Art	1.0; 4.0
Creative Expression	Folk/Outsider Art, Crafts, Clay, Architecture, School Garden and Outdoor Art	2.0
Historical and Cultural Context	Visiting the Museum-Four Field Trips During the Year	3.0
	Movements and Periods and Artists: Panels and Written Report <ul style="list-style-type: none">Detailed Study of the Movements and Artists including: Pre-historicNon-Western ArtAncientMedievalRenaissanceBaroqueEighteenth CenturyNineteenth CenturyTwentieth CenturyModernismPost-Modernism	3.0
Connections, Relationships and Applications	Art Theory	4.0
	Evaluation of Art	4.0
	Purposes of Art	4.0
	Art in History-Focus on the Periods Above	4.0
Portfolio	Independent Work with Instructor	

Advanced Music Appreciation (elective)

Students may elect to take Advanced Music Appreciation more than once. Lessons and Activities will be different each year. Unit formatting and themes will remain the same but composers and selection of music will rotate every four years. Each musical era will be placed into the appropriate cultural context relating to the arts, society, economics, and scientific and mathematical exploration.

Objective	Units/Lessons	Standard(s)
Artistic Perception: Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to Music	Definitions	1.0
	Change Over Time	
	Symphony	
	Chamber Music	
Creative Expression: Creating, Performing, and Participating in Music	Instrumentation	2.0
	Scoring	
	Voice	
Historical & Cultural Context: Understanding the Historical Contributions and Cultural Dimensions of Music	Composers	3.0
	Conductors	
	Vocal and Choral Music	
	Research Paper on a Movement or Era	
	LA and Music Contributions	
Aesthetic Valuing: Responding to, Analyzing, and Making Judgments About Works of Music	Critique of Composer	4.0
	Critique of Performance	
	Critique of Conductor	
Connections, Relationships, Applications: Connecting and Applying What Is Learned in Music to Learning in Other Art Forms and Subject Areas and to Careers	History, L/A and Music (AP)	5.0
	Portfolio of Work this Semester-Multimedia Presentation Using Music	
	Careers-Electronic Music and Music Historians	

PHYSICAL EDUCATION

Physical Education

Objective	Units/Lessons	Standard(s)
Wellness	Exercise and Health Units (NIH)	CA PE Framework
Exercise and Diet	Weekly Record of Exercise and Food Intake One Month Plan	
Lifelong Plan for Health	Computerized Exercise Plan-Semester Plan	
Advanced Understanding of Nutrition	Food Groups and Interactions	
	Eating for Exercise	
	Food Pyramid	
Advanced Physical Proficiency (Rated on a Scale of 1 to 6)	Single Participant	
	Team Activity	
	Leader	
Movement	Link Movement	
	Independent Learning of Advanced Skills & Motions and Sports teams	
	Understand Diversity in Movement and Play and Sports	
Exercise	Sports and Dance Units	

Health and Safety

Objective	Units/Lessons	Standard(s)
Choices	HS- Peer Pressure and Sex MS-Good Hygiene and Occupational Safety	Expectations 1, 6 & 8
Home Safety	National Fire Association	Expectation 4
Tolerance and Diversity	Teach Tolerance Units	Expectation 5 & 7
Wellness and Habits	Tobacco Free! (American Cancer Association)	Expectation 3
Safety	Safe Driving (AAA Club)	Expectation 3
Work and School Safety	Red Cross Master of Disaster Units	Expectation 4
Homeland Security	FEMA Home and School Safety	Expectation 3 & 5
Enjoyment & Relaxation	Recreation Yesterday and Today (Library of Congress/AMC)	Expectation 1
Nutrition and Diet & Dental	Looking Good, Feeling Good:	Expectation 2 & 9

Health	From the Inside Out (NIH)	
Survival Skills	Sleep, Sleep Disorders, and Biological Rhythms (NIH)	Expectation 1 & 2
Exercise	The Science of Energy Balance: Calorie Intake and Physical Activity (NIH)	Expectation 2 & 4
Wellness and the World	The Science of Mental Illness (NIH)	Expectation 4
Wellness	Understanding Alcohol: Investigations into Biology and Behavior (NIH)	Expectation 3

APPENDIX B5

HOME VISIT PROGRAM

Home Visit Teacher Manual



Copyrights © 2007

Accord Institute for Education Research

www.accordeducation.org

Home Visit Teacher Manual

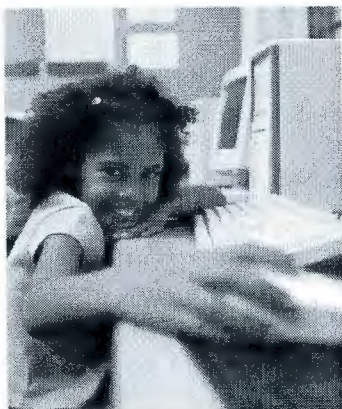
Schooling in the 21st century must be different than in recent decades. Teachers must see their work as educating the whole student, rather than as merely delivering facts. To educate effectively, teachers must reach out to students' families in ways not traditionally imagined and help bridge the ever-widening gap between home and school, so that students realize they are known, cared about, and expected to achieve.

Family visits offer invaluable insights about students. They can provide new understanding about students' learning styles. For example, some students may work better alone rather than with others, or they may like an active environment more than quiet time. Visits might also reveal the emotional and social needs and behaviors of students. It is helpful to know if they react to problems with tears, anger, or withdrawal, and how they socialize with peers. Through family visits, teachers can identify students' latest interests or concerns, such as a new hobby, an upcoming trip, or a change in the family.



Contents

No table of contents entries found.



Caring makes a difference

Years ago a John Hopkin's professor gave a group of graduate students this assignment: Go to the slums. Take 200 boys, between the ages of 12 and 16, and investigate their background and environment. Then predict their chances for the future.

The students, after consulting social statistics, talking to the boys, and compiling much data, concluded that 90 percent of the boys would spend some time in jail.

Twenty-five years later another group of graduate students was given the job of testing the prediction. They went back to the same area. Some of the boys - by then men - were still there, a few had died, some had moved away, but they got in touch with 180 of the original 200. They found that only four of the group had ever been sent to jail.

Why was it that these men, who had lived in a breeding place of crime, had such a surprisingly good record? The researchers were continually told: "Well, there was a teacher..."

They pressed further, and found that in 75 percent of the cases it was the same woman. The researchers went to this teacher, now living in a home for retired teachers. How had she exerted this remarkable influence over that group of children? Could she give them any reason why these boys should have remembered her?

"No," she said, "no I really couldn't." And then, thinking back over the years, she said musingly, more to herself than to her questioners: "I loved those boys...."

Research on Family Involvement

Family Involvement

Research clearly shows that school programs, that emphasize family involvement and relate well to their community, have students who outperform those in schools lacking these qualities. Not only do students flourish, but also the schools are strengthened when families seize an active interest in their children's educations. The results include (a) improved academic achievement, (b) better attendance, improved behavior, (c) higher quality of education, and (d) safe and disciplined learning environment.

A new body of research by the Southwest Educational Developmental Laboratory found a positive and convincing relationship between family and community involvement and benefits to students, including academic achievement. Studies concluded that students with involved parents, no matter what income level or background, are more likely to have success in school. (3)

Personal Connections

Key to a child's school success are the relationships established between the teacher and student, and the teacher and the student's family. Family visits offer a good way to develop these relationships on safe, "home" territory. Research has shown that one of the keys to successful teaching and schooling is creating personal connections with students inside and outside of school (Epstein 1998; Heath, 1983; Moll, Amanti, Neff, & González, 1992). Knowing the students' outside interests, families, and home routines, and then using this information to connect in meaningful ways can have huge rewards in helping to construct happier, healthier, and smarter kids. (2)



Why Home Visits

Crucial cooperation

For most students home and school are two different domains. Especially for minority students even the people, languages, foods, rules, duties, and concerns are different in these two worlds. They do not intersect considerably.

Parents and the teachers are critical partners in educating the "whole child". However, parent conferences and other school-hosted meetings do not provide sufficient means for the parties to communicate enough and effectively and to show the student that they are on the same team. Home visits are the teachers' attempt to break the virtual border between the partners, which is most of the time successful.

"I know this is not usual but I specifically came to thank you. Two of son's teachers visited us at home last night, we had a great conversation. I've never had such experience before." Parent of a 7th grader, speaking to the school principal in Reno, NV

Parents' Feelings

"It [the family visit] gives me an opportunity to talk to you. It informs, and instead of being right in the school and feeling closed up or whatever—I like being at home.... I mean I feel like we have a good verbal communication, and with the home visits I think I know everything that's going on with him at school, and I hope that you all feel comfortable with him, with what's going on here."

—Ann (a parent) (1)

Proactive or remedial?

Accord schools aim to be proactive in terms of prevention and teaching appropriate behavior by means of character education and college counseling classes and the active participation of teachers by setting up role models for the students and by effective communication through home visits.

As the famous saying goes, a good start leads to a great finish. The most important time of the academic year for the students is the beginning which mostly determines the end of year results. A home visit in the beginning of the year will help students succeed.

Home visits also ease teachers' job substantially. Spending a little time visiting homes of the prospective or new students results in saving a lot of time throughout the year which would otherwise be spent on fixing problems and a healthy, stress-free academic year.

Teachers can focus on raising the quality of their education instead of trying to minimize problems and maintain a healthy personal life.

Specifics of Home Visit Program

Which students?

We aim to visit not only low-achieving but all our students for two reasons:

- Every student benefits from home visits. Often, home visits reveal new ways or opportunities that school can offer to a high-achieving student in order for him/her to thrive more.
- Teachers need to see high-achieving kids besides low achieving ones.

Some parents will reject home visits. They might, however, change their minds or conditions may change at home and therefore invite us later to visit their residencies.

Any priorities?

Yes,

1. New students
2. Low achieving students
3. Seniors who prepare for SAT/ACT
4. Other students

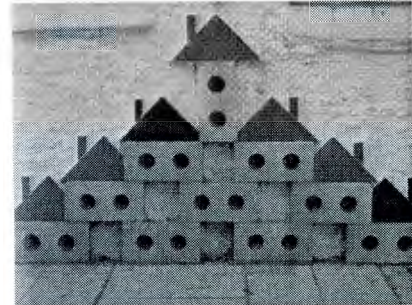
When?

The best time for home visits is before school starts. Teachers see the homes of their students, get insight from parents and tailor instruction accordingly. An efficient way of communication is well established before school starts.

If not paid before school starts, first two months of the school year is the second best period so that necessary adjustments and interventions can be made in the beginning of the school year.

How often?

Ideally once a semester, at least once a year.



Inside Story Headline

Testimony from a teacher.

How to schedule

Scheduling home visits requires persistence. Failing to schedule a visit at your first attempt doesn't always mean that the family doesn't want a home visit. Sometimes, your request doesn't even reach the family. Other times, parents will like the idea very much, however they will forget to discuss an appropriate time and get back to you because of their daily routines.

A combination of the following means can be utilized to schedule home visits:

1- In person

Use the following opportunities to schedule home visits in person

a- Parent Orientation Meetings

Accord Schools' teachers invite parents to the school and inform them about the upcoming school year. This is a wonderful time to schedule a visit. A form like Form 2 on page 12 of this booklet can be used to have parents mark their most convenient time on the form.

A new teacher has scheduled 48 home visits before school starts in August 2008 by utilizing parent orientation meetings well.

b- Back to School Nights

Back to School Night is a great opportunity for the teacher to schedule home visits to the families who have not been visited until that time. The same form can be used with available dates of the teacher.

c- Parent Conferences

If there are still some parents who have not marked your form despite your persistent trials, parent conferences can be used.

2- By phone

Phone is the most direct means of communication with parents. Accord's past two year implementation of home visits program showed that parents respond very well to teachers' home visit requests over the phone.

3- By mail

Mail should be the last resort. If the teacher cannot schedule a visit using the above means, mail can be used to schedule a visit.

Inside Story Headline

Testimony from a parent.

Sample Home Visit Request Letter

Hi Mrs. Edwards,

This is Mr. O., Jane's Science teacher. I am writing this e-mail in reference to one of our programs named "HOME VISITS". It is a school tradition that teachers visit students and families at home.

We would like to conduct a short visit and discuss your child's progress, school's programs and future plans, and at the same time get feedback and input from you.

The Home Visits program has been very successful at our school in the past five years and improves student-parent-teacher relationships and creates a caring school environment.

Please choose one of the available time spots below and let me know via e-mail or phone. If none of them is good for you, please let me know when would be a good time for you. I can be reached via e-mail at mr.o@myschool.org or via phone at (123) 987 6543.

Thanks,

Mr. O
Science Teacher

Time spot 1: October 22nd Monday 4:30 pm

Time spot 2: October 25th Thursday 7:30 pm

Time spot 3: October 27th Saturday 11:00 am

Sample Home Visits Scheduling Form for Parent Orientation Meetings

Please choose a date on which you would be available for a home visit, write your name between brackets.

September 2007						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	1 11:00 () 1:00 () 2:00 ()
2	3 7:30 ()	4	5 4:30 ()	6	7	8
9	10	11 5:30 ()	12 7:00 ()	13	14	15 11:00 () 1:00 () 2:30 ()
16	17	18 5:30 () 7:00 ()	19	20 5:30 () 7:00 ()	21	22 11:00 () 1:00 () 2:30 ()
23	24	25	26	27	28	29
30	1	2 4:30 ()	3	4 5:30 () 7:00 ()	5	6

[illegible]

Home Visit Recipe

Ingredients:

- 1- A small gift
- 2- A smiling face
- 3- Student's academic records
- 4- Information about future events

Procedures:

1- Bring along a small gift: A small gift will warm the environment and tell them that you are not a machine that executes tasks and reports problems.

2- Communicate, do not try only to convey messages: As mentioned earlier in this document, home visits are done to get insight from the families, not to lecture them.

As a teacher and a representative of your school, you are trying to figure out how you can help the student better.

3- Be positive: Do not forget; you are there to build bridges. The purpose of the home visit is not to lay out the child's all problems and give him some homework assignments as how to solve his/her problems.

Grades, assignments? Of course you will inform the family about the student's academic successes or failures, but hey they can learn them through progress reports and online student information system of your school.

Home visits should be done to establish a healthy and efficient communication base with families.

4- Praise the student: Every student has something good about him/her. It can be either a habit or an accomplishment done just last week even if it's a tiny little thing. The problems will be discussed naturally.

You need to create a good atmosphere for an efficient cooperation.

6- Inform about upcoming bonding events: Picnics, trips, etc.

Inside Story
Headline

A story from an Accord school.

Home Visit Etiquette

1. NOTIFY THE PARENT OF HOME VISIT

- *Contact parent a week to 10 days in advance by phone and letter and follow up with a phone call*
- *Schedule at family's convenience as much as possible*
- *Include purpose of visit (i.e., to provide information about school, learn about family)*
- *Set time limit (i.e., 4:30 – 5:30)*

2. REVIEW CHILD'S RECORDS, FAMILY HISTORY, CULTURAL BACKGROUND

- *Learn names of family members*
- *Research special needs issues*

3. DEVELOP TENTATIVE PLAN FOR VISIT

- *Be flexible*
- *Schedule 45 to 60 minutes for each home visit*
- *Plan travel time, sequence of visits*
- *Dress appropriately*
- *Gather papers, pamphlets, etc.*
- *Be sure of location, carry maps of area*
- *Leave schedule of home visits and emergency contact information with office personnel*



Consider These

- Be a good listener
- Have specific goals or objectives for each visit
- Be flexible
- Be prompt to your home visits
- Realize the limitations of your role
- Help parents become more independent
- Keep language appropriate
- Dress appropriately and comfortably
- Be confident
- Remember that small improvements lead to big ones
- Be yourself
- Respect cultural and ethnic values
- Monitor your own behavior—the parent is observing you

Home Visit Etiquette

4 ARRIVAL

Set the tone

- *Introduce self and staff*
- *Establish social connection*
- *Include other family members in conversation, to make conducive to learning if desired by primary caregiver*

5 DURING THE VISIT

Share information and lend support

- *Elicit feedback from parents regarding child's interests, concerns, and progress in program and at home: "tell me about your child" or "what does your child like best about school?"*
- *Discuss parents' interests, hobbies, strengths*
- *Observe family interaction in its cultural context*
- *Reinforce positive parenting*

6 CONCLUDING THE VISIT

Summary

- *Provide information about future parent activities*
- *Highlight school activities, events*
- *Invite parents to get involved*
- *Discuss next visit*
- *Make yourself available for phone calls and questions*
- *Closure and good-bye*

Safety Tips

Don't be a target

- Stay alert
- Dress appropriately
- Leave jewelry at home
- Leave purse at office or trunk
- Carry necessary cash, keys, and driver license on person
- Remove yourself from dangerous situations
- Travel in pairs when possible
- Survey the neighborhood
- Identify safe areas (i.e., restaurants, telephones, rest-rooms, police stations)
- Trust your instincts
- Consider a neutral meeting location if visit cannot be made safely at home (i.e., library, conference rooms, restaurants)
- Ask family members to come out to meet you if you feel uncomfortable with area
- Keep car in good repair
- Keep emergency supplies in car, include all-weather gear
- Ask family to secure pets before arrival
- Attend safety seminars
- Consider the use of cell phones

Do's and Don'ts

DO

- *Be a good listener*
- *Have specific goals or objectives for each visit*
- *Be flexible*
- *Be prompt to your home visits*
- *Realize the limitations of your role*
- *Help parents become more independent*
- *Keep language appropriate*
- *Dress appropriately and comfortably*
- *Be confident*
- *Remember that small improvements lead to big ones*
- *Be yourself*
- *Respect cultural and ethnic values*
- *Monitor your own behavior—the parent is observing you*

DON'T

- *Impose Values*
- *Bring visitors without the parent's permission*
- *Socialize excessively at the beginning of the visit*
- *Exclude other members of the family from the visit*
- *Talk about families in public*
- *Be the center of attention*
- *Expect perfection from the parent*
- *Ask the parent to do something you wouldn't do*

How do I afford it?

Home visits do not cost much.

A visit will cost you about \$10 the most if the home is not too far from the school.

Accord Schools compensate their teachers for home visits. Fill out a reimbursement form and get paid back.

(Sample) Home Visit Quick Feedback Form

Name of Student:

Date of Visit

Sibling(s):

Grade/Group (circle): 6A 6B 6C 6D 7A 7B 7C 7D 8A 8B 8C 8D

9A 9B 9C 10A 10B 11A 11B 12A

Length of Visit: ☐ 0-20 minutes ☐ 21-40 minutes ☐ 41-60 minutes

☐ More than 60 minutes

Participating Teacher (s) :

Visit notes (check those apply):

☐ New parents; informed about the school and school's

☐ Existing parents/guardians; happy with the school

☐ Existing parents/guardians; have concerns expressed below

☐ Student is successful in his/her classes

☐ Student will participate in after-school tutoring in:

☐ Student will start participating in the following clubs:

☐ Parents and the student were informed about the importance of college and careers

☐ Student will participate in college prep

Additional Notes:

Works Cited

1. **McIntyre, Diane Kyle and Ellen.** Center of Research on Education, Diversity & Excellence. [Online] October 2000.
<http://www.cal.org/crede/pubs/PracBrief1.htm>.
2. [Online] <http://crede.berkeley.edu/research/pdd/pb1.shtml>.
3. **Henderson, A. T. & Mapp, K. L.** Austin, TX : Henderson, A. T. & Mapp, K. L. (2002). A new wave of evidence; The impact of school, family, and community connections. National Center of Family & Community Connections with Schools: Southwest Educational Development L, 2002.

APPENDIX B6

GET READY FOR LIFE PROGRAM

MAGNOLIA PUBLIC SCHOOLS

CHARACTER ED/ LIFE SKILLS / GRFL SYLLABUS (this is sample, customize as needed)

Instructor: _____
Location: Portable 4
Email: _____@_____academy.org
Phone#: (____) _____

Welcome! My name is _____ and I am the character education teacher this year. Below you will find some important information regarding to my classroom policies, expectations grading policy and some other relevant information. I am glad to have this unique opportunity to teach your child. If you have any questions or concerns about the performance of your child in my classroom, please feel free to contact me at the contact information above.

GENERAL COURSE DESCRIPTION

During the year, we will put into practice a well-structured character education plan by means of the Character Education Class (one period a week for middle-school students only), special events and activities, and curriculum integration.

Each month, a character trait will be announced. Some other traits are laid out through the entire year, so that students are frequently reminded of these values and given the opportunity to make connections between various concepts.

The curriculum for the Character Education Program in our school has been built using the following resource guides; Character Counts, College Board College Ed and Wise Skills.

COURSE OUTLINE

- ❖ Study Skills &Organizational Skills
- ❖ Leadership &Social Skills
- ❖ Career& College Education
- ❖ Character Education
- ❖ Substance Awareness

COURSE OBJECTIVES

The objective of the Life Skills Class/GRFL/Character Ed is to encourage students to take responsibility for their actions, to familiarize them with good traits that are going to help them through their personal and professional life, to equip them with good study and organizational skills, give them opportunities to discover careers and to help develop good citizens.

Supplies Needed:

Notebook paper
Writing instruments (pencil, eraser)
Binder

The Structure of the Life Skills Class

1. **Warm UP-** (5-10)
Students are expected to work on the given writing prompt.
2. **Instruction** (10-20 min)
That week's topic will be introduced via PowerPoint or Video clips or stories.
4. **In-Class Assignment** (10-20 min)
The students do activities, group works, surveys, skits etc. related to topic.
5. **Wrap-up session** (5 min)

GRADING: (customize if needed)

Grading Scale

It is the same as in the student handbook. Refer to the Falcon Book.

Everyone starts this class with a grade of 100. Some of you might be losing points unless you complete the assignments, which will be announced later in the course.

There might be projects or presentations assignments. A student will be graded on the following:

- | | |
|-------------------------|-----|
| 1. Essays/Midterm/Final | 25% |
|-------------------------|-----|

2. Class Participation	25%
3. In-class assignments	25%
4. Presentations/Projects	25%

Make-up work

Check the make up tray to get your assignment. You will have **one week** to make up the work that you missed. The work will not be accepted after the due date.

Extra Credit Work

Ask for extra credit one per semester. It will increase your overall grade up to 10 %.

RULES

In addition to school wide rules and expectations; please remember the following rules for Life Skills Class.

- 1- One person speaks at a time.
- 2- Keep your hands, feet and belongings to yourself.
- 3- Raise your hand and wait for permission to speak.

4- Focus on the instruction being delivered.

5- Stay at your assigned seat.

Consequences (customize as you wish)

1st offense –student's name goes on the board .

2nd offense – A warning check by the student's name.

3rd offense –DETENTION and a parent call.

The names and checks are recorded and erased each progress and report cards period.

REWARDS (customize)

- Joy of Learning (each day)
- In class parties (each quarter)
- Positive note to home
- Raffle (each quarter)
- Parent call
- Special Incentives

Scheduling and Appointment



Dear parents, due to a great number of students that I am serving, please make an appointment when you need to see me regarding your child's academic or behavioral performance. Either email me or call me from the phone # given. Thank you.

Email: _____@_____academy.org

Phone : (____) _____

Please keep your syllabus in your binder.



MAGNOLIA PUBLIC SCHOOLS

Entering the Classroom Procedure:

When entering the class;

1. Have your seat.
2. Pick up your handouts from the instructor (me).
3. Start doing that day's bellwork.

Leaving the Classroom Procedure:

When the bell rings, the students must not jump out of their seats and run to the door. **Nobody can leave the classroom until the teacher dismisses the class.** It is not the bell who dismisses the class, it's the teacher. Before the students leave the class, they must make sure that:

- 1- Stand up and face forward
- 2- Clean your desk
- 3- Leave the classroom in an orderly fashion.

Seating policy

Every student is expected to sit according to the seating chart. Students who fail to do so will have to face the consequences.

Absences and tardies



It is the responsibility of every student to arrive at school prepared and on time daily!!!

1. You are expected to be in your seat with all required materials at the time class starts. If you are not, you will not be accepted in my class unless you have a tardy slip.
2. When you return from an absence, it is the responsibility of you to request work missed due to absence from school. If you were absent on the day an assignment was due, it must be turned in on the day you return.
3. If you are absent on the day a test is given or a project is due, you will be expected to take the test or turn in the project on the day you return to class.



4. If you know in advance that you will be absent on a day that a project is due you will be expected turn the project in before the due date.

PROJECTS

6th Grade Projects:

- a) 3 Object Presentation (Individual)
- b) Real Life Stories / Research Work (Group Work)

7th Grade Projects:

Each semester, a student will teach a topic by researching on real life stories

8th grade Projects:

Each student will present a career and college.

TEEN EXCELLENCE CERTIFICATE

Students who receive at least B- (80) in Life Skills Class will receive the certificate.

Requirements: No more than 2 detentions per year

MAGNOLIA PUBLIC SCHOOLS

This syllabus is subject to change

-----Sign & return this page-----

By returning this sheet, you receive your first assignment grade.

This syllabus may be modified at any time to better fit the individual needs of the students. The students and parents will be informed if there is a change.

Student name:.....

Parent name:.....

Parent email address:.....

Parent Contact Phone #:.....

Information I would like _____ **to know about my**
child:.....

.....
.....
.....

Movie Permission

I am notifying you that we will be watching a film/video in class with a rating above the G. Please notify me if you don't want your child to see any of the movies listed below.

6th grade: Hoot: Rated PG for mild bullying and brief language

Radio: Rated PG for mild language and thematic elements

7th grade: Pursuit of Happyness : Rated PG-13 for some language

8th grade: Gifted Hands: TV-PG

I have read the rules and expectations for _____'s Life Skills Class.

Parent signature:.....

Student signature:.....

I WISH YOU A GREAT, SUCCESSFUL AND PRODUCTIVE YEAR

		6th Grade	7th Grade	8th Grade
	main theme	Study and Organizational Skills	Leadership and Social Skills	Career and College Ed.
August / September	PATTERNS OF SUCCESS			
	1	Introduction Syllabus	Introduction Syllabus	Introduction Syllabus
	2	Goal Setting	Goal Setting	Career Planning-Career Research Introduction
	3	Smart Study Skills	Study Skills	Emotional Intelligence
	4	Organizational Skills	Time Management	Effective Communication (wisdom Tree)
	5	Presentation Skills	Test Taking Skills	Presentation Skills
	6	Presentation or Activity: Poster Making	Cooperation	Punctuality - Wisdom Tree
October	RESPECT			
	7	Respect for elders	Respect for Parents	Leadership
	8	Courtesy	Tolerance	Privacy
	9	Self-Respect (Red-Ribbon Week)	Golden Rule	Etiquette
	10	"HOOT " Movie- Respect for environment	CollegeED	CollegeED
November	CONFLICT RESOLUTION			
	11	Empathy	Communication skills	Conflict Resolution
	12	Peer Pressure	Prejudice	Dealing With Pressure
	13	Manners and Bullying	Bullying	Cyber Bullying
	14	Cyberbullying	Texting Safe 101	CollegeED
	RESPONSIBLE CHOICES			

Dec-Jan	15	Dangers of Smoking	Choosing Right Friend	Smoking
	16	Dangers of Marijuana	Marijuana	Marijuana
	17	Dangers of Alcohol	Alcohol	College Ed
	18	MIDTERM	MIDTERM	MIDTERM
	19	Stealing and Consequences	Cheating	Plagiarism
	20	activity:research on real life stories	Making Responsible Choices	CollegeED
February	CITIZENSHIP			
	21	Civil Rights	I have a dream	Peace
	22	Multiculturalism	Moral Dynamics	Global Awareness
	23	Patriotism	Fairness	Financial Literacy
	24	Be a character	CollegeED	CollegeED
March	HUMAN RELATIONS			
	25	Friendship	Friendship-Gossip	CollegeED
	26	Loyalty	Positive Attitude	CollegeED
	27	Cooperativeness	Benevolence	CollegeED
	28	Gratitude	teamwork	CollegeED
April	PERSONAL QUALITIES			
	29	Attitude	Contentment-Generosity	Integrity
	30	Forgiveness (wisdom tree)	Frugality	Honesty
	31	Honesty	Honesty	CollegeED

SELF-DISCIPLINE

May	32	Stress Management		CollegeED		CollegeED
	33	Sportsmanship		Determination		CollegeED
	34	Cleanliness		Internet Safety		Dealing with criticism
	35	FINALS		FINALS		FINALS
	36	Perseverance		Pursuit of Happyness/Movie		Gifted Hands/Movie
	37	Movie:Radio		Pursuit of Happyness/Movie		Gifted Hands/Movie

APPENDIX B7

COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM

**College Mentorship and
Leadership Program
(High School)**

**CMLP
Handbook**

Table of Contents	Page
CMLP Introduction	2
CMLP Mission and Vision.....	2
CMLP Major Components	3
Congressional Award: The Four Program Areas	4
Congressional Award Program Requirements.....	4
CMLP Leadership Seminar Topics	5
CMLP Responsibilities.....	6
Principal Responsibilities	6
Coordinator Responsibilities	6
Mentor Responsibilities	6
Parent Responsibilities.....	7
Student Responsibilities	7
CMLP Selection/Dismissal Procedure	8
Pre-Qualification.....	8
9 th , 11 th graders.....	9
Application Process	9
Dismissal.....	9
Appendix	10
CMLP Mentor Participation Request Form.....	10
CMLP Parent Agreement Form.....	11
Progress Report.....	14
Weekly Report	15
Congressional Award Steps	16
Congressional Award Registration Form	17
College Board 101 Great Books List.....	18
CMLP 2011-2012 - Chart of Estimated Activity Cost.....	21
CMLP Activity Calendar	23
CMLP Fundraising Ideas	26
Congressional Award Service Goal Examples.....	27
Camp, sleepover sample programs.....	32
How will I implement this program in my school?.....	35

CMLP Introduction

CMLP is a voluntary mentorship program designed to help qualified students to improve their skills in:

- Social
- Academics
- Extracurricular
- Personal development

We believe that students, within a collaborative and cooperative environment, will excel at academics' while reaching full of their intellectual, mental, physical and emotional potential. CMLP is a committed long term mentor-mentee relationship to be able to get admission into the top US and World colleges.

CMLP Mission and Vision

Mission:

CMLP mission is to provide academic and social programs and opportunities to prepare GT/Advanced students for higher education and to improve their leadership skills in a teamwork environment for real life.

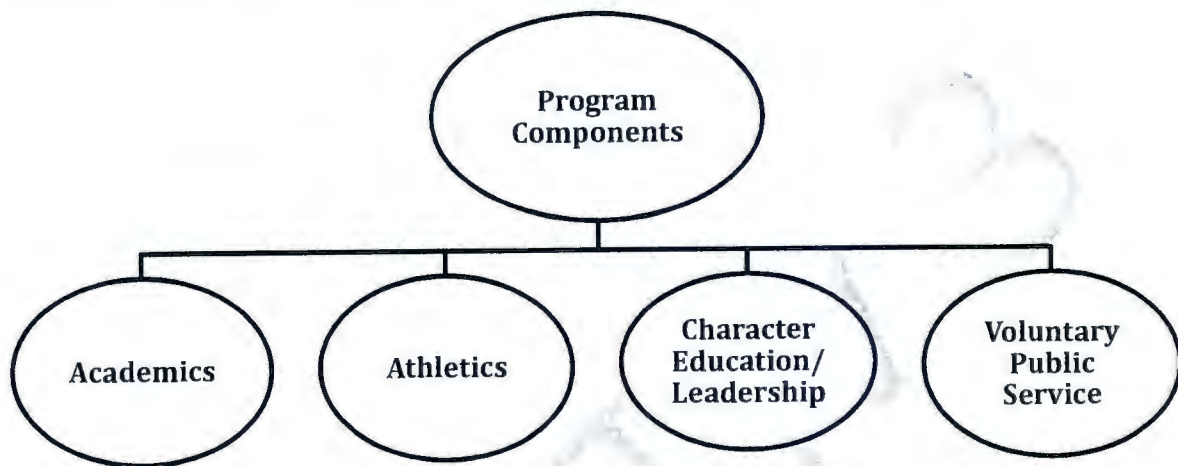
Vision:

Students get accepted into top colleges in US.

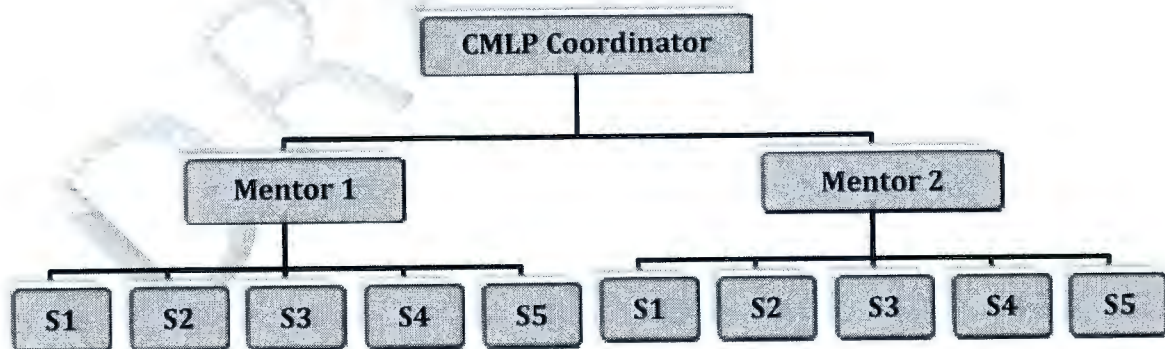
CMLP Major Components

CMLP has 4 major components.

Students get accepted into top universities .



Grade-wide selection of top 5 students forms a team.
One mentor teacher is assigned to each team.



Congressional Award: The Four Program Areas

Voluntary Public Service: Providing service to others and the community at large.

Personal Development: Developing personal interests, social or employment skills.

Physical Fitness: Improving quality of life through fitness activities.

Expedition/Exploration: Undertaking an outdoor, wilderness or venture experience
(Historical, cultural or environmental).

Congressional Award Program Requirements

There are six levels of the Award-Bronze, Silver and Gold Certificates and Bronze, Silver and Gold Medals. Each level is cumulative – time spent on one Award is carried with you to the next level.

	BRONZE CERTIFICATE	SILVER CERTIFICATE	GOLD CERTIFICATE	BRONZE MEDAL	SILVER MEDAL	GOLD MEDAL
VOLUNTARY PUBLIC SERVICE	30 HOURS	60 HOURS	90 HOURS	100 HOURS	200 HOURS	400 HOURS
VOLUNTARY PUBLIC SERVICE MONTHS OF ACTIVITY	N/A	N/A	6 MONTHS	7 MONTHS	12 MONTHS	24 MONTHS
PERSONAL DEVELOPMENT	15 HOURS	30 HOURS	45 HOURS	50 HOURS	100 HOURS	200 HOURS
PERSONAL DEVELOPMENT MONTHS OF ACTIVITY	N/A	N/A	6 MONTHS	7 MONTHS	12 MONTHS	24 MONTHS
PHYSICAL FITNESS	15 HOURS	30 HOURS	45 HOURS	50 HOURS	100 HOURS	200 HOURS
PHYSICAL FITNESS MONTHS OF ACTIVITY	N/A	N/A	6 MONTHS	7 MONTHS	12 MONTHS	24 MONTHS
EXPEDITION/ EXPLORATION	1 DAY (8-8 HOURS OF ACTIVITY)	2 DAYS	3 DAYS	1 OVERNIGHT	2 CONSECUTIVE OVERNIGHTS	4 CONSECUTIVE OVERNIGHTS

Along with the hour requirement, the higher levels of the Award require that activities be spread out over a minimum amount of months. Please note the following:

- 1- **The month requirement applies to Voluntary Public Service, Personal Development, and Physical Fitness.** Participants must accumulate the necessary

hours over a certain amount of months. For example, the Bronze Medal requires a minimum of seven months of activity in Voluntary Public Service, seven months of activity in Personal Development, and seven months of activity in Physical Fitness.

- 2- **Months do not need to be consecutive.** For instance, if one registers with the Award in January and works on Personal Development in January, February and March and then does not work on any Personal Development until October, November and December that would count as six months of activity.
- 3- **Months are cumulative.** For example, the seven months of activity completed at the Bronze Medal level will be carried over to the next level, leaving a minimum of five more months of activity needed in order to qualify for the Silver Medal.
- 4- **Months may only be counted once in the same activity area.** For instance, if you play soccer and softball during the same six month period for your Physical Fitness activity, you will only get credit for six months of activity, not 12 months of activity. If different goals overlap in the same month, the month may only be counted once for the respective program area.

CMLP Leadership Monthly Seminar Topics:

- 1- The ABCs of Leadership
- 2- Time Management
- 3- Goal Setting
- 4- Working Together Effectively
- 5- Communication and Personal Effectiveness
- 6- Understanding and Managing Conflict
- 7- Strategic Thinking and Planning
- 8- Problem Solving and Decision Making
- 9- Serving Others

CMLP Responsibilities

Principal Responsibilities

- Encourage teachers to participate in CMLP as mentors
- Regularly meet with the CMLP coordinator. At least once a month
- Appreciate by giving awards to extra performing students nominated by Mentor and Coordinator.
- Recognize CMLP Mentor
- Attend family gatherings
- Help CMLP coordinator in arranging Guest speakers for the Career development, Leadership seminars, Camps, Trips etc.

Coordinator Responsibilities

- Prepare yearly plan and make necessary adjustments according to school calendar.
- Introduce the program to
 - ▶ Staff – During School Wide Staff Developments
 - ▶ Students Identification – First week of School
 - ▶ Parent information session - Second week of School
- Get the volunteer mentor teachers applications
- Perform Diagnostic Test to 6th thru 9th graders – At 1st week of School
- Meet with the parents and make parents sign in the consent form
- Assign the applied students to the Mentors
- Perform weekly meeting with the Mentors
 - ▶ Fill out student tracking forms
- Organize monthly Seminars
 - ▶ Leadership
- Organize Camps and Trips according to the yearly plan
- Organize 8 week tests and share the results with the mentors
- Perform meeting with the parents once in a semester
- Check database for
 - ▶ Regular data entry
 - ▶ Report submission to the parents

Mentor Responsibilities

- Get the assigned students names no later than 3rd week of School.
- Meet with the students and keep track of weekly and yearly plans
- Set all kinds of college prep related goals for each student and track them
- Perform Weekly program

Weekly requirements:	Weekly	
	With Mentor	Total
Math Study	1 hour	2 hours
8-11 th grades: Word memorizing/ flash cards/word tests	30 min	1 hours
Book Reading follow up High Schools - 101 books by college board	10 minute	1 book in two weeks
Track a scientific competition (science fair, sciolymp, math counts, etc.)		
Character Education – give a topic to Each student for preparing a presentation and let him/her present to group members.	20 min	20 min
Game (Soccer, Swimming, PS3, Foosball, Movie, Wii, etc.)	30 min	30 min
Weekly meeting between Student-Mentor	30 min	30 min

- Sends 8 week report to the parents
- Tracks the students Congressional Award goals
- Invites group to whole CMLP group activities and events.
- Attends weekly meeting with CMLP Coordinator.
- Enters students academic and sport performance results to the Database regularly.
- Mentor should meet with parents (Home Visit/Family Invitation) after each report period(8 weeks)

Parent Responsibilities

- Sign the consent form for your child's admission to the program.
- Encourage your child to regularly respond to his/her group activities
- Notify your CMLP Mentor Teacher if there is a change of address or other contact information or any other change in the family that might affect your child's participation in the program.
- Participate in family gatherings such as picnics, dinners, assemblies, etc.
- Communicate regularly with student's Volunteer Mentor Teacher.
- Track the student's performance via 6 weeks reports
- Make the payment of the extracurricular activities associated with CMLP.
- Voluntarily Participate as a Chaperon CMLP activities if needed.

Student Responsibilities

- Commitment to a specific amount of time per week or month, thus the regularity of meetings is agreed upon. Devote about 2-3 hours per week for a start.
- Commitment to learn.
- Meet weekly, monthly, yearly requirements:

Weekly requirements:	Weekly	
	With Mentor	Total
Math Study	1 hour	2 hours
8-11 th grades: Word memorizing	30 mins	1 hours
Track a scientific competition (science fair, sciolymp, math counts, etc.)	1 hour	1 book in two weeks
Book Reading		
Character Education - Each student should prepare a presentation about a given character education topic (one student at each week) and present to his/her group.	20 min	20 min
Game (Soccer, Swimming, PS3, Foosball, Movie, Wii, etc.)	30 min	30 min
Weekly meeting between Student-Mentor	30 min	30 min

- Set goals with mentor for Congressional Award and devote your time and effort to achieve these set goals.
- Take responsibility for own growth and success
- Full time attendance (unless it is an emergency) to CMLP activities including
 - ▶ Weekly gatherings with mentor
 - ▶ Camps, Trips, sport activities
 - ▶ Leadership and Career development seminars
 - ▶ All other programs associated with CMLP
- Best behavior
- For high school students, keep GPA as high as possible and understand that if GPA gets below 3.00 for a semester, it requires dismissal from the CMLP.
- For middle school students, keep average grade of Math, Science, ELA and Social Studies courses as high as possible and understand that if average grades of aforementioned courses drops below B-, it requires dismissal from the CMLP.

CMLP Selection/Dismissal Procedure

Pre-Qualification

6th thru 9th graders

- 1- On the second day of the school, CMLP coordinator should present the program to students.
- 2- Selection should be done according to following weighted criteria:

Previous year's state test scores (Math and Reading)	70%
GPA	30%
Discipline Records	Letter from Dean of Students (No Out of School Suspension)
Minimum two teacher recommendation letters	

According to aforementioned criteria, top five students will be eligible to enroll the CMLP and second five will be in the waiting list.

10th and 11th graders

Selection should be done according to following weighted criteria:

Most recent PSAT Test Result	70%
GPA	30%
Discipline Records	Letter from Dean of Students (No Out of School Suspension)
Minimum two teacher recommendation letters	

According to aforementioned criteria, top five students will be eligible to enroll the CMLP and second five will be in the waiting list.

Application Process

Invitation letters will be sent to eligible students' parents via both email and mail. Parents will be invited to CMLP information session.

After information session, there should be meeting provide detailed information and to sign the consent form to participate in CMLP.

Parents in the waiting list might be called upon availability.

Dismissal

Student will be dismissed from the CMLP if:

- Mentor refers student for dismissal by the program. Mentor may refer student for dismissal in case of :

- Student does not attend to totally 3 programs without any excuse
- Student is referred by **all** members of the team for dismissal.
- Student does not do his/her academic and other duties/assignments for 3 times. Such as:
 - Not memorizing assigned words
 - Not finishing assigned tests, etc.
- Student does not attend totally 10 programs
- For 9th-11th grades, if Student's CGPA gets lower than 3.00
- For 6th-8th grades, average grade of Math, Science, ELA and Social Studies courses drops below 80.
- If a student gets out of school suspension.
- If student gets in school suspension, student may not be accepted to CMLP for the following year/semester.

Appendix

CMLP Mentor Participation Request Form

I have reviewed all of the responsibilities and expectations about the COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM (CMLP). I understand, and accept all of the responsibilities and expectations about the CMLP and, I will voluntarily work with my assigned students to implement CMLP as a mentor.

Today's Date : _____

Teacher's Name : _____

Phone # : (____) ____ - _____

Signature of Teacher: _____

CMLP Parent Agreement Form

Dear Parent of ... {Student's Name}...

Congratulations!

Your child has been eligible and accepted for SCIENCE Public Schools COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM (CMLP). To complete registration, we request you to read carefully and sign the following agreement and return it to the Program Coordinator Mr./Mrs. ...{CMLP Coordinator}... by{date}.... Moreover we would like to remind you that first CMLP meeting will be held on ... {date}.... Please attend this meeting with your child.

[SCIENCE PUBLIC SCHOOLS]

[SCIENCE ACADEMY]

COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM AGREEMENT

STUDENT

I have reviewed all of the responsibilities and expectations about the COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM (CMLP). I understand, acknowledge and agree to abide all of the responsibilities and expectations about the CMLP which is written on the "Responsibilities of Students" addendum. Moreover, any failure to follow CMLP responsibilities may result in my dismissal from the program.

Student's Name, Last Name: _____ Grade/Section: _____

Signature: _____ Date: ____/____/____

PARENT

We (I), the parent (s)/guardian of _____, we (I) have reviewed all of the responsibilities and expectations about the COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM (CMLP). We (I) understand and acknowledge and agree to abide all of our (my) responsibilities about the CMLP as a parent which is written on the "Responsibilities of Parents" addendum. Also We (I) agree to regularly communicate with the volunteer mentor teacher and encourage and support our (my) child to actively participate in the CMLP.

For liability, We (I), the parent (s)/guardian of the student mentioned above, understand and agree that the CMLP is a volunteer activity and function performed by SCIENCEPublic Schools. This release is intended to cover all injuries of every name, type, kind or nature, and personal property damage, if any, which may be sustained or suffered from any cause connected with or arising out of, or from participation in all of the CMLP events. I give permission for my child to participate in all activities of the CMLP, and I do not hold the SCIENCEPublic Schools liable for my child.

For transportation, by signing this form parent(s) give(s) consent to his/her child to take the transportation provided by school or teacher. Means of transportation could be any public, rental or private vehicles driven by an adult.

For Activity Costs, I am aware of the fact that, CMLP is volunteer based program held by SCIENCEPublic Schools and all I am responsible of the costs of the CMLP program activities such as

Camps, Trips, etc. and I will make the payments on time. Any outstanding payment may result in inadmissibility of my child to the activity.

Parent's Full Name: _____

Signature: _____

Date: __/__/__

Contact Details:

Home Address: _____

Phone Number: (____) ____ - ____

Email: _____

VOLUNTEER MENTOR TEACHER

I have reviewed all of the responsibilities and expectations about the COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM (CMLP). I understand, and agree to abide all of the responsibilities and expectations about the CMLP and, I voluntarily work with my assigned students to implement CMLP as a mentor.

I will work closely with the CMLP coordinator and I will contact with CMLP Coordinator if I will not be able to attend any of the CMLP meetings between coordinator, students and parents. I understand excessive absences will result in my removal from the program.

Mentor's Name, Last Name: _____

Signature: _____

Date: __/__/__

Progress Report

Student Name:

Mentor Teacher:

Progress Report Period:

Attendance

# of Absent	# of Excused Absents

Academic

Math	
Objectives	# of Q

Book Reading	
Book Name	Out Come (page/point)

Vocabulary	
Events	Out Come

Test Results	

Congressional Award

Expedition/Exploration	
Events	Out Come
•Trips	
•Camps	

Physical Fitness	
Sport/Athletics	Out Come

Volunteer Public Service	
Events	Out Come

Personal Development	•Seminars	
	Events	Out Come
	•PD Hours	
	Events	Out Come
	•Character Education	
	Events	Out Come

Weekly Report

Student Name:

Mentor Teacher:

Progress Report Period:

Attendance

# of Absent	# of Excused Absents

Academic

Math	
Objectives	# of Q

Book Reading	
Book Name	Out Come (page/point)

Vocabulary	
Events	Out Come

Test Results

Congressional Award

Expedition/Exploration	
Events	Out Come

Physical Fitness	
Sport/Athletics	Out Come

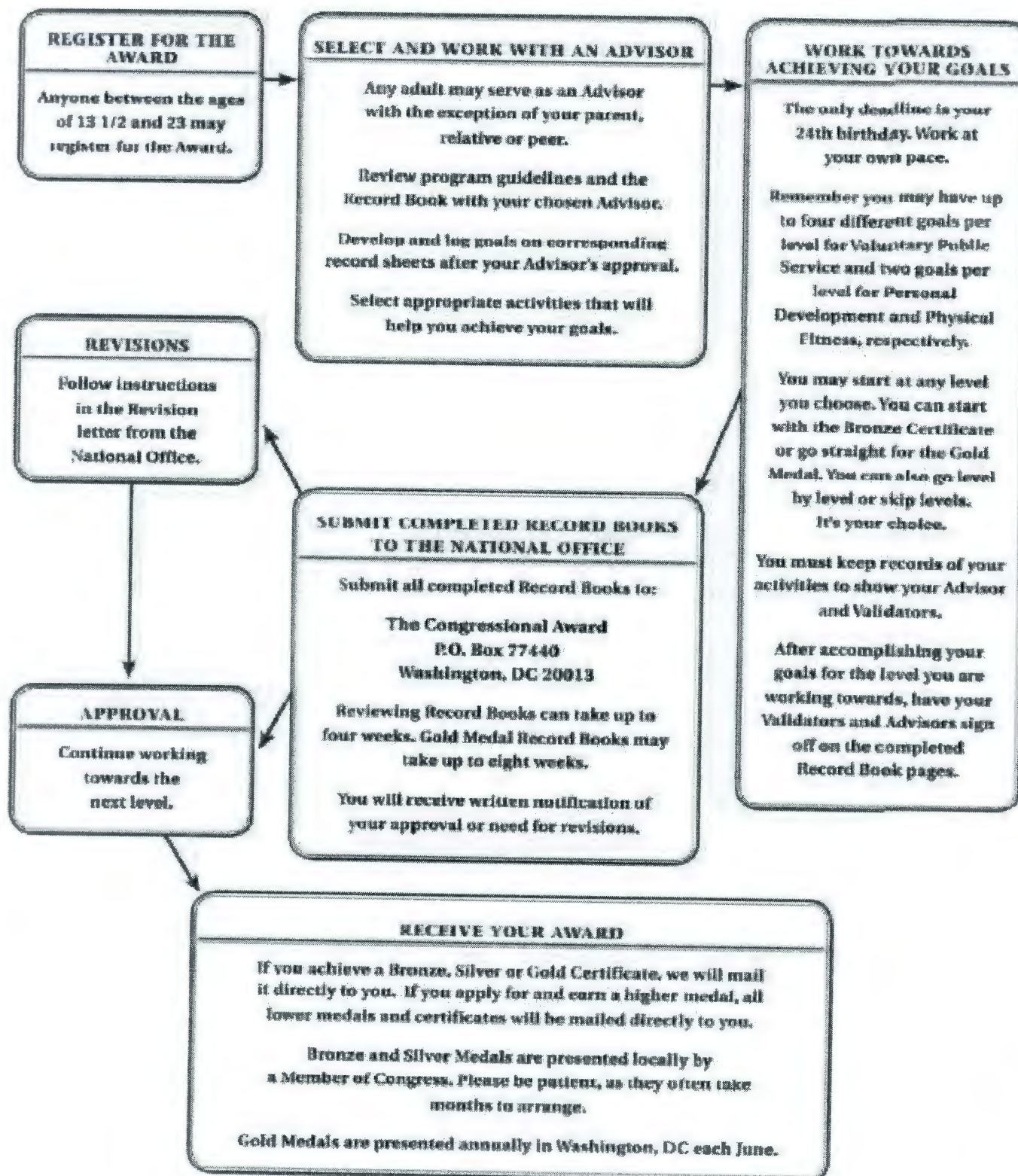
Volunteer Public Service	
Events	Out Come

Personal Development	•Seminars	
	Events	Out Come
	•PD Hours	
	Events	Out Come
	•Character Education	
	Events	Out Come

Mentor's Note:

Congressional Award Steps

FOLLOW THESE STEPS



Congressional Award Registration Form



THE CONGRESSIONAL AWARD

Registration Form & Waiver

MEMBER OF CONGRESS: _____

To find your US Representative, please visit www.congress.org!

PARTICIPANT INFORMATION

Name: _____

Date of Birth: ____/____/____

Age: _____ Gender: ☐ Male ☐ Female

Address: _____

City: _____

State/ZIP: _____

Phone: (____) _____

E mail: _____

Parents' Names: _____

Parents names will be used for press purposes and are not mandatory

School Attending: _____

Year of Study: _____

Affiliated Organization(s): _____

Examples: 4H, Boy Scouts, Girl Scouts, YMCA, etc.

SIGNATURE: _____

Date: _____

ADVISOR INFORMATION

Choose an Advisor other than a parent, relative or peer!

Advisor's Name: _____

Advisor's Address: _____

Phone: (____) _____

Email: _____

SEND COMPLETED FORM AND \$10 REGISTRATION FEE TO:

The Congressional Award Foundation
P.O. Box 77440
Washington, DC 20013

****Make checks payable to the Congressional Award****

WAIVER & AGREEMENT

I agree to the following Congressional Award Program ("Program") rules and requirements:

- I will select the activities I will perform in order to earn an award or certificate.
- I will not attempt to perform any activity until I have made certain that I can perform it safely.
- No one is authorized by the Program to: (i) advise as to the safety of any activity, or as to whether I am prepared to perform it safely, or (ii) supervise or exercise any control or authority over me or any other participant.
- I hereby release and hold harmless each of the individuals and legal entities involved in the Program from any and all liability of any kind for any injury I might suffer while performing any activity in connection with the Program.
- Information about me and my participation in the Program may be publicized by the Program.
- This agreement shall remain in effect as long as I am participating in the Program.

PARTICIPANT: _____

DATE: _____

SIGNATURE: _____

PARENTS/GUARDIANS ACKNOWLEDGMENT*

We are the parents or legal guardians of the Congressional Award participant listed above. We have read the foregoing Waiver and Agreement and agree on behalf of ourselves and the participant to the terms thereof. We will assure ourselves that the participant is aware of the risks involved in each activity and we take full responsibility in lieu of the Program for each activity.

NAME: _____

DATE: _____

SIGNATURE: _____

** Required for all candidates who are not considered adults under their state law—generally all who are under 18 years of age.*

If you have already registered with the Award, please disregard this form. You only have to register for the Congressional Award ONCE.

College Board 101 Great Books List

(Recommended for College-Bound Readers)

The list of the books below is required to be read by all High School CMLP students. From CMLP freshman up to junior year, 20 books/year will be read until the end of each grade level. Students can choose from following book list.

Author	Title	Grade Level
--	<i>Beowulf</i>	Freshman
Achebe, Chinua	<i>Things Fall Apart</i>	Freshman
Agee, James	<i>A Death in the Family</i>	Freshman
Austen, Jane	<i>Pride and Prejudice</i>	Freshman
Baldwin, James	<i>Go Tell It on the Mountain</i>	Freshman
Beckett, Samuel	<i>Waiting for Godot</i>	Freshman
Bellow, Saul	<i>The Adventures of Augie March</i>	Freshman
Brontë, Charlotte	<i>Jane Eyre</i>	Freshman
Brontë, Emily	<i>Wuthering Heights</i>	Freshman
Camus, Albert	<i>The Stranger</i>	Freshman
Cather, Willa	<i>Death Comes for the Archbishop</i>	Freshman
Chaucer, Geoffrey	<i>The Canterbury Tales</i>	Freshman
Chekhov, Anton	<i>The Cherry Orchard</i>	Freshman
Chopin, Kate	<i>The Awakening</i>	Freshman
Conrad, Joseph	<i>Heart of Darkness</i>	Freshman
Cooper, James Fenimore	<i>The Last of the Mohicans</i>	Freshman
Crane, Stephen	<i>The Red Badge of Courage</i>	Freshman
Dante	<i>Inferno</i>	Freshman
de Cervantes, Miguel	<i>Don Quixote</i>	Freshman
Defoe, Daniel	<i>Robinson Crusoe</i>	Freshman
Dickens, Charles	<i>A Tale of Two Cities</i>	Freshman
Dostoyevsky, Fyodor	<i>Crime and Punishment</i>	Freshman
Douglass, Frederick	<i>Narrative of the Life of Frederick Douglass</i>	Freshman
Dreiser, Theodore	<i>An American Tragedy</i>	Freshman
Dumas, Alexandre	<i>The Three Musketeers</i>	Freshman
Eliot, George	<i>The Mill on the Floss</i>	Freshman
Ellison, Ralph	<i>Invisible Man</i>	Freshman
Emerson, Ralph Waldo	<i>Selected Essays</i>	Freshman
Faulkner, William	<i>As I Lay Dying</i>	Freshman
Faulkner, William	<i>The Sound and the Fury</i>	Freshman
Fielding, Henry	<i>Tom Jones</i>	Freshman
Fitzgerald, F. Scott	<i>The Great Gatsby</i>	Freshman

Flaubert, Gustave	<i>Madame Bovary</i>	<i>Freshman</i>
Ford, Ford Madox	<i>The Good Soldier</i>	<i>Freshman</i>
Goethe, Johann Wolfgang von	<i>Faust</i>	<i>Sophomore</i>
Golding, William	<i>Lord of the Flies</i>	<i>Sophomore</i>
Hardy, Thomas	<i>Tess of the d'Urbervilles</i>	<i>Sophomore</i>
Hawthorne, Nathaniel	<i>The Scarlet Letter</i>	<i>Sophomore</i>
Heller, Joseph	<i>Catch 22</i>	<i>Sophomore</i>
Hemingway, Ernest	<i>A Farewell to Arms</i>	<i>Sophomore</i>
Homer	<i>The Iliad</i>	<i>Sophomore</i>
Homer	<i>The Odyssey</i>	<i>Sophomore</i>
Hugo, Victor	<i>The Hunchback of Notre Dame</i>	<i>Sophomore</i>
Hurston, Zora Neale	<i>Their Eyes Were Watching God</i>	<i>Sophomore</i>
Huxley, Aldous	<i>Brave New World</i>	<i>Sophomore</i>
Ibsen, Henrik	<i>A Doll's House</i>	<i>Sophomore</i>
James, Henry	<i>The Portrait of a Lady</i>	<i>Sophomore</i>
James, Henry	<i>The Turn of the Screw</i>	<i>Sophomore</i>
Joyce, James	<i>A Portrait of the Artist as a Young Man</i>	<i>Sophomore</i>
Kafka, Franz	<i>The Metamorphosis</i>	<i>Sophomore</i>
Kingston, Maxine Hong	<i>The Woman Warrior</i>	<i>Sophomore</i>
Lee, Harper	<i>To Kill a Mockingbird</i>	<i>Sophomore</i>
Lewis, Sinclair	<i>Babbitt</i>	<i>Sophomore</i>
London, Jack	<i>The Call of the Wild</i>	<i>Sophomore</i>
Mann, Thomas	<i>The Magic Mountain</i>	<i>Sophomore</i>
Marquez, Gabriel García	<i>One Hundred Years of Solitude</i>	<i>Sophomore</i>
Melville, Herman	<i>Bartleby the Scrivener</i>	<i>Sophomore</i>
Melville, Herman	<i>Moby Dick</i>	<i>Sophomore</i>
Miller, Arthur	<i>The Crucible</i>	<i>Sophomore</i>
Morrison, Toni	<i>Beloved</i>	<i>Sophomore</i>
O'Connor, Flannery	<i>A Good Man is Hard to Find</i>	<i>Sophomore</i>
O'Neill, Eugene	<i>Long Day's Journey into Night</i>	<i>Sophomore</i>
Orwell, George	<i>Animal Farm</i>	<i>Sophomore</i>
Pasternak, Boris	<i>Doctor Zhivago</i>	<i>Sophomore</i>
Plath, Sylvia	<i>The Bell Jar</i>	<i>Sophomore</i>
Poe, Edgar Allan	<i>Selected Tales</i>	<i>Sophomore</i>
Proust, Marcel	<i>Swann's Way</i>	<i>Sophomore</i>
Pynchon, Thomas	<i>The Crying of Lot 49</i>	<i>Junior</i>
Remarque, Erich Maria	<i>All Quiet on the Western Front</i>	<i>Junior</i>
Rostand, Edmond	<i>Cyrano de Bergerac</i>	<i>Junior</i>
Roth, Henry	<i>Call It Sleep</i>	<i>Junior</i>
Salinger, J.D.	<i>The Catcher in the Rye</i>	<i>Junior</i>

Shakespeare, William	<i>Hamlet</i>	<i>Junior</i>
Shakespeare, William	<i>Macbeth</i>	<i>Junior</i>
Shakespeare, William	<i>A Midsummer Night's Dream</i>	<i>Junior</i>
Shakespeare, William	<i>Romeo and Juliet</i>	<i>Junior</i>
Shaw, George Bernard	<i>Pygmalion</i>	<i>Junior</i>
Shelley, Mary	<i>Frankenstein</i>	<i>Junior</i>
Silko, Leslie Marmon	<i>Ceremony</i>	<i>Junior</i>
Solzhenitsyn, Alexander	<i>One Day in the Life of Ivan Denisovich</i>	<i>Junior</i>
Sophocles	<i>Antigone</i>	<i>Junior</i>
Sophocles	<i>Oedipus Rex</i>	<i>Junior</i>
Steinbeck, John	<i>The Grapes of Wrath</i>	<i>Junior</i>
Stevenson, Robert Louis	<i>Treasure Island</i>	<i>Junior</i>
Stowe, Harriet Beecher	<i>Uncle Tom's Cabin</i>	<i>Junior</i>
Swift, Jonathan	<i>Gulliver's Travels</i>	<i>Junior</i>
Thackeray, William	<i>Vanity Fair</i>	<i>Junior</i>
Thoreau, Henry David	<i>Walden</i>	<i>Junior</i>
Tolstoy, Leo	<i>War and Peace</i>	<i>Junior</i>
Turgenev, Ivan	<i>Fathers and Sons</i>	<i>Junior</i>
Twain, Mark	<i>The Adventures of Huckleberry Finn</i>	<i>Junior</i>
Voltaire	<i>Candide</i>	<i>Junior</i>
Vonnegut, Kurt Jr.	<i>Slaughterhouse-Five</i>	<i>Junior</i>
Walker, Alice	<i>The Color Purple</i>	<i>Junior</i>
Wharton, Edith	<i>The House of Mirth</i>	<i>Junior</i>
Welty, Eudora	<i>Collected Stories</i>	<i>Junior</i>
Whitman, Walt	<i>Leaves of Grass</i>	<i>Junior</i>
Wilde, Oscar	<i>The Picture of Dorian Gray</i>	<i>Junior</i>
Williams, Tennessee	<i>The Glass Menagerie</i>	<i>Junior</i>
Woolf, Virginia	<i>To the Lighthouse</i>	<i>Junior</i>
Wright, Richard	<i>Native Son</i>	<i>Junior</i>

CMLP 2012-2013 - Chart of Estimated Activity Cost								
	In state	Out of state	Camps	Trip Cost	Camp Cost	Total Cost	Estimated* Fundraisin g Amount	Yearly Cost per Student
Middle School	2 (\$60/trip)	0	12 Days (\$20/day)*	\$120	\$420	\$540	\$240	\$300
Grade 9	1 (\$60/trip)	0	14 Days (\$20/day)*	\$60	\$480	\$540	\$300	\$240
Grade 10	1 (\$60/trip)	1 x (\$250/trip)	14 Days (\$20/day)*	\$310	\$480	\$790	\$400	\$390
Grade 11	0	1 x (\$250/trip)	14 Days (\$20/day)*	\$250	\$480	\$730	\$430	\$300

**: Final raised money may vary

****:** Final raised money may vary

DRAFT.V3

DRAFT. 4.3

DRAFT.V.3

DRAFT.V.3

CMLP Fundraising Ideas

CMLP students will have academic and personal development activities during academic year, such as camps and trips etc.... For all those activities, they will need extra money to run their program. For this purpose, they can have fundraising in their schools. You will see some fundraising ideas for your CMLP student below.

- 1- Sales: From bake sale to popcorn sale CMLP students can come together and sell goods in their school during dismissal time. Here are some selling ideas. Selling candies, drinks, snacks, pizza etc.
- 2- Carwash: Students can prepare a brochure or letter about their fundraising activities. They can distribute them to parents during dismissal time and wash cars Saturdays at school.
- 3- Dinners: Students can organize dinner at school or out of school location and can sell tickets.
- 4- School yard sales: Students can collect selling goods (toys, house goods etc.) and sell them in their school.
- 5- Students can visit local neighborhood companies and talk about CMLP program and activities and gently ask for help.
- 6- Students can print school newspaper and get commercial advertisement.
- 7- Parents' nights at restaurants: Students can go to restaurants and can get both discount and fee for each parent go to that restaurant for dinner.
- 8- Students can meet with PTO members, administrators and staff members to get different ideas for fundraising ideas.

CMLP students are required to follow campus fundraising procedures. Campus principal permission is **mandatory** for all fundraising events.

Congressional Award Service Goal Examples

Voluntary Public Service: Providing service to others and the greater community at large.

Examples:

- 1- I am going to dedicate four hours a week under the direction of St. Vincent de Paul, Inc." I will work in the clothing distribution center and the soup kitchen."
- 2- "I will provide a minimum of 100 hours of service under the direction of the Volunteer Office of Southern Illinois." (A similar situation may be applied to service clubs, scouting programs, American Red Cross, etc.)
- 3- Assisting with food and clothing drives
- 4- Working at homeless soup kitchens
- 5- Constructing facilities for other communities, building playgrounds and sidewalks, etc.
- 6- Serve as a lifeguard for Voluntary Public Service,
- 7- I will collect donations for the local Red Cross by calling shops from my home for excess merchandise that they may contribute for disaster relief efforts. I will also volunteer with the local Red Cross at blood drives, assembling school chests and I will serve as a peer educator for volunteer training sessions."
- 8- Volunteering at the local Animal Shelter,
- 9- Constructing or painting a municipal building, feeding the homeless,
- 10- Volunteering with local civic agencies and organizations, such as the firefighters, police, Botanic Gardens, Boys and Girls Club, Senior Centers, library, museum, homeless shelter, animal shelter, health clinic/hospital, Meals on Wheels, Special Olympics, Civil Air Patrol, Chamber of Commerce/Visitors' Bureau, Big Brothers and Sisters, Boy/Girl Scouts; Parks and Recreation, Red Cross, Junior Elks, Cheyenne Frontier Days, Municipal Pool, YMCA, Head Start, community theater; volunteering with school organizations, such as the Key Club, Teen Court, National Honor Society, FBLA, Habitat for Humanity; teaching sign language or ESL; food/book/clothing/blood drives; fund-raising for non-profit organizations such as the American Cancer Society, Muscular Dystrophy, United Way, read with the elderly; helping the disabled; Congressional Award Youth Service Retreat.
- 11- Peer counseling/tutoring,
- 12- Volunteering in an elementary school as a sports coach, tutor, or teacher's aide;
- 13- Managing school sports teams;
- 14- Volunteering to teach computers,
- 15- I will volunteer with the Girl Scouts as an assistant leader and camp counselor.

- 16- I will volunteer with the Botanic Gardens by planting, weeding, and watering public plots.
- 17- I will organize a food/blood/book/clothing drive at my school with the Key Club
- 18- I will volunteer at the local homeless shelter by serving meals twice a week.
- 19- I will volunteer at the local community theater by participating in several productions.
- 20- I will work with the local Volunteer Fire Department.
- 21- I will volunteer at the local pool by instructing water safety to children.

Personal Development: Developing personal interests, social or employment skills.

Examples:

- 1- I will improve my acting skills and learn more about working behind the scenes in a theater, I will perform in community theatre, work as a stage hand and learn about lighting, props and costumes
- 2- I will work part-time at a bank where my duties will include: answering telephones, filing, word processing and operating photocopiers and fax machines. This will allow me to explore careers in banking while still being in school full-time,
- 3- "I will pursue my interest in photography as a member of the school newspaper staff. I intend to produce at least ten photos, which will be published during the next school year."
- 4- School/community theater or musical performances, Student Council, Speech and Debate, Boys/Girls State, Improvisational troupes, DECA, ROTC.
- 5- Scrapbooking,
- 6- Learning/improving musical skills,
- 7- Knitting, crocheting, sewing, cross-stitching,
- 8- Child care,
- 9- Part-time jobs,
- 10- Voice lessons,
- 11- Girl/Boy Scout badges and 4-H projects,
- 12- College preparatory classes or camps,
- 13- Art (drawing, painting, ceramics, sculpting, origami, anime),
- 14- Creative writing,
- 15- Photography,
- 16- Learning computer skills/foreign languages/astronomy, etc.,
- 17- Animal care and training,
- 18- Competition in academic events (History Day, State, Science Fair, etc.),
- 19- Tying flies,
- 20- First aid/CPR/EMT training,
- 21- Carpentry/woodworking, nutrition/cooking programs,
- 22- State drama/music events,
- 23- Lifeguard training,
- 24- Video production,
- 25- Learning ranch/farm skills,
- 26- Car maintenance,
- 27- Personal accounting/finances,
- 28- Amateur radio,

- 29- Gardening, horsemanship,
- 30- Building models,
- 31- Learning magic,
- 32- Cake decorating,
- 33- Creating a reading program.
- 34- I will improve my piano-playing skills by learning 3 new pieces/advancing to a higher level/performing in the school musical.
- 35- I will learn leadership skills by being an active member of the Student Council.
- 36- I will improve my ability to speak in public by participating in extra-curricular debates.
- 37- I will research good nutritional practices, find healthful recipes, and prepare dinner for my family once a week.
- 39- I will learn to crochet and make a small baby blanket.
- 38- I will participate in community theater productions as an actor/set designer/lights and sound engineer/stagehand.
- 39- I will build a bookcase/dollhouse/table, using both power and hand tools.
- 40- I will expand my reading ability by learning more about the science fiction/classics/mystery genre and completing 7 new books with written reports/summaries.

Physical Fitness: Improving quality of life through fitness activities.

Examples:

- 1- I am interested in rowing and would like to row a 2k in 15 minutes." I will practice rowing on a machine three times a week,
- 2- I will stretch and lift weights and I will join the rowing team. I will improve my basketball skills so that my free-throw percentage will increase from 35 to 40 percent. I will achieve this goal by practicing after school and by playing on the school basketball team.
- 3- I will decrease my mile time from eleven minutes to ten minutes by running after school and joining the track team,
- 4- I can presently jog five miles in 50 minutes and I intend to improve my time to 8.5 minutes per mile. Through my aerobics program, I will improve my resting heart rate from 90 to 75 and lose ten pounds within 15 months.
- 5- I will improve my physical fitness by increasing the number of laps I swim in 40 minutes from 15 to 20.
- 6- I will do an exercise/fitness program to increase my maximum heart rate from 110 to 120 beats per minute.
- 7- I will improve my arm strength by lifting weights, starting with 5 lb. hand weights and increasing to 8 lb. weights.
- 8- I will improve my physical fitness by increasing my stamina playing basketball so that I can play for 20 minutes without tiring. Currently, I can play 15 minutes before I tire.
- 9- I will increase my physical flexibility and core strength by practicing 30 min. of yoga per day. I will also learn 5-10 new positions.
- 10- I will improve my tennis playing by increasing the accuracy of my serves to 75%. Currently, my serves are accurate about 50% of the time.

Expedition/Exploration: Undertaking an outdoor, wilderness or venture experience (Historical, cultural or environmental).

Examples:

- 1- Expedition: I will take a day trip while water rafting. I will map the route that we will take, plan for my transportation to and from the rafting company, take preparatory safety classes and work on my arm strength by lifting weights."
- 2- Exploration: I will plan and prepare a trip to Playa Dominical, Costa Rica to learn about surfing and explore a rainforest environment I will research flights and hotels to determine my budget, apply for need-based scholarships, and work on small fundraisers. I will then map out the places I want to visit and select a variety of rainforest immersion tours."
- 3- Expedition: will plan a four consecutive night camping trip on the Appalachian Trail where I will hike fifteen miles a day and will compare and contrast the foliage of the surrounding trees on each leg of my hike. I will plan for my four-night camping trip by coordinating my travel arrangements and meals, mapping the trail, packing, researching the area and training to carry a large backpack."
- 4- Exploration: "I will travel from Centreville, Pennsylvania to New York City to explore different types of architecture and study my own heritage. I will use public transportation to visit Little Italy, Chinatown and Ellis Island. I will plan and prepare for my Exploration by coordinating my travel and researching the different cultures. I will also find information about my family at Ellis Island to complete a study on my own heritage.
- 5- Exploration: Visiting the Florida Keys works well for an Exploration as long as you can show that you immersed yourself in a new surrounding, were self-sufficient and gained from the experience."
- 6- Expedition goals are usually outdoor excursions that may include camping, hiking, hunting, fishing, rock climbing, spelunking, canoeing, bicycling, horseback riding, etc. Participants should be learning new skills such as camping, setting up a tent, cooking in the outdoors, and orienteering.
- 7- Exploration goals are longer trips that involve a new cultural experience. Examples of this goal are living on a farm, ranch, or reservation; traveling to a foreign country for home stays, study abroad, or cultural discovery; exploring a new environment. The goal must include preliminary research and preparation -- pre-planned events such as school band trips, sport camps, leadership workshops, or "Sign Up and Go to..." trips are not acceptable Boy Scout Ranches.
- 8- I will plan and participate in an overnight camping trip. I will select a site, set up a tent, cook a meal, lead a hike, and clean the campground.
- 9- I will spend an overnight on a ranch, sleeping in a cabin and performing ranch chores.
- 10- I will take a group trip to Europe, researching transportation and currency as well as learning necessary phrases in a foreign language. While there, I will attend a local school and stay with a host family.
- 11- I will take a trip to Mexico, researching cultural and historic sites and using a foreign language to ask for information and services. I will also do the trip planning, including transportation, accommodations, and currency conversions.

12- I will plan and complete a 5-day, 4-night wilderness trip, during which I will also fish and hike.

COLLEGE MENTORSHIP AND LEADERSHIP PROGRAM

BOOK REPORT

Describe the most exciting and interesting event in the book (5-6 sentences)

Describe a story from your life that is similar to events in your book (5-6 sentences)

SETTING: Time and Place (3-4 sentences)

CONCLUSION: Briefly give your opinion of the book. Explain whether or not you would recommend the book, and why you feel that way. (5-6 sentences) ☺

DRAFT

CMLP STATE PARK CAMP APPLICATION CONSENT FORM

Student Name: _____ Grade: _____ Date: _____

..... CMLP applicant students can join us for a Thanksgiving Camp at State Park. This camp is limited to 18 students only.

During this camp, the CMLP curriculum and Congressional Award will be presented to the students. There will be a Priorities & Goals Seminar. The camp detail schedule will be delivered to the parents on Friday, November 19th.

Besides academic studies, students will enjoy the park's activities such as Canoeing, Kayaking, Fishing, Hiking, and Picnicking as well as outdoor sports.

ABOUT THE PARK

Located on the River, this inviting source of cool, clear water has attracted people for thousands of years. Visitors enjoy the picnic area, playground and sandy volleyball court. A boardwalk overlooks the spring and river. White-tailed deer, gray squirrels, red-shouldered hawks, pileated woodpeckers and barred owls are some of the animals seen in the park. Manatees sometimes visit the spring during the winter months.

CABINS

Spacious two-bedroom cabins have central heating and cooling, an electric fireplace, screened porch and kitchenette. Cabins are equipped with linens and kitchen utensils.

WHERE:

COST: \$95 (Including meals, transportation and accommodation.)

SCHOOL DROP OFF: Sunday, November 21, 2010, 1:00pm

CAMP CHECK IN: Sunday, November 21, 2010, 4:00pm

CAMP CHECK OUT: Wednesday, November 24, 2010, 11:30am

SCHOOL PICK UP: November 24, 2010, 3:00pm

DUE: Monday, November 15, 2010.



- **Liability Release:** Should my child sustain or incur any accident or illness while on the Fanning Springs Thanksgiving Camp, I hereby authorize the director/administrator, or his/her agent, to execute any and all documents, including any necessary releases, which might be required at any medical facility to

perform any emergency care on my behalf. In the event that my child has an illness or accident during the camp, and it requires a visit to the doctor or hospital, the existing family policies will solely represent the insurance coverage.

For transportation needs, unless I offer another option to the school, I am giving full consent to the Science Academy Staff for the transportation of my child.

I give permission for my child to participate in any and all activities of the CMLP camp, and I do not hold the SCIENCE SCHOOL liable for my child.

Parent/Guardian Name: _____

Phone #: Home: _____ Work: _____ Cell: _____

Parent Signature: _____

Emergency Contact and Phone #: _____

Relationship to student: _____

Date : _____

---- HS CMLP Reading Camp Schedule

Friday

4:30pm	5:00	Transportation to the camp
5:30	6:00	Reorganizing (rooms, food, items, lodge clean up, setup)
6:00	6:30	Dinner preparation (mashed potatoes, bbqed chicken, salad)
6:30	7:00	Dinner
7:00	7:30	Walk and talk (light exercise)
7:30	9:30	Snacks and reading time
9:35	10:45	Movie (History channel, Engineering Marvels, Juniors and Sophomores)
10:45	11:00	Free Time
11:00		Lights out

Saturday

7:00am	7:30	Breakfast preparation (eggs, Hash browns, Grilled cheese, Orange juice, tea, milk)
7:30	8:30	Exercise, Hike
8:30	8:45	free time
8:45	9:45	Snacks and reading time
9:45	10:45	Fun, team building activity, project decision and planning
10:45	11:00	Pack up and depart

Please make your checks payable to ---- . Thank you.

SAMPLE SLEEPOVER SCHEDULE

SCHEDULE OF THE CLUB

Every month on Friday from 3:30pm until on Saturday to 4:00pm

February 4th and 18th

March 4th and 18th

April 1th, 15th and 29th

May 6th and 20th

June 3rd and 4th

FRIDAY

3:30-4:00 pm	PIZZA
4:00-5:30 pm	BOWLING
5:30-6:00 pm	ARRIVE AT HOME
6:30-7:30 pm	STUDY TIME & Character Education
7:30 -8:00 pm	DINNER
8:00-10:00 pm	MOVIE TIME or READING BOOK/GAME
10:00-11:00 pm	GO TO SLEEP

SATURDAY

7:15-8:00 am	WAKE UP
8:00-8:30 am	BREAKFAST
8:30-9:00 am	ARRIVE AT THE SCHOOL
9:30-12:00 pm	STUDY ALGEBRA & reading book
12:00-4:00 pm	FIELD TRIP

FIELD TRIP'S SCHEDULE

February 5th	VISIT SCIENCE ACADEMY HAVE LUNCH AND PLAY BASKETBALL GAME
February 19th	VISIT CULTURE CENTER AND HAVE LUNCH
March 5th	SKATING AND LUNCH-1.Student Performance Report Card
March 19th	LASER TAG AND LUNCH
April 2th	SCIENCE MUSEUM

GUIDELINES FOR SUCCESSFUL ADOPTION OF CMLP PROGRAM.

1. How will I announce the CMLP and admission test to my staff?

- At your first staff meeting, Please introduce the program through **8 CLMP presentation for Staff** and a knowledgeable Principal or College Advisor about the program can make this presentation as well. The principal will ask if there is any volunteer for this, they should see the principal or email.

3. How will I select CMLP students?

There are four criteria to select the students? PSAT or MAP testing,
GPA,
discipline records
and three recommendation letters.

4. How will I group the students?

After the exam results are announced, Rank the students from top to bottom. Since the mentorship group will be all boys or all girls, list your students in two groups.

Students then will be grouped at most five (5) and will be assigned a mentor teacher. Until parents sign the contract, the teachers (mentors) will not know which students they will mentor.

In addition to main list, create a shadow list (5 students) in case parents don't accept the contract or a student drops during the course of the year

5. How will I inform the students that I would like to be in the program?

Students who are on the main list will be given **9 Selected Student Invitation Letter** and parents and students are invited to school for CMLP program presentation. Preferably meal should be served.

6. How will I introduce the program to the parents?

At the meeting, either principal or CMLP coordinator will introduce the program through **10_ CLMP Presentation for parents-short version** or **11_ CLMP Presentation for parents-Detailed** based on the need of the group. Mentor teachers will be present at this meeting.

7. How will the students make their commitment to the program?

At the end of the meeting, parents will be informed about "**12 CMLP Commitment Form**" and asked to sign it here or at home. Remind them that the rules will be reinforced with clarity and the students who don't follow the rules will be dismissed from the CMLP.

At this point, neither children nor the mentor will be notified about their groups. After the signed papers came, then the distribution will start.

8. What do I do when the signed Commitment Forms come?

After the signed reports came, the students will be gathered in a conference room and the principal makes a motivational speech about the importance of the program, that only select students are accepted and they should be aware of the value of the program. Then The CMLP coordinator is invited to make his/her speech. The coordinator mentions about the rules and introduces the mentors. In order for them to feel special, some refreshment is served.

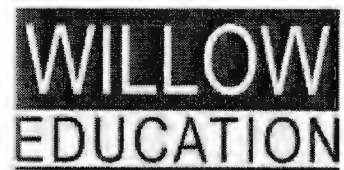
The children are given information about the schedule.

The children are reminded about their responsibilities to their Mentor and CMLP coordinator, the program officially starts at this point. All the above-mentioned processes should finish by the end of September. If they are finished earlier, the better.

DRAFT.V3

APPENDIX C₁

ARTICLES OF INCORPORATION



ARTICLES OF INCORPORATION OF WILLOW EDUCATION

A California Nonprofit Public Benefit Corporation

(As Amended)

ARTICLE 1.

The name of this corporation is Willow Education.

ARTICLE 2.

- A. This corporation is a nonprofit public benefit corporation and is not organized for the private gain of any person. It is organized under the Nonprofit Public Benefit Corporation Law for public and charitable purposes.
- B. The specific purpose for which this corporation is organized is to design, develop, and operate public, nonprofit charter schools.

ARTICLE 3.

The name and address in the State of California of this corporation's initial agent for service of process is:

Name: Suleyman Bahceci

Address: 2355 Holland St.

City: San Mateo

State: California Zip: 94403

ARTICLE 4.

- A. This corporation is organized and operated exclusively for charitable and educational purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code.
- B. No substantial part of the activities of this corporation shall consist of carrying on propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate or intervene in any political campaign (including the publishing or distribution of statements) on behalf of any candidate for public office.

ARTICLE 5.

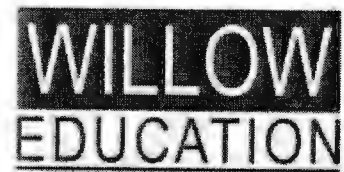
The property of this corporation is irrevocably dedicated to charitable and educational purposes and no part of the net income or assets of this corporation shall ever inure to benefit of any director, officer or member thereof or to the benefit of any private person. Upon the dissolution or winding up of the corporation, its assets remaining after payment, or provision for payments, of all debts and liabilities of this corporation shall be distributed to a nonprofit fund, foundation or corporation which is organized and operated exclusively for charitable and educational purposes and which has established its tax exempt status under Section 501(c)(3) of the Internal Revenue Code.

Dated: May 7, 2003

Suleyman Bahceci, Incorporator

APPENDIX C2

BYLAWS



BYLAWS OF
WILLOW EDUCATION

A California Nonprofit Public Benefit Corporation

ARTICLE 1.
NAME

Section 1.1. The name of this corporation is Willow Education.

ARTICLE 2.
OFFICES

Section 2.1. Principal Office. The principal executive office and the principal office for the transaction of the business of the Corporation may be established at any place or places within or without the State of California by resolution of the Board of Directors. The Board of Directors may change the location of the principal office of the Corporation at anytime.

Section 2.2. Other Offices. The Board of Directors may at any time establish branch or subordinate offices at any place or places where the Corporation is qualified to transact business. The Board of Directors may change the location of any branch or subordinate office at anytime.

ARTICLE 3.
OBJECTIVES AND PURPOSES

Section 3.1. General Purpose. The general purpose for which this Corporation is organized is to engage in any lawful act or activity for which a corporation may be organized under the Nonprofit Public Benefit Corporation Law of California, provided, however, nothing in this Article III shall be construed to authorize this Corporation to carry on any activity for the profit of its officers, directors or other persons or to distribute any gains, profits or dividends to any of its officers, directors or other persons as such. Furthermore, nothing in this Article shall be construed as allowing the Corporation to engage in any activity forbidden under Section 501(c)(3) of the Internal Revenue Code.

Section 3.2. Specific Purpose. The specific purpose for which this Corporation is organized is to design, develop, and operate public, nonprofit charter schools.

ARTICLE 4.
NONPARTISAN ACTIVITIES

Section 4.1. This Corporation has been formed under the California Nonprofit Public Benefit Corporation Law for the public purposes described above, and it shall be nonprofit and nonpartisan. No substantial part of the activities of the Corporation shall consist of the publication or dissemination of materials with the purpose of attempting to influence legislation, and the Corporation shall not participate or intervene in any political campaign on behalf of any candidate for public office or for or against any cause or measure being submitted to the people for a vote.

Section 4.2. The Corporation shall not, except in an insubstantial degree, engage in any activities or exercise any powers that are not in furtherance of the purposes described above in Section 4.1.

ARTICLE 5.
DEDICATION OF ASSETS

- Section 5.1. The property of this Corporation is irrevocably dedicated to charitable or educational purposes, or any other purposes permitted under Section 501(c)(3) of the Internal Revenue Code. No part of the net income or assets of this Corporation shall ever inure to the benefit of any director or officer thereof or to the benefit of any private person; provided, however, that this provision shall not prevent payment to any such person of reasonable compensation for services performed for the Corporation in effecting any of its public purposes, as long as such compensation is otherwise permitted by these Bylaws and is fixed by resolution of the Board of Directors; and no such person or persons shall be entitled to share in the distribution of, and shall not receive, any of the corporate assets on the dissolution of the Corporation.
- Section 5.2. Upon the dissolution or winding up of this Corporation, its assets remaining after payment, or provision for payment, of all debts and liabilities of this Corporation, except for those acquired by the Willow Education solely for the Charter School (i.e. federal and state funding, public and private grants, and individual donations etc.) shall be distributed to a nonprofit fund, foundation or corporation which is organized and operated exclusively for charitable, scientific or educational purposes and which has established its tax exempt status under Section 501(c)(3) of the Internal Revenue Code. All Charter School assets will be distributed according to the procedures outlined in the Charter petition.

ARTICLE 6.
MEMBERSHIPS

- Section 6.1. Members. This Corporation shall have no members.
- Section 6.2. Non-Voting Members. The Board may adopt policies and procedures for the admission of associate members or other designated members who shall have no voting rights in the Corporation. Such associate or other members are not "members" of the Corporation as defined in Section 5056 of the California Corporations Code or any successor provision.

ARTICLE 7.
DIRECTORS

- Section 7.1. Number of Directors. The Board of Directors shall consist of not less than three (3) positions nor more than eleven (11) voting positions, the exact number of directors to be fixed, within the limits specified in this Section 7.1, by resolution of the Board. Directors need not be residents of California.
- Section 7.2. Powers.
- 7.2.1. General Corporate Powers. Subject to the provisions of the California Nonprofit Corporation Law, the business and affairs of the Corporation shall be managed, and all corporate powers shall be exercised, by or under the direction of the Board of Directors. The Board may delegate the management of the activities of the Corporation to any person or persons, management company or committee however composed, provided that the activities and affairs of the Corporation be managed and all corporate powers shall be exercised under the ultimate direction of the Board.

- 7.2.2. Specific Powers. Without prejudice to the general corporate powers described in Section 7.2.1, and subject to the same limitations, the Board shall have the following powers.
- 7.2.2.1. Amend the articles of incorporation; amend, alter or repeal the Bylaws.
 - 7.2.2.2. At its pleasure, select, remove, and supervise all officers, agents and employees of the Corporation; prescribe any powers and duties for them that are consistent with law, with the Articles of Incorporation, and with these Bylaws; and fix their compensation.
 - 7.2.2.3. Change the principal executive office or the principal business office in the State of California from one location to another; cause the Corporation to be qualified to conduct activities in any other state, territory, dependency, or country and conduct activities within the State of California; and designate any place within the State of California for the holding of meetings, including annual meetings.
 - 7.2.2.4. Adopt, make and use a corporate seal; and alter the form of the seal. Such seal shall be kept at the principal office of the corporation.
 - 7.2.2.5. Borrow money and incur indebtedness on behalf of the Corporation and cause to be executed and delivered for the Corporation's purposes, in the corporate name, promissory notes, bonds, debentures, deeds of trust, mortgages, pledges, hypothecations, and other evidences of debt and securities.
 - 7.2.2.6. Design, develop, and operate nonprofit, public charter schools, including but not limited to, the following:
 - 7.2.2.6.1. Oversee charter schools to ensure that schools' decisions and operations are in accord with charter agreements between the Willow Education ("Willow") and Charter Granting Agency ("CGA").
 - 7.2.2.6.2. Form an Advisory Committee that will provide evaluations of the schools' performance and recommendations on major decisions.
 - 7.2.2.6.3. Perform any other functions necessary to comply with charter petitions.
 - 7.2.2.6.4. Communicate on behalf of charter schools with CGA.
- Section 7.3. Terms; Election of Successors. The terms of office of the initial Board of Directors shall be staggered for one-, two- and three-year terms. Each Director of subsequent Boards shall hold office for two (2) years and until a successor director has been designated and qualified. At each annual meeting, each seat on the incoming Board shall be filled by a separate vote of the current directors; a majority vote of a quorum of directors shall be sufficient to fill each seat. Each new director shall take office at the conclusion of the annual meeting at which he or she is elected. Notwithstanding the above, a director shall serve until a successor has been elected. Vacancies on the Willow/School Board may be filled by a majority vote of a quorum of directors.
- Section 7.4. Restriction on Interested Persons as Directors. No more than forty-nine percent (49%) of the persons serving on the Board of Directors may be "interested persons." An interested person is (a) any person compensated by the corporation for services rendered to it within the previous twelve (12) months, whether as a full-time or part-time employee, independent contractor, or otherwise, excluding any reasonable compensation paid to a director as director; and (b) any brother, sister, ancestor, descendant, spouse, brother-in-law, sister-in-law, son-in-law, daughter-in-law, mother-in-law, or father-in-law of such

person. However, any violation of this paragraph shall not affect the validity or enforceability of transactions entered into by the corporation.

Section 7.5. Vacancies.

- 7.5.1. Events Causing Vacancy. A vacancy or vacancies on the Board of Directors shall be deemed to exist on the occurrence of the following: (i) the death, resignation, or removal of any director; (ii) the declaration by resolution of the Board of Directors of a vacancy of the office of a director who has been declared of unsound mind by an order of court or convicted of a felony or has been found by final order or judgment of any court to have breached a duty under the California Nonprofit Corporation Law; or (iii) whenever the number of authorized directors is increased.
- 7.5.2. Removal. Directors may be removed without cause by a simple majority of directors then in office.
- 7.5.3. Resignations. Except as provided in this paragraph, any director may resign, which resignation shall be effective on giving written notice to the Chairperson of the Board, the President, the Secretary, or the Board of Directors, and such resignation shall take effect immediately unless the notice specifies a later time for the resignation to become effective. No director may resign if the Corporation would then be left without a duly elected director or directors in charge of its affairs, except upon notice to the Attorney General.
- 7.5.4. Appointment to Fill Vacancies. If a vacancy is created by any event, a majority of a quorum of the remaining directors then in office may appoint a new director to serve until the next annual meeting of the Board of Directors. Appointments to fill vacancies shall be made only at Special Meetings and with proper notice in keeping with Section 7.8 of this Article VII.
- 7.5.5. No Vacancy on Reduction of Number of Directors. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

Section 7.6. Place of Meetings; Meetings by Telephone. Regular and special meetings of the Board of Directors shall be held within the boundaries of the territory over which the Board exercises jurisdiction unless conditions in Government Code § 54954(b)(1)-(7) exist. Notwithstanding the above provisions of this Section 7.5, a regular or special meeting of the Board of Directors may be held at any place consented to in writing by all the members of the Board of Directors, either before or after the meeting. If consents are given, they shall be filed with the minutes of the meeting. Any meeting, regular or special, may be held by conference telephone or similar communication equipment, so long as all directors participating in the meeting can hear one another, and all such directors shall be deemed to be present in person at such meeting. All votes taken during a teleconferenced meeting shall be by roll call. If the Board elects to use teleconferencing, it shall post agendas at all teleconference locations and conduct teleconference meetings in a manner that protects the statutory and constitutional rights of the parties or the public appearing before the Board. Each teleconference location shall be identified in the notice and agenda of the meeting or proceeding, and each teleconference location shall be accessible to the public. To the extent applicable, all meetings of the Board of Directors shall be called, held and conducted in accordance with the terms and provisions of the Ralph M. Brown Act, California Government Code Sections 54950, et seq., as said chapter may be modified by subsequent legislation.

- Section 7.7. Annual Meeting. On the last Thursday in June of every year, commencing with 2004, the Board of Directors shall hold a meeting for the purpose of organization, election of directors and the transaction of other business. No notice of this meeting need be given. To the extent applicable, all meetings of the Board of Directors shall be called, held and conducted in accordance with the terms and provisions of the Ralph M. Brown Act, California Government Code Sections 54950, et seq., as said chapter may be modified by subsequent legislation.
- Section 7.8. Other Regular Meetings. The Board of Directors shall set a specified time and place for its regular meetings. Once the Board of Directors sets the time for regular meetings, each Director shall receive notice, as specified in Section 7.8.2 of this Article VII, of the time and place that regular meetings shall be held. Subsequent to such notice, regular meetings shall be held without call. If the Board of Directors changes the time and place of regular meetings, each Director shall receive notice of the change in keeping with Section 7.8.2 of this Article VII. If the Board of Directors does not set a specified time and place for its regular meetings, meetings of the Board of Directors shall be considered Special Meetings and have the notice requirements of Section 7.8.2. Meetings may be held either within or without the state of California and shall be held at the Corporation's registered office in California if resolution does not specify the location of the meetings. To the extent applicable, all meetings of the Board of Directors shall be called, held and conducted in accordance with the terms and provisions of the Ralph M. Brown Act, California Government Code Sections 54950, et seq., as said chapter may be modified by subsequent legislation.
- Section 7.9. Special Meetings.
- 7.9.1. Authority to Call. Special meetings of the Board of Directors for any purpose may be called at any time by the Chairperson of the Board or by a majority of the Directors.
- 7.9.2. Notice.
- 7.9.2.1. Manner of Giving. Notice of the time and place of special meetings shall be given to each director by one of the following methods: (a) by personal delivery or written notice; (b) by first-class mail, postage paid; (c) by telephone or facsimile communication, either directly to the director or to a person at the director's office who would reasonably be expected to communicate such notice promptly to the director; or (d) by telegram, charges prepaid (e) by e-mail through the e-mail address of each director as shown on the records of the Corporation. To the extent applicable, all such notices shall be given or sent to the director's address or facsimile number as shown on the corporation's records and shall be sent with at least such notice as is required in accordance with the terms and provisions of the Ralph M. Brown Act, California Government Code Sections 54950, et seq., as said chapter may be modified by subsequent legislation which is applicable to the type of meeting called.
- 7.9.2.2. Time Requirements. Notices sent by first class mail shall be deposited into a United States mailbox at least four days before the time set for the meeting. Notices given by personal delivery, telephone, facsimile, telegraph or e-mail shall be delivered, telephoned, telecopied, given to the telegram company or sent at least 72 hours before the time set for the meeting. Notice shall be received at least 24 hours before the time of the meeting as specified in the notice.

- 7.9.2.3. Notice Contents. The notice shall state the date and time, who called the meeting, purpose, and place for the meeting. It need not, however, specify the place of the meeting if it is to be held at the principal executive office of the Corporation.
- Section 7.10. Quorum. A majority of the authorized number of directors shall constitute a quorum for the transaction of business, except to adjourn as provided in Section 7.12 of this Article VII. Every act taken or decision made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors, subject to the provisions of the California Nonprofit Corporation Law, including, without limitation, those provisions relating to (i) approval of contracts or transactions in which a director has a direct or indirect material financial interest, (ii) creation of, and appointment to, committees of the board, and (iii) indemnification of directors unless the act of a greater number is required by law or the Bylaws. A meeting at which a quorum is initially present may continue to transact business, notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.
- Section 7.11. Proxies. A Director may vote by proxy executed in writing by the director. No proxy shall be valid after three (3) months from the date of its execution.
- Section 7.12. Waiver of Notice. The transactions of any meeting of the Board of Directors, however called and noticed or wherever held, shall be as valid as though taken at a meeting duly held after regular call and notice, if (a) a quorum is present, and (b) either before or after the meeting, each of the directors not present signs a written waiver of notice, a consent to holding the meeting, or an approval of the minutes. The waiver of notice or consent need not specify the purpose of the meeting. All waivers, consents, and approvals shall be filed with the corporate records or made a part of the minutes of the meeting. Notice of a meeting shall also be deemed given to any director who attends the meeting without protesting before or at its commencement about the lack of adequate notice. Directors can protest the lack of notice only by presenting a written protest to the Secretary of the Corporation either in person, by first-class mail addressed to the Secretary at the principal office of the Corporation as contained on the Corporation's records as of the date of the protest, or by facsimile addressed to the facsimile number of the Corporation as contained on the Corporation's records as of the date of the protest. [Note to WE: the Brown Act "Waiver of Notice" is a bit different than what you have here: According to the Brown Act, "The written notice may be dispensed with as to any Director who at or prior to the tie the meeting convenes files with the Secretary of the Board a written waiver of notice. The written notice may also be dispensed with as to any Director who is actually present at the meeting at the time it convenes. The call and notice shall be posted at least 24 hours prior to the special meeting in a location that is freely accessible to members of the public."]
- Section 7.13. Adjournment. A majority of the directors present, whether or not constituting a quorum, may adjourn any meeting to another time and place.
- Section 7.14. Notice of Adjournment. Notice of the time and place of holding an adjourned meeting need not be given, unless the meeting is adjourned for more than 24 hours, in which case personal notice of the time and place shall be given before the time of the adjourned meeting to the directors who were not present at the time of the adjournment.
- Section 7.15. Conduct of Meetings. Meetings of the Board of Directors shall be presided over by the Chairperson of the Board, or, if no such person has been so designated or, in his or her absence, the President of the Corporation or, in his or her absence, by a Vice President of the Corporation or, in the absence of each of these persons, by a Chairperson chosen by a majority of the directors present at the meeting. The Secretary of the Corporation shall act as secretary of all meetings of the Board, provided that, in his or her absence, the

presiding officer shall appoint another person to act as Secretary of the Meeting. Meetings shall be governed by Robert's Rules of Order or by the Consensus Method, as may be determined by the Board of Directors from time to time, insofar as such rules are not inconsistent with or in conflict with these Bylaws, with the Articles of Incorporation of this Corporation, or with provisions of law.

Section 7.16. Action Without Meeting. Any action required or permitted to be taken by the Board of Directors may be taken without a meeting, if all members of the Board, individually or collectively, consent in writing to that action. For the purposes of this Section only, "all members of the Board" shall not include any "interested director" as defined in Section 5233 of the California Nonprofit Public Benefit Corporation Law. Such action by unanimous written consent shall have the same force and effect as a unanimous vote of the Board of Directors. Such written consent or consents shall be filed with the minutes of the proceedings of the Board.

Section 7.17. Fees and Compensation of Directors. Directors and members of committees may receive such compensation, if any, for their services, and such reimbursement of expenses, as may be determined by resolution of the Board of Directors to be just and reasonable. Directors may be compensated for rendering services to the Corporation in a capacity other than director, provided such compensation is reasonable and further provided that not more than forty-nine percent (49%) of the persons serving as directors may be "interested persons," as defined in Section 5227 of the California Nonprofit Public Benefit Corporation Law or any successor provision.

Section 7.18. Non-Liability of Directors. The directors shall not be personally liable for the debts, liabilities, or other obligations of the Corporation.

ARTICLE 8. COMMITTEES

Section 8.1. Committees of Directors. The Board of Directors may, by resolution adopted by a majority of the directors then in office, create one or more committees, including an executive committee, each consisting of two or more directors, to serve at the discretion of the Board and may include persons who are not directors. Any committee, to the extent provided in the resolution of the Board, shall have all the authority of the Board, except that no committee, regardless of Board resolution, may:

- 8.1.1. Fill vacancies on the Board of Directors or in any committee which has the authority of the Board;

- 8.1.2. Fix compensation of the directors for serving on the Board or on any committee;
- 8.1.3. Amend or repeal Bylaws or adopt new Bylaws;
- 8.1.4. Amend or repeal any resolution of the Board of Directors which by its express terms is not so amendable or repealable;
- 8.1.5. Appoint any other committees of the Board of Directors or the members of these committees;
- 8.1.6. Approve any transaction (1) between the Corporation and one or more of its directors or (2) between the Corporation or any person in which one or more of its directors have a material financial interest; or
- 8.1.7. Expend corporate funds to support a nominee for director after more persons have been nominated than can be elected.

Section 8.2. Meetings and Action of Committees. Meetings and action of committees shall be governed by, and held and taken in accordance with, the provisions of Article VII of these Bylaws, concerning meetings of directors, with such changes in the context of those Bylaws as are necessary to substitute the committee and its members for the Board of Directors and its members, except that the time for regular meetings of committees may be determined by resolution of the Board of Directors. Special meetings of committees may also be called by resolution of the Board of Directors. Notice of special meetings of committees shall also be given to any and all alternate members, who shall have the right to attend all meetings of the committee. Minutes shall be kept of each meeting of any committee and shall be filed with the corporate records. The Committee shall report to the Board of Directors from time to time as the Board may require. The Board of Directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws, or, in the absence of rules adopted by the board, the committee may adopt such rules.

Section 8.3. Quorum Rules for Committees. A majority of the authorized committee members shall constitute a quorum for the transaction of committee business, except to adjourn. A majority of the committee members present, whether or not constituting a quorum, may adjourn any meeting to another time and place. Every act taken or decision made by a majority of the committee members present at a meeting duly held at which a quorum is present shall be regarded as an act of the committee, subject to the provisions of the California Nonprofit Corporation law, including without limitation those provisions relating to (i) creation of, or appointment to, committees of the Board, and (ii) indemnification of directors. A meeting at which a quorum is initially present may continue to transact business, notwithstanding the withdrawal of committee members, if any action taken is approved by at least a majority of the required quorum for that meeting.

Section 8.4. Revocation of Delegated Authority. The Board of Directors may, at any time, revoke or modify any or all of the authority so delegated to a committee, increase or decrease but not below two (2) the number of its members, and fill vacancies therein from the members of the Board.

ARTICLE 9.

OFFICERS

Section 9.1. Officers. The Corporation shall have as officers, a President, a Secretary, and a Chief Financial Officer. The Corporation may also have, at the discretion of the Board of

Directors, a Chairperson of the Board, one or more vice presidents, one or more assistant secretaries, one or more assistant treasurers, and such other officers as may be appointed in accordance with the provisions of Section 9.3 of this Article IX. Any number of offices may be held by the same person, except that neither the Secretary nor the Chief Financial Officer may serve concurrently as either the President or the Chairperson of the Board.

- Section 9.2. Election of Officers. Any person may serve as an officer of the Corporation. The officers of the Corporation, except those appointed in accordance with the provisions of Section 9.3 of this Article IX, shall be chosen by the Board of Directors, and each shall serve at the discretion of the Board, subject to the rights, if any, of an officer under any contract of employment. The officers of the Corporation shall be elected annually by the Board of the Directors at the regular meeting of the Board of Directors. If the election of officers is not held at this meeting, the election shall be held as soon thereafter as conveniently as possible. Each officer shall hold office until a successor is duly selected and qualified. An officer may be elected to succeed himself or herself in the same office.
- Section 9.3. Subordinate Officers. The Board of Directors may appoint, and may authorize the Chairperson of the Board or the President or another officer to appoint, any other officers that the business of the Corporation may require, each of whom shall have the title, hold office for the period, have the authority, and perform the duties specified in the Bylaws or determined from time to time by the Board of Directors.
- Section 9.4. Removal of Officers. Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, with or without cause, by the Board of Directors, at any regular or special meeting of the Board, or at the annual meeting of the Corporation, or, except in the case of an officer chosen by the Board of Directors, by an officer on whom such power of removal may be conferred by the Board of Directors.
- Section 9.5. Resignation of Officers. Any officer may resign at any time by giving written notice to the Corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any of the Corporation under any contract to which the officer is a party.
- Section 9.6. Vacancies in Offices. A vacancy in any office because of death, resignation, removal, disqualification, or any other cause shall be filled in the manner prescribed in these Bylaws for regular appointments to that office. In the event of a vacancy in any office other than the President, such vacancy shall be filled temporarily by appointment by the President, and shall remain in office for 60 days, or until the next Regular Meeting of the Board of Directors, whichever comes first. Thereafter, the position can be filled only by action of the Board of Directors.
- Section 9.7. Responsibilities of Officers.
- 9.7.1. Chairperson of the Board. If such an officer be elected, the Chairperson of the Board shall preside at meetings of the Board of Directors and exercise and perform such other powers and duties as may from time to time be assigned to him by the Board of Directors or prescribed by the Bylaws. If there is no President, the Chairperson of the Board shall, in addition, be the chief executive officer of the Corporation and shall have the powers and duties prescribed in Section 9.7.2, below.
- 9.7.2. President. Subject to such supervisory powers as may be given by the Board of Directors to the chairperson of the board, if any, the President shall, subject to the control of the

Board of Directors, supervise, direct, and control the business affairs of the Corporation and the activities of the officers of the Corporation. The President may delegate his or her responsibilities and powers subject to the control of the Board of Directors. In addition to all duties incident to his or her office, he or she shall preside, in the absence of the chairperson of the board, or if there be none, at all meetings of the Board of Directors. He or she shall have such other powers and duties as may be prescribed by the Board of Directors or the Bylaws.

- 9.7.3. Vice Presidents. In the absence or disability of the President, or in the event of his or her inability or refusal to act, the vice presidents, if any, in order of their rank as fixed by the Board of Directors or, if not ranked, a vice president designated by the Board of Directors, shall perform all the duties of the President, and when so acting shall have all the powers of, and be subject to all the restrictions upon, the President. The President may delegate any or all of his or her powers to one or more vice presidents.
- 9.7.4. Secretary. The Secretary shall attend to the following:
 - 9.7.4.1. Bylaws. The Secretary shall certify and keep at the principal office of the Corporation the original, or a copy of these Bylaws as amended or otherwise altered to date.
 - 9.7.4.2. Book of Minutes. The Secretary shall keep or cause to be kept, at the principal executive office or such other place as the Board of Directors may direct, a book of minutes of all meetings, proceedings, and actions of directors and committees of directors, recording the time and place of holding such meeting, whether regular or special, and, if special, how authorized; the notice given; the names of those present at such meetings; the number of directors present or represented at directors' meetings; and the proceedings of such meetings. The book of minutes shall also contain any protests concerning lack of adequate notice or dissents from members of the Board, if the protesting or dissenting members request in writing.
 - 9.7.4.3. Notices, Seal and Other Duties. The Secretary shall give, or cause to be given, notice of all meetings of the Board of Directors in accordance with these Bylaws. He or she shall keep the seal of the Corporation in safe custody, and shall have such other powers and perform such other duties incident to the office of Secretary as may be prescribed by the Board of Directors or these Bylaws.
 - 9.7.4.4. Corporate Records. Upon request, the Secretary shall exhibit at all reasonable times to any director of the Corporation, or to his or her agent or attorney, the Bylaws and book of minutes.
- 9.7.5. Chief Financial Officer. The Chief Financial Officer shall attend to the following:
 - 9.7.5.1. Books of Account. The Chief Financial Officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and transactions of the Corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and other matters customarily included in financial statements. The books of account shall be open to inspection by any director at all reasonable times.
 - 9.7.5.2. Financial Reports. The Chief Financial Officer shall prepare, or cause to be prepared, and certify, or cause to be certified, the financial statements to be included in any required reports.

9.7.5.3. Deposit and Disbursement of Money and Valuables. The Chief Financial Officer shall deposit, or cause to be deposited, all money and other valuables in the name and to the credit of the Corporation with such depositories as may be designated by the Board of Directors; shall disburse, or cause to be disbursed, the funds of the Corporation as may be ordered by the Board of Directors; shall render, or cause to be rendered to the President and directors, whenever they request it, an account of all of his or her transactions as Chief Financial Officer and of the financial condition of the Corporation; and shall have other powers and perform such other duties incident to the office of Chief Financial Officer as may be prescribed by the Board of Directors or the Bylaws.

9.7.5.4. Bond. If required by the Board of Directors, the Chief Financial Officer shall give the Corporation a bond in the amount and with the surety or sureties specified by the Board for faithful performance of the duties of his office and for restoration to the Corporation of all its books, papers, vouchers, money, and other property of every kind in his possession or under his control on his death, resignation, retirement, or removal from office.

Section 9.8. Compensation of Officers. The salaries of officers, if any, shall be fixed from time to time by resolution of the Board, and no officer shall be prevented from receiving such salary by reason of the fact that he or she is also a director of the Corporation, provided, however, that such compensation paid a director for serving as an officer of the Corporation shall only be allowed if permitted under the provisions of Section 7.16 of these Bylaws. In all cases, any salaries received by officers of the Corporation shall be reasonable and given in return for services actually rendered for the Corporation which relate to the performance of the public benefit purposes of the Corporation.

ARTICLE 10.

TRANSACTIONS BETWEEN CORPORATION AND DIRECTORS OR OFFICERS

Section 10.1. Contracts with Directors and Officers.

10.1.1. The Corporation shall not be a party to any contract or transaction:

10.1.1.1. In which one or more of its directors or officers has a material financial interest, or;

10.1.1.2. With any corporation, firm, association, or other entity in which one or more directors or officers has a material financial interest, or;

10.1.1.3. With any corporation, firm, association, or other entity (other than a California nonprofit public benefit corporation) in which one or more of its directors is a member; unless:

10.1.1.3.1. The material facts concerning the contract or transaction and such director's or officer's financial interest of common directorship are fully disclosed in good faith and are noted in the minutes;

- 10.1.1.3.2. Prior to authorizing or approving the contract or transaction, the board considers and in good faith determines after reasonable investigation that the Corporation could not obtain a more advantageous arrangement with reasonable investigation under the circumstances or that the contract or transaction implements a charitable program of the Corporation;
- 10.1.1.3.3. The Corporation enters into the contract or transaction for its own benefit;
- 10.1.1.3.4. The contract or transaction is fair and reasonable to this Corporation or implements a charitable program of the Corporation at the time the contract or transaction is entered into, and;
- 10.1.1.3.5. Such contract or transaction is authorized or approved in good faith by a majority of disinterested directors at the meeting, provided that that majority has decision-making authority under the quorum provisions of Section 7.9 of Article VII.
- 10.1.2. A director or officer of this Corporation shall not be deemed to have a “material financial interest” in a contract or transaction that implements a charitable program of this Corporation solely because such a contract or transaction results in a benefit to a director or officer or their families by virtue of their membership in the class of persons intended to be benefited by the charitable program of this Corporation.
- 10.1.3. Loans to Directors and Officers. The Corporation shall not make any loan of money or property to or guarantee the obligation of any director or officer, unless approved by the Attorney General of the State of California; provided, however, the Corporation may advance money to a director or officer of the Corporation for expenses reasonably anticipated to be incurred in the performance of duties of such director or officer, provided that in the absence of such advance, such director or officer would be entitled to be reimbursed for such expenses by the Corporation.
- Section 10.2. Interlocking Directorates. No contract or other transaction between the Corporation and any California nonprofit public benefit corporation is either void or voidable because such director(s) are present at a meeting of the Board of Directors that authorizes, approves, or ratifies the contract or transaction, if the material facts as to the transaction and as to such director's other directorship are fully disclosed to the board, and the board authorizes, approves, or ratifies the contract or transaction in good faith by a vote of disinterested directors at the meeting (subject to the quorum provisions of Article VII), or if the contract or transaction is just and reasonable as to the Corporation at the time it is authorized, approved, or ratified.
- Section 10.3. Duty of Loyalty; Construction with Article XI. Nothing in this Article shall be construed to derogate in any way from the absolute duty of loyalty that every director and officer owes to the Corporation. Furthermore, nothing in this Article shall be construed to override or amend the provisions of Article XI. All conflicts between the two articles shall be resolved in favor of Article XI.

ARTICLE 11.

INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS

- Section 11.1. Definitions. For purpose of this Article,
 - 11.1.1. “Agent” means any person who is or was a director, officer, employee, or other agent of this Corporation, or is or was serving at the request of this Corporation as a director, officer, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, or other enterprise, or was a director, officer, employee, or agent of a

foreign or domestic corporation that was a predecessor corporation of this Corporation or of another enterprise at the request of the predecessor corporation;

11.1.2. "Proceeding" means any threatened, pending, or completed action or proceeding, whether civil, criminal, administrative, or investigative; and

11.1.3. "Expenses" includes, without limitation, all attorneys' fees, costs, and any other expenses reasonably incurred in the defense of any claims or proceedings against an Agent by reason of his position or relationship as Agent and all attorneys' fees, costs, and other expenses reasonably incurred in establishing a right to indemnification under this Article XI.

Section 11.2. Successful Defense by Agent. To the extent that an Agent of this Corporation has been successful on the merits in the defense of any proceeding referred to in this Article XI, or in the defense of any claim, issue, or matter therein, the Agent shall be indemnified against expenses actually and reasonably incurred by the Agent in connection with the claim. If an Agent either settles any such claim or sustains a judgment rendered against him, then the provisions of Sections 11.3 through Section 11.5 shall determine whether the Agent is entitled to indemnification.

Section 11.3. Actions Brought by Persons Other than the Corporation. Subject to the required findings to be made pursuant to Section 11.5, below, this Corporation shall indemnify any person who was or is a party, or is threatened to be made a party, to any proceeding by reason of the fact that such person is or was an Agent of this Corporation, for all expenses, judgments, fines, settlements, and other amounts actually and reasonably incurred in connection with the proceeding. Notwithstanding the foregoing, no indemnification shall be permitted under this Section 11.3 for any action brought by, or on behalf of this Corporation, or by an officer, director or person granted relator status by the Attorney General, or by the Attorney General on the ground that the defendant director was or is engaging in self-dealing within the meaning of Section 5233 of the California Nonprofit Corporation Law, or by the Attorney General or a person granted relator status by the Attorney General for any breach of duty relating to assets held in charitable trust.

Section 11.4. Action Brought by or on Behalf of the Corporation.

11.4.1. Claims Settled Out of Court. If any Agent settles or otherwise disposes of a threatened or pending action brought by or on behalf of this Corporation, with or without court approval, the Agent shall receive no indemnification for either amounts paid pursuant to the terms of the settlement or other disposition or for any expenses reasonably incurred in defending against the proceeding, unless it is settled with the approval of the Attorney General.

11.4.2. Claims and Suits Awarded Against Agent. This Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action brought by or on behalf of this Corporation by reason of the fact that the person is or was an Agent of this Corporation, for all expenses actually and reasonably incurred in connection with the defense of that action, provided that both of the following are met:

11.4.2.1. The determination of good faith conduct required by Section 11.5 of this Article XI, must be made in the manner provided for in that Section; and

11.4.2.2. Upon application, the court in which the action was brought must determine that, in view of all of the circumstances of the case, the Agent should be entitled to indemnity for the

expenses incurred. If the Agent is found to be so entitled, the court shall determine the appropriate amount of expenses to be reimbursed.

Section 11.5. Determination of Agent's Good Faith Conduct. The indemnification granted to an Agent in Section 11.3 and Section 11.4 above is conditioned on the following:

11.5.1. Required Standard of Conduct. The Agent seeking reimbursement must be found, in the manner provided below, to have acted in good faith, in a manner he or she believed to be in the best interest of this Corporation, and with such care, including reasonable inquiry, as an ordinarily prudent person in a like position would use in similar circumstances. The termination of any proceeding by judgment, order, settlement, conviction, or on a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith or in a manner he or she reasonably believed to be in the best interest of this Corporation or that he or she had reasonable cause to believe that his conduct was unlawful. In the case of a criminal proceeding, the person must have had no reasonable cause to believe that his conduct was unlawful.

11.5.2. Manner of Determination of Good Faith Conduct. The determination that the Agent did act in a manner complying with Section 11.5.1 above shall be made by:

11.5.2.1. The Board of Directors by a majority vote of a quorum consisting of directors who are not parties to the proceeding; or

11.5.2.2. The court in which the proceeding is or was pending. Such determination may be made on application brought by this Corporation or the Agent or the attorney or other person rendering a defense to the Agent, whether or not the application by the Agent, attorney, or other person is opposed by this Corporation.

Section 11.6. Limitations. No indemnification or advance shall be made under this Article XI, except as provided in Sections 11.2 or 11.4.2, in any circumstances when it appears:

11.6.1. That the indemnification or advance would be inconsistent with a provision of the Articles of Incorporation, as amended, or an agreement in effect at the time of the accrual of the alleged cause of action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

11.6.2. That the indemnification would be inconsistent with any condition expressly imposed by a court in approving a settlement.

Section 11.7. Advance of Expenses. Expenses incurred in defending any proceeding may be advanced by this Corporation before the final disposition of the proceeding on receipt of an undertaking by or on behalf of the Agent to repay the amount of the advance unless it is determined ultimately that the Agent is entitled to be indemnified as authorized in this Article XI.

Section 11.8. Contractual Rights of Nondirectors and Nonofficers. Nothing contained in this Article XI shall affect any right to indemnification to which persons other than directors and officers of this Corporation, or any subsidiary hereof, may be entitled by contract or otherwise.

Section 11.9. Insurance. The Board of Directors may adopt a resolution authorizing the purchase and maintenance of insurance on behalf of any Agent of the Corporation, as defined in this

Article XI, against any liability asserted against or incurred by any Agent in such capacity or arising out of the Agent's status as such, whether or not this Corporation would have the power to indemnify the Agent against the liability under the provisions of this Article XI.

ARTICLE 12.
CORPORATE RECORDS, REPORTS AND SEAL

- Section 12.1. Minute Book - Maintenance and Inspection. The Corporation shall keep a minute book in written form at its principal office which shall contain a record of all actions by the Board or any committee including the time, date and place of each meeting; whether a meeting is regular or special and, if special, how called; the manner of giving notice of each meeting and a copy thereof; the names of those present at each meeting of the Board or the executive committee thereof; the minutes of all meetings; any written waivers of notice, consents to the holding of a meeting or approvals of the minutes thereof; all written consents for action without a meeting; all protests concerning lack of notice; and formal dissents from Board actions.
- Section 12.2. Books and Records of Account - Maintenance and Inspection. The Corporation shall keep adequate and correct books and records of account to be kept at its principal office. "Correct books and records" includes, but is not necessarily limited to: accounts of properties and transactions, and accounts of its assets, liabilities, receipts, disbursements, gains, and losses.
- Section 12.3. Articles of Incorporation and Bylaws - Maintenance and Inspection. The Corporation shall keep at its principal office, the original or a copy of its Articles of Incorporation and Bylaws as amended to date.
- Section 12.4. Annual Report; Statement of Certain Transactions. The Board shall cause an annual report to be sent to each director within one hundred and twenty (120) days after the close of the Corporation's fiscal year containing the following information:
- 12.4.1. The assets and liabilities of the Corporation as of the end of the fiscal year;
 - 12.4.2. The principal changes in assets and liabilities, including trust funds, during the fiscal year;
 - 12.4.3. The revenue or receipts of the Corporation, both unrestricted and restricted to particular purposes, for the fiscal year;
 - 12.4.4. The expenses or disbursements of the Corporation for both general and restricted purposes during the fiscal year;
 - 12.4.5. A statement of any transaction (1) to which the Corporation, its parent, or its subsidiary was a party, (2) which involved more than \$50,000 or which was one of a number of such transactions with the same person involving, in the aggregate, more than \$50,000, and (3) in which either of the following interested persons had a direct or indirect material financial interest (a mere common directorship is not a financial interest):
 - 12.4.5.1. Any directors or officer of the Corporation, its parent, or its subsidiary;
 - 12.4.5.2. Any holder of more than 10 percent of the voting power of the Corporation, its parent, or its subsidiary.

The statement shall include: (1) a brief description of the transaction; (2) the names of interested persons involved; (3) their relationship to the Corporation; (4) the nature of their interest in the transaction, and; (5) when practicable, the amount of that interest, provided that, in the case of a partnership in which such person is a partner, only the interest of the partnership need be stated.

12.4.6 A brief description of the amounts and circumstances of any loans, guaranties, indemnifications, or advances aggregating more than \$10,000 paid during the fiscal year to any officer or director of the Corporation under Article X of these Bylaws.

Section 12.5 Directors' Rights of Inspection. Every director shall have the absolute right at any reasonable time to inspect the Corporation's books, records, and documents of every kind, physical properties, and the records of each of its subsidiaries. The inspection may be made in person or by the director's agent or attorney. The right of inspection includes the right to copy and make extracts of documents.

Section 12.6 Corporate Seal. The Board of Directors may adopt, use, and at will alter, a corporate seal. Such seal shall be kept at the principal office of the corporation. Failure to affix the seal to corporate instruments, however, shall not affect the validity of any such instrument.

ARTICLE 13 EXECUTION OF INSTRUMENTS, DEPOSITS AND FUNDS

Section 13.1 Execution of Instruments. The Board of Directors, except as otherwise provided in these Bylaws, may by resolution authorize any officer or agent of the Corporation to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances. Unless so authorized, no officer, agent, or employee shall have any power or authority to bind the Corporation by any contract or engagement or to pledge its credit or to render it liable momentarily for any purpose or in any amount.

Section 13.2 Checks and Notes. Except as otherwise specifically determined by resolution of the Board of Directors, or as otherwise required by law, checks, drafts, promissory notes, orders for the payment of money, and other evidence of indebtedness of the Corporation shall be signed by the Chief Financial Officer and countersigned by the President of the Corporation.

Section 13.3 Deposits. All funds of the Corporation shall be deposited from time to time to the credit of the Corporation in such banks, trust companies, or other depositories as the Board of Directors may select.

Section 13.4 Gifts. The Board of Directors may accept on behalf of the Corporation any contribution, gift, bequest, or devise for the charitable or public purposes of this Corporation.

ARTICLE 14 CONSTRUCTION AND DEFINITIONS

Section 14.1 Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the California Nonprofit Corporation Law shall govern the construction of these Bylaws. Without limiting the generality of the above, the masculine gender includes the feminine and neuter, the singular number includes the plural, the plural

number includes the singular, and the term "person" includes both the Corporation and a natural person.

ARTICLE 15
AMENDMENTS

Section 15.1 Amendment by Directors. The Board of Directors may adopt, amend or repeal Bylaws. Such power is subject to the following limitations:

15.1.1 The Board of Directors may not amend Bylaw provisions fixing the authorized number of directors or establishing procedures for the nomination or appointment of directors other than by unanimous vote of all directors.

15.1.2 This Section may be amended only by the unanimous vote of all directors.

APPENDIX C3

BIOGRAPHIES OF WILLOW EDUCATION (WE) BOARD OF DIRECTORS

MEHMET SEN, P H . D .

Email: msen@balsoy.com

EXPERIENCE

- **eBay Inc**, San Jose, CA May 2010-
Member of Technical Staff
- **GT Nexus Inc**, Oakland, CA July 2007 – May 2010
Senior Software Engineer
- **Electronic Tools Company**, Sonoma, CA Apr 2003 – July 2007
Senior Software Architect
- **Wiley College**, TX Sep 2002-Mar-2003
Assistant Professor
- **Independent Consultant**, Campbell, CA Sep 2001-Sep 2002
Adjunct Professor, Santa Clara University, CA
Principles of Programming Languages
- **Anabas Inc.**, San Jose, CA Dec 2000-Aug 2001
Member of Technical Team, J2EE architect and lead.
- **NPAC** (Northeast Parallel Architecture Center), Syracuse, NY Sep 1996-Dec 2000
Researcher (Research Assistant)
- **Bruningerland GmbH**, Stuttgart, Germany. Summer 1991
Software Engineer, Summer 1991 Summer Internship
- **Ege University**, Computer Science Department, Izmir, Turkey Summer 1990
Software Engineer, Summer 1990 Summer Internship

EDUCATION

- 1997 – 2000 Ph.D., Thesis: *Distributed Open Asynchronous Information Access Environment*, Computer and Information Science, Syracuse University, NY. Cumulative GPA: 3.9/4.0
- 1995 -1996, M.S., Computer and Information Science, Syracuse University, NY.
- 1993-1994 Informatik, M.S. student, Informatik, Stuttgart Universitat, Germany.
- 1992 –1993 Intensive German Language Courses, Stuttgart, Germany
- 1987–1992 B.S., Computer Engineering and Information Sciences, Bilkent University, Turkey.

ACCOMPLISHMENTS

- Worked on several teams and projects; mostly at eBay Daily Deals, and Global Header. Provided backend database support for maintaining and scheduling the deals. Architected/developed a service oriented multi-design platform for the eBay's global header as part of the new technology stack initiation. The header is served through the cloud and visible in every eBay page including US and international sites with a continuous high demand. The header design is highly customizable with time based variations and can host multiple designs at once. At the same time, it is subject to frequent modifications with the demand of multiple teams. Customizations can be done exclusively out of the code and their maintenance can be either file based or through MongoDB with a Web UI.
eBay Inc.
- Developed and supported a wide range of products and features in a trade and logistics portal for supply chain visibility within a huge source code. The worked domain includes supplier enablement, large scale orders and shipments in the ocean, container/shipment tracking through events, and payments. The portal serves a wide user community from customers, suppliers, banks, carriers, freight forwarders, and other third party logistic companies; about 80,000 users from 20,000 organizations. High volumes of integration and transaction data (XML, EDI) from different parties are processed in real time. J2EE and MS SQL Server stored procs are extensively used.
GT Nexus Inc.
- Architected and managed development of several integrated E-Government Information Systems using J2EE and Web Services technologies. Prepared user requirements, functional requirements, and technical specification documents. Prepared demos and gave presentations in many occasions to
E-Tools Company

large groups of government representatives. The projects suite is called SmartGov and includes the following:

- BudgetMaster, a government budget preparation and execution system: Analyzed and documented requirements, designed software, architected software, and managed the development.
- PublicBooks, a government accounting system: Performed all stages including development itself.
- PIPMaster, a development projects management system as an extension to BudgetMaster: Performed all stages including development itself.
- TaxMaster, a government tax collection system: Analyzed and documented high-level requirements, monitored design of software, architected software, and supervised the development.
- IdMaster, a citizen identification and tax id management system: Analyzed requirements, designed software, architected software, and monitored the development.
- DMVMaster, a driver license and vehicle information management system: Supervised all stages (with same software architecture.)
- Integration of projects: Architected and developed the integration of several projects using Web Services such as secure communication of PublicBooks, BudgetMaster, and the central bank.
- Supervision, a user management and access control management system that is pluggable to all SmartGov projects: Performed all stages including development itself.
- GateKeeper, airport entry control and visa issue system. An independent project inspired from the above architecture under the management of other engineers.
- SpyMaster, a information management system for intelligence: An independent project inspired from the above architecture under the management of other engineers.
- Managed or supervised a mix of engineers at different levels. Most of the engineers were in entry level and grouped. Groups have a group leader and a mentor who is a senior engineer.
- Implemented architecture-related libraries and utilities to speed-up the development process for the above projects.

Anabas Inc.

- Architected a J2EE Web LMS, Learning Management System, including XML schemas, developed middle and back tiers, helped for front tier designs. Implemented middle tier using Java objects, which represent the XML Schema objects at the backend. This project is a lightweight version, which works on file system without any other database implementation.
- Prepared quick (a week) prototypes for a J2EE LMS, and similar systems.
- Converted below system storage into XML document system by switching middle tier interface implementations from EJB to XML-Java object models without any touch to JSP site.
- Architected and leaded development of a J2EE server side online-conference management system, supports a windows application, which provides online conferencing. The management system is implemented using Oracle database, Weblogic EJB pool and JSP pages, and various other supportive technologies like JavaScript, Apache server & utilities, etc.

Dissertation and others

- Architected and developed course management system, an Internet open asynchronous access environment architecture over back-tier student-course databases; a multi-tier architecture implemented by using HTML, JavaScript, SSL-Server, Servlets, Java, XML, XSL, DOM, JDBC, SQL, database servers, and limited CGI-Perl.
- Designed an assessment system for distance education based on web usage mining and above-mentioned system. Surveyed data mining fundamentals.
- Designed a fuzzy CLIPS language layered on present CLIPS in 1997.
- Designed various graphical user interfaces using primitive graphics packages of old days.
- Architected and developed a video clips archive server on WWW simulating back tier Unix directories.
- Architected and developed an interactive periodic table of elements on the web, using recent technologies in 96, which includes HTML, JavaScript, CGI, Perl, and VRML. The element information is showed as on-the-fly web pages and 3D VRML view.
- Other chosen projects: Designed and implemented a heuristic algorithm for optimal placement of 2D objects; implemented Fortune's algorithm in Computational Geometry including comparisons of

various data structures like red-black trees. Developed computer architecture and operating system simulators like Tomasulo Scheduling Algorithm for DLX RISC architecture, various OS paging schemes, etc. Developed a small language interpreter in Structured Prog. and Formal Methods. Wrote simulators of a mathematical model for the grid-bracing problem.

- Worked in various projects; an inscriptor based expert system shell, PSPICE simulations for electric labs.
- **Other:** Helped staff to prepare various web technology classes, like writing small programs, or preparing slides on specific topics, etc. Gave volunteer courses like C++, Pascal, Math.

HONORS AND AWARDS

- Graduate **Research Assistant**, Sept. 1996-May 2000, Syracuse University, NY.
- Graduate **Students' Representative** in Tenure and Promotions Committee in 1999.
- Graduate **Students' Representative** in Academic Affairs Committee in 1998.
- **Tuition award** from Dean's Office in spring 1998, Syracuse University.
- **Fellowship** from the Turkish Ministry of National Education to cover all the expenses during graduate study abroad.
- **Full scholarship** from the best engineering university of Turkey, Bilkent University.
- **Ranked 144th, 1%**, in the National University Entrance examination in a pool of 1,000,000.
- **Ranked 3rd in nationwide Mathematics Competition** in Turkey.
- **Participated** pre-camps of the National Team for the International **Mathematics Olympiads**.
- Member, ACM

SKILLS

- **Programming Languages:** Java, Perl, C/C++, Pascal, COBOL, CLIPS, Lisp, Prolog, PL/SQL, MS SQL, dBaseIV, and Intel x86 Assembler, Rexx, Yacc, Lex, OOP, OOA, OOD.
- **Internet Based Languages and Technologies:** J2EE, HTML, DHTML, Swing, JavaScript, JSP, Struts, JSF, JSTL, EJB, Servlets, JDBC, RMI, JNDI, DOM, SAX, XML, XSL, XSLT, DTD, XML Schemas, (CGI-HTTP Programming).
- **Component technologies:** EJB, JavaBeans, familiar with CORBA Component Model.
- **Distributed Objects:** RMI, familiar with CORBA, COM/DCOM, RDF.
- **Network Programming:** Socket Programming in Java.
- **Parallel Programming:** Strong experience on CM-5, iPSC/860, SP2, nCube Parallel Architectures.
- **Query Languages:** SQL, PL/SQL, MS SQL, WOW, ORA-PERL, JDBC/ODBC.
- **Databases:** dBaseIV, Oracle and mSQL, programming and system administration experience.
- **Platforms:** Sun Unix, Solaris, X-Window, SGI, VM/XA SP, DOS, and Windows 95-98-2000/NT. (Short term NT system administration experience)
- **Some Application Platforms:** Struts Studio, Eclipse, JDeveloper, Webgain Studio, Visual Café, Bea Weblogic, XML Spy, Castor, Apache Server, Zeus Server, Tomcat Server, ERwin data modeler, MS Visual Source Safe, CVS, Dreamweaver, FrontPage, PageMaker.
- **Some Interest Areas:** XML based information systems, Web Services; WSDL, UDDI, SOAP, Meta Computing, Business Integrations. Data Mining; Web Mining, OLAP.
- **Security:** Security modeling in systems, basic concepts: SSL, PKI, Kerberos, etc.
- **Experienced open source projects:** Struts, Axis, Displaytag, POI, Log4J, Ant, surveying reporting projects.

PERSONAL STRENGTHS

- Self Motivated
- Carry responsibility to finish projects before the deadline (always)
- Strong imagination and problem solving ability in research and development
- Ability to integrate different technologies and tools on solving a particular problem or designing architectures.
- Ability to work both as an architect and a developer in the projects
- Ability to work individually, as a team member and as a team-leader
- Sound computer science skills. Strong sequential and parallel programming skills.

Ayhan Mutlu

CONTACT INFORMATION

Extreme DA Corporation
3211 Scott Blvd. Suite 204
Santa Clara, CA 95054-3009

Voice: (650) 796-9589
Fax: (408) 588-4682
E-mail: ayhan@extreme-da.com

EXPERIENCE

Extreme DA Corporation, Santa Clara, California

Director of Product Engineering

2010-present

- Directing a team of talented engineers on future enhancements and product offerings in statistical timing, circuit analysis and optimization.

Senior Member of Technical Staff

2007-2010

- Technical Marketing.
 - ◊ Application notes and white papers on statistical timing, parametric on chip variation (OCV) analysis, statistical extraction.
 - ◊ Product Requirement Documents (PRDs) for future technology enhancements on:
 - Timing Analysis.
 - RC Extraction.
 - Circuit level statistical modeling.
- Foundry Interface. Working with leading foundries on:
 - ◊ Statistical transistor models for 45nm and below processes.
 - ◊ Interconnect variations and their implications on extraction and timing analyses.
 - ◊ On Chip Variation (OCV) extraction methodologies.
- Statistical Analysis Enhancements.
 - ◊ Cell modeling and characterization for Statistical Static Timing Analysis (SSTA).
 - ◊ Statistical Leakage analysis.
 - ◊ Standard cell, memory and analog circuit optimization in the presence of process variations.
 - ◊ Variation-aware RC extraction methodologies.

Member of Technical Staff

2005-2007

- Incorporation of process variation effects into SSTA tool.
 - ◊ Interaction with semiconductor foundries on back-end and front-end process variation extraction for timing analysis.
 - ◊ Design of test structures targeting specific process variations such as L , V_{th} , T etc.
 - ◊ Data post-processing methodologies and algorithms.
 - ◊ Statistical device modeling and analysis.

Intel Corporation, Santa Clara, California

Senior Technology CAD Engineer

1999-2005

- Development and implementation of statistical reliability analysis tools and flows.
 - ◊ Statistical electromigration analysis.
 - ◊ Statistical bias temperature stress analysis.
 - ◊ Gate oxide coupling analysis. - Effects of line to line capacitive coupling on gate oxide reliability.
 - ◊ Soft breakdown and its effects on cache V_{ccmin} .
 - ◊ Frequency degradation analysis on critical circuits.
- Oracle database related developments.
 - ◊ Development of relational database infrastructure to store and use *design-related*, *usage-related*, and *material-related* data in order to assess the overall reliability of a product.
 - ◊ Client user tools to interact with the back-end Oracle DB using PL/SQL procedures at Visual Studio environment.
- Design For Manufacturability

- ◊ Single via Detection flow and analysis.
- ◊ Fuse detection flow and analysis.
- ◊ Analysis of process variation effects on critical path degradation.
- ◊ Analysis of temperature variation on interconnect and device reliability using temperature maps obtained from an IREM (Infra-Red Emission Microscope).
- ◊ Propagation of variance for correlated random variables for intra-die timing variations.
- ◊ Development of design of experiments type of analysis in the gate characterization flow to account for process variations.

Santa Clara University, Santa Clara, California

Adjunct Faculty

2003-Present

- EE-391 : *Process and Device Simulation with Technology Computer Aided Design (TCAD)*
 - ◊ Review of semiconductor technology fundamentals.
 - ◊ Introduction to numerical simulation and TCAD, 2D process and device simulation, CMOS process flow and device design, device characterization and parameter extraction, circuit simulation.
 - ◊ TCAD tools and methods as a design aid for visualizing physical device quantities that influence device processing parameters and circuit performance.
 - ◊ Introduction to virtual IC factory concept, integration of process, device and circuit simulation tools. The concept of process variation, and statistical analysis.
- EE-390 : *Semiconductor Device Technology Reliability*
 - ◊ Reliability challenges in device design, fabrication technology, and test methodology.
 - ◊ Device reliability issues such as latch-up, hot carrier injection, oxide breakdown, electrostatic discharge, etc.
 - ◊ Interconnect reliability issues, such as electromigration, via delamination, etc.
 - ◊ IC yield models and yield enhancement techniques.
 - ◊ Engineering statistics.

California Institute of Nanotechnology, San Jose, CA

Professional Training Instructor

2008-2009

- Nanotechnology Design and Modeling.

Advanced Builder Energy Technologies, Meridian, Idaho

Technical Consultant

2003-2004

- Development and testing of ABET-2201 power conditioners for residential power savings.

EDUCATION

Santa Clara University, Santa Clara, California

Doctor of Philosophy, Electrical Engineering

2000-2004

- Dissertation Title: "Statistical Analysis and Optimization of Process Variation Effects on Circuit Operation"
- Research Interests
 - ◊ Intra-, Inter-Die Process Variations and their effect on circuits.
 - ◊ Environmental Variations (temperature, voltage, etc.).
 - ◊ Statistical analysis, modeling and optimization.
 - ◊ Novel low-leakage device structures for deep sub-micron designs.
 - ◊ Novel structures for Field Emission Displays.

Clemson University, Clemson, South Carolina

Master of Science, Electrical Engineering

1996-1998

- Thesis Topic: "Steady State Effects of Series Compensation in Power Systems"
 - ◊ Real time analysis of flexible AC transmission systems (FACTS).
 - ◊ New methodologies on fast resonance investigation.

Middle East Technical University, Ankara, Turkey

Bachelor of Science, Electrical Engineering

1991-1996

RECENT
PUBLICATIONS

- S. Idgunji, A. Mutlu, "Circuit Analysis and Optimization under Manufacturing Variations and Impact on Dynamic Voltage Scaled Systems," *IEEE Design Automation Conference*, June 2010.
- A. Mutlu, K. J. Le, Ruben Molina, M. Celik, "A Parametric Approach for Handling Local Variation Effects in Timing Analysis," *IEEE Design Automation Conference*, July 2009.
- A. Mutlu, K. J. Le, M. Celik, "Parametric Analysis to Determine Accurate Interconnect Extraction Corners for Design Performance," *IEEE International Symposium on Quality Electronic Design*, March 2009.
- A. Mutlu, K. J. Le, M. Celik, D. Tsien, G. Shyu, and L. C. Yeh, "An Exploratory Study on Statistical Timing Analysis and Parametric Yield Optimization," *IEEE International Symposium on Quality Electronic Design*, March 2007.
- A. A. Mutlu, C. Kwong, A. Mukherjee, and M. Rahman, "Statistical Circuit Performance Variability Minimization under Manufacturing Variations," *Proc. of IEEE International Conference on Circuits and Systems*, pp. 3025-3028, May 2006.
- A. A. Mutlu, and M. Rahman, "Statistical Methods for the Estimation of Process Variation Effects on Circuit Operation," to appear in *IEEE Transactions on Electronics Packaging and Manufacturing*, Volume 28, Issue 4, pp. 364 - 375, Oct. 2005.
- I. Pesic, A. A. Mutlu, N. Gunther, M. Rahman, J. Schulze, W. Hänsch, I. Eisele, "Single-electron-transistor behavior in deep sub-0.1 μm planar-doped-barrier FETs," *Proc. of Device Research Conference*, Vol. 1, pp. 93-94, June 2004.
- N. G. Gunther, A. A. Mutlu, M. Rahman, "Quantum-Mechanically Corrected Variational Principle for Metal-Oxide-Semiconductor Devices, Leading to a Deep Sub-0.1 Micron Capacitor Model," *Journal of Applied Physics*, Vol. 95, Issue 4, pp. 2063-2072, February 2004.
- I. Pesic, N. Gunther, A. A. Mutlu, M. Rahman, "Modeling C-V characteristics of deep sub - 0.1 micron mesoscale MOS devices," *Proc. of IEEE International Semiconductor Device Research Symp.*, pp. 140, Dec. 2003.
- N. Gunther, A. A. Mutlu, M. Rahman, "Fringe field and quantum mechanical effects on capacitance characteristics of sub-0.1 micron MOS devices," *Proc. of Device Research Conference*, Vol. 1, pp. 53, June 2003.
- A. A. Mutlu, N. G. Gunther, and M. Rahman, "Concurrent optimization of process dependent variations in different circuit performance measures," *Proc. of IEEE International Conference on Circuits and Systems*, Vol. 4, pp. 692-695, May 2003.
- A. A. Mutlu, and P. Aminzadeh, "A method to comprehend the impact of interconnect coupling effects on gate oxide reliability," *Proc. of IEEE International Reliability Physics Symposium*, pp. 570, April 2003.

A. A. Mutlu, N. G. Gunther, and M. Rahman, "Analysis of Quantum Mechanical (QM) Charge Redistribution Effects in MOSFETs on Circuit Performance," *Proc. IEEE International Conference on Semiconductor Electronics*, pp. 287-291, Dec. 2002.

A. A. Mutlu, N. G. Gunther, and M. Rahman, "Analysis of Two-dimensional Effects on Subthreshold Current in Submicron MOS Transistors," *Solid State Electronics*, Vol. 46, Issue 8, pp. 1133-1137, August 2002.

N. G. Gunther, A. A. Mutlu, and M. Rahman, "A novel variational approach for modeling sub-0.1 micron MOS devices including Quantum Mechanical interface charge confinement effects," *Proc. of Device Research Conference*, pp. 59, June 2002.

N. G. Gunther, A. A. Mutlu, and M. Rahman, "A simple variational technique for estimating quantum mechanical charge redistribution effects in deep sub-micron MOS devices," *Proc. of IEEE International Semiconductor Device Research Symp.*, pp. 94-97, Dec. 2001.

PANELS/TALKS

June 2011, Invited Talk, "Essentials of Timing Sign-off," *Exhibitor Forum, IEEE Design Automation Conference*, San Diego, CA.

January 2007, Panelist, "How to Hit a Moving Target: Or, How to Design to a Process When the Process Won't Stand Still," *DesignCon*, Santa Clara, CA.

March 2007, Panelist, "Managing Variability," *International Symposium on Quality Electronic Design*, San Jose, CA.

April 2007, Invited Talk, "Statistical Modeling and Design Flows," *10th OpenAccess⁺ Conference*, Santa Clara, CA.

September 2007, Panelist, "Statistical or Smarter Deterministic Designs?" *The Computer-Aided Network Design (CANDE) Workshop*, The Queen Mary, Long Beach, CA.

June 2007, Tutorial Lecture, "Timing Closure: Requirements for Variation Aware Design," *Hands-On Tutorials, Design Automation Conference*, San Diego, CA.

March 2008, Panelist, "Statistical Design - Solutions Searching for Problems?" *The International Symposium on Quality Electronic Design*, San Jose, CA.

COMPUTER SKILLS

- Languages: C++, Perl, Tcl, Visual Basic, Oracle PL/SQL, some use of Unix shell scripts.
- Statistical Packages: Jump, Minitab.
- Applications: Static/Statistical Timing Analysis and Extraction tools, Synopsys TCAD Suite, Silvaco TCAD Suite, HSPICE, Transistor model parameter extraction tools, Matlab, Intel-specific reliability and timing flows, L^AT_EX, common Windows database, spreadsheet, and presentation software.
- Operating Systems: Unix/Linux, Windows.

MEMBERSHIPS

IEEE Member.

Sigma-Xi Associate Member.

Technical Steering Committee Voting Member, Silicon Integration Initiative (Si2).

Deniz Dogruer

Professional Experience

Curriculum Writer, Nov 2009 – present

Science is Elementary, Bay Area, CA, United States

- Write lesson plans with hands-on science experiments for elementary school students.
- Science is Elementary is focused on inspiring a passion for science in the citizens of tomorrow by increasing knowledge and interest in science at the elementary school level.
- Volunteer Position

Owner, creator, Nov 2008 – present

DecorativeLabels, Sunnyvale, CA, United States

- Maintain online shop, www.decorativelabels.etsy.com
- Discuss custom orders with clients, complete to specifications, package and ship orders

Graduate Research/Teaching Assistant, Jan 2005 – Dec 2006

University of Nevada, Reno - Mechanical Engineering Dept., Reno, NV, United States

- Development of a hydrodynamic model for the Segmented Ionic Polymer Metal Composite (IPMC) for underwater applications.
- Investigated the potential use of IPMCs for energy harvesting applications.
- Teaching Assistant for MECH 241: Statics. Responsible for grading homework and holding office hours to answer questions.

Intern, Jul 2005 – Jul 2005

NASA Langley Research Center, Langley, VA, United States

- One month summer internship with Dr. Su at NASA Research Center – Langley

Data Analyzer, Curriculum Writer, Oct 2003 – Dec 2004

University of Nevada, Reno - Raggio Research Center for Science, Technology, Engineering and Mathematics (STEM) Education, Reno, NV, United States

- Input and Analyze Data from the Young Scientists' Lab (YSL). Comparing pre and post test results of students who attended.
- Help develop and write curriculum for YSL.
- YSL is a grant funded program aimed at bringing elementary school students (grades 3-5) to the university campus to inspire a love for science, technology, engineering and mathematics.

Education

Master of Science - Mechanical Engineering, December 2006

University of Nevada, Reno, NV, United States

- Thesis: The Development of a Hydrodynamic Model for the Segmented Ionic Polymer Metal Composite (IPMC) for Underwater Applications and The Potential Use of IPMCs for Energy Harvesting.
- Published and presented several papers regarding the use of IPMCs in underwater applications.
- GPA: 4.0/4.0

Bachelor of Science in Mechanical Engineering minoring in Mathematics

University of Nevada, Reno, NV, United States

- GPA: 3.797/4.0

References

References are available on request.

Sefa Isik (Treasurer)

Mr. Isik has spent most of his Engineering carrier as project engineer and project manager designing and managing industrial scale engineering systems. His primary responsibilities are designing the system per applicable code requirements, meeting client expectations, meeting budget and time requirements. Sefa Isik has started up his own mechanical engineering consulting company and has been successfully serving Monterey Bay, CA and Yuma AZ areas. He holds BS and MS degrees in Mechanical Engineering and is licensed Professional Engineer in state of California.

Throughout his college education Mr. Isik volunteered in developing and providing tutoring both in individual and group levels and developed educational materials, problem solution kits to provide assistance in understanding complex issues.

Mr. Isik is married and has three children.

Zeynep (Ozkan) ARACI

Address:

712 Sutter Avenue,
Palo Alto, CA, 94303

email: araci.zeynep@gmail.com

SUMMARY:

- Proficient in various electrochemical techniques such as Cyclic Voltammetry (CV), Potentiometry, Impedance Spectroscopy.
- Expertise in Spectroscopy and several surface analysis techniques such as Electroreflectance (ER) spectroscopy, Attenuated Total Reflectance (ATR) Spectroscopy, Atomic Force Microscopy (AFM), Ellipsometry.
- Skillful in instrumentation, design and construction of spectroscopic and electrochemical research instruments.
- Experienced in using cleanroom environment and cleanroom procedures specifically microfluidic circuit design and microfluidic fabrication process.
- Skillful in usage of AutoCAD program, mold and chip making, soft lithography method for microfluidic devices and testing of these devices.
- Experienced in using Scanning Electron Microscopy, UPS and XPS, Contact Angle Measurements.
- Expertise in spectroelectrochemical characterization of interface between electrode and various thin films (e.g. proteins, polymers) and nanoscale materials (e.g. nanoparticles) that are crucial for biosensors and organic electronic devices such as organic photovoltaics (OPVs).
- Excellent project management, organizational and problem solving skills.
- Demonstrated ability to lead and work in teams.

EDUCATION:

- Postdoctoral Fellow and Scientist at Medical Center at Stanford University (September 2011 – present)
- Postdoctoral Fellow in *Chemistry and Biochemistry* (from August 2010 – June 2011)
University of Arizona, AZ
- *PhD in Chemistry and Biochemistry* (July 2010)
University of Arizona, AZ
- *M.Sc. in Chemistry* (April 2007)
University of Arizona, AZ
- Master of Science Thesis Title: "Potential-Modulated Attenuated Total Reflectance Spectroscopy on Adsorbed Films on Indium Tin Oxide."
- *M.A. in Chemistry Education* (January 2003)
Izmir Dokuz Eylul University, Turkey.
- *B.S in Chemistry* (June 2001)
Ege University, Izmir, Turkey.
- Senior Project Title: "The Applications of Polymers in Pharmaceutical Fields."

EXPERIENCE AND PROFESSIONAL DEVELOPMENT:

- **Postdoctoral Scientist at Biomaterials and Advanced Drug Delivery Laboratory at Stanford School of Medicine**
 1. Designed and analyzed biomaterials, developing drug delivery devices and formulations,
 2. Developed smart materials for biomedical applications.

- **Researcher at the Microfluidics Summer Workshop (September 2011) Stanford Microfluidics Foundry**
 1. Learned how to design and fabricate microfluidic devices, setting up the hardware (e.g. pressure controllers), producing channels, valves and features on PDMS elastomeric materials using soft lithography method.
 2. Succeeded in making molds and chips and testing the microdevices.
 3. Learned details related to AutoCAD design rules and tricks to design microfluidic circuits.
- **Postdoctoral Fellow (August 2010 – June 2011) U of A, Arizona**
 1. Conducted research on surface characterization/modification of NiO substrates and its possible application to solar energy conversion systems.
 2. Constructed, tested and optimized the waveguide-based instrumentation with multiple components for spectroelectrochemical measurements.
- **Research Assistant (January 2005 – July 2010) U of A, Arizona**
 1. Validated a novel waveguide-based electroreflectance technique, potential-modulated attenuated total reflectance (PM-ATR) spectroscopy as a suitable method for determination of charge transfer rates between electrode and molecular film.
 2. Characterized newly synthesized organic molecules to determine their various properties such as stability, redox activity, compatibility, thickness, surface roughness and kinetic properties on surfaces using spectroscopic, electrochemical and surface analytical techniques.
 3. Developed a novel approach to correlate protein structure (cytochrome c) and its redox activity in an adsorbed thin film on electrode surface which is crucial for efficient charge transfer in bioelectronic devices.
 4. Applied above novel method to well-known conducting polymer film poly(3,4-ethylene-dioxythiophene) / poly(styrene-4-sulfonate), or PEDOT/PSS (that are facilitate hole injection processes in organic electronics) and thus was able to report the first measurement of interfacial charge transfer kinetics for PEDOT/PSS on indium tin oxide (ITO).
 5. Succeeded in characterization of reversible electron injection into submonolayer coverages of surface tethered CdSe nanocrystals and optical determination of onset potentials for electron injection which provides estimates for the conduction band edge (E_{CB}) using frequency-domain, planar waveguide spectroelectrochemistry.
- **Teaching Assistant (August 2003 – December 2004) U of A, Arizona**
 1. Taught and supervised general undergraduate chemistry labs. Additional teaching activities included: grading, tutoring and proctoring.
 2. Mentored high school, undergraduate and junior graduate students for different chemistry projects in the research lab and supervised their organization of the project presentations.

ADDITIONAL SKILLS:

- Computer skills include extensive use of End Note, Origin, AutoCAD and LabView.
- Multilingual with fluency in English and Turkish.

HONORS and AWARDS:

- Selected and Awarded as one of the winners in the Center for Interface Science: Solar Electric Materials (CIS:SEM) Innovative Research Seed Award (CIRSA) (formerly the "Pemberton Pairs") (2010)
- Selected and Awarded as a '2008-2009 recipient of Merck Research Laboratories Fellowship in Analytical/Physical Chemistry' (2008)
- Awarded 'Outstanding Teaching Assistant' prize by University of Arizona (2007)
- Awarded 3rd place prize by Science and Technology Center (STC) to present a poster titled "Spectroelectrochemistry of organically modified ITO electrodes. Electron Transfer rate determination for a model system: Prussian Blue." in CMDITR Annual Retreat (2006)

- Awarded prizes by TUBITAK (Science and Technology Research Center of Turkey) and EBILTEM (Ege University's Science and Technology Center) for publication paper titled "Electrochemical genosensor for the detection of interaction between methylene blue and DNA" (Electrochemistry Communications, 2002)

PUBLICATIONS and SELECTED PRESENTATIONS:

- Araci, Z.O.; Saavedra, S.S. Spectroelectrochemical characterization of charge injection processes in molecular materials for electronic device application: A conductive polymer poly(3,4-ethylenedioxythiophene)/poly(styrenesulfonate) (PEDOT/PSS), **in preparation**.
- Araci, Z.O.; Shallcross, C.R.; Armstrong, N.R.; Saavedra, S.S. Potential-Modulated Attenuated Total Reflectance Characterization of Charge Injection Processes in Monolayer-Tethered CdSe Nanocrystals, *J. Phys. Chem. Lett.*, **2010**, 1 (12), pp 1900–1905.
- Kim, B.Y.; Shim, I.B.; Araci, Z.O.; Saavedra, S. S.; Monti, O.L.A.; Armstrong, N. R.; Sahoo, R.; Srivastava, D.N.; Pyun, J. Synthesis and Colloidal Polymerization of Ferromagnetic Au-Co Nanoparticles into Au-Co₃O₄ Nanowires, *J. Am. Chem. Soc.*, **2010**, 132, 3234.
- Araci, Z.O.; Runge, A.F.; Doherty, W. J. III; Saavedra, S.S. Correlating Molecular Orientation Distributions and Electrochemical Kinetics in Subpopulations of an Immobilized Protein Film, *J. Am. Chem. Soc.* **2008**, 130, 1572-1573.
- Araci, Z.O.; Runge, A.F.; Doherty, W.J. III, Saavedra, S.S. Potential-Modulated Attenuated Total Reflectance Spectroscopy of Prussian Blue Films on ITO, *Israel Journal of Chemistry* **2006**, 46, 249 – 255.
- Kerman, K.; Ozkan, D.; Kara, P.; Karadeniz, H.; Ozkan, Z.; Erdem, A.; Jelen, F.; Ozsoz, M. Electrochemical Detection of Specific DNA Sequences from PCR Amplicons on carbon and mercury electrodes using Meldola's blue as an intercalator, *Turkish J. of Chem.* **2004**, 28, 523.
- Kara, P.; Kerman, K.; Ozkan, D.; Meric, B.; Erdem, A.; Ozkan, Z.; Ozsoz, M. Electrochemical genosensor for the detection of interaction between methylene blue and DNA, *Electrochem. Commun.* **2002**, 4, 705-709.
- Oral presentation at the Interface to face Research Conference for the Center for Interface Science: Solar Electric Materials (CIS:SEM), Tucson, AZ (2010)
- Poster presentation at the Arizona Research Institute for Solar Energy (AzRISE) – First Year Poster Session, University of Arizona. (December 2008)

REFERENCES:

Prof. S. Scott Saavedra, Department of Chemistry and Biochemistry, U of A
Phone: (520) 621-9761
Email: saavedra@u.arizona.edu

Prof. Neal R. Armstrong, Department of Chemistry and Biochemistry, U of A
Phone: (520) 621-8242
Email: nra@u.arizona.edu

Prof. Jeanne E. Pemberton, Department of Chemistry and Biochemistry, U of A
Phone: (520) 621-8245
Email: pembertn@u.arizona.edu

Dr. Jayakumar Rajadas, Director of Biomaterials and Advanced Drug Delivery Laboratory at Stanford University.
Phone: (650) 724-7710
Email: jayraja@stanford.edu

APPENDIX D1

PROPOSED BUDGET AND CASH FLOW

1. BayTech Budget
2. BayTech Cash Flow



Bay Area Technology School

Oper

2013-2014
Planning

2014-2015
Planning

2015-2016
Planning

2016-2017
Planning

2017-2018
Planning

SUMMARY

Total Revenue & Resources	\$ 1,862,771.76	\$ 2,053,989.63	\$ 2,280,571.13	\$ 2,389,707.13	\$ 2,416,028.00
Total Budgeted Expenditures	\$ 1,745,451.32	\$ 1,925,580.67	\$ 2,079,373.10	\$ 2,193,448.65	\$ 2,221,099.20
3% Reserve	\$ 55,883.15	\$ 61,619.69	\$ 68,417.13	\$ 71,691.21	\$ 72,480.84
Carry-over From Previous Year	\$ 33,384.15	\$ 94,821.44	\$ 223,230.40	\$ 356,011.29	\$ 480,578.55
Annual Operating Surplus (Deficit)	\$ 61,437.28	\$ 66,789.27	\$ 132,780.89	\$ 124,567.26	\$ 122,447.96
Percent of Expenses	3.52%	3.47%	6.39%	5.68%	5.51%

REVENUE & RESOURCES DETAIL

Projected Enrollment K-3	0	0	0	0	0
Projected Enrollment 4-6	60	60	60	60	30
Projected Enrollment 7-8	90	120	120	120	120
Projected Enrollment 9-12	105	110	135	150	180
Total Enrollment	255	290	315	330	330
Estimated Average Daily Attendance (ADA)	242	276	299	314	314

REVENUE

STATE REVENUE	\$ 1,496,364.75	\$ 1,650,767.50	\$ 1,853,423.25	\$ 1,946,632.50	\$ 1,967,061.00
OTHER STATE AND FEDERAL REVENUE	\$ 181,407.01	\$ 218,222.13	\$ 242,147.88	\$ 258,074.63	\$ 263,967.00
OTHER REVENUE	\$ 185,000.00	\$ 185,000.00	\$ 185,000.00	\$ 185,000.00	\$ 185,000.00
TOTAL REVENUE	\$ 1,862,771.76	\$ 2,053,989.63	\$ 2,280,571.13	\$ 2,389,707.13	\$ 2,416,028.00

STATE REVENUE

General Block Grant	\$ 1,399,464.75	\$ 1,540,567.50	\$ 1,733,723.25	\$ 1,821,232.50	\$ 1,841,661.00
Categorical Block Grant	\$ 96,900.00	\$ 110,200.00	\$ 119,700.00	\$ 125,400.00	\$ 125,400.00
Sub-total General Purpose & Cat Block Grant Rev	\$ 1,496,364.75	\$ 1,650,767.50	\$ 1,853,423.25	\$ 1,946,632.50	\$ 1,967,061.00
Percent of Revenue / Resources	80.33%	80.37%	81.27%	81.46%	81.42%
Avg. Gen. Purpose and Categorical Block Grant pe	\$ 6,176.94	\$ 5,991.90	\$ 6,193.56	\$ 6,209.35	\$ 6,274.52

OTHER STATE AND FEDERAL REVENUE

NCLB-Title I, II, V	\$ 95,931.00	\$ 109,098.00	\$ 118,503.00	\$ 124,146.00	\$ 124,146.00
Economic Impact Aid	\$ 63,290.66	\$ 79,811.88	\$ 90,309.38	\$ 97,719.38	\$ 101,887.50
National School Lunch Program	\$ -	\$ -	\$ -	\$ -	\$ -
Lunch Fees	\$ -	\$ -	\$ -	\$ -	\$ -
Lottery	\$ 22,185.35	\$ 29,312.25	\$ 33,335.50	\$ 36,209.25	\$ 37,933.50
Special Education	\$ -	\$ -	\$ -	\$ -	\$ -
Sub-total Federal Revenue	\$ 181,407.01	\$ 218,222.13	\$ 242,147.88	\$ 258,074.63	\$ 263,967.00
Percent of Revenue/Resources	9.74%	10.62%	10.62%	10.80%	10.93%

OTHER REVENUE

PCSGP Startup Grant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
State Charter Schools Facilities Incentive Grant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Private Grant Funding (WALTON FAMILY, etc.)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
High Priority School Grant-HPSG	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
After School Education And Safety Grant-ASES	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00
Nell Soto-Parent visit Grant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Philanthropy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Property tax exempt Return	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Start-Up Capital (from previous year)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Charter School Revolving Loan	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
Other	\$ 185,000.00	\$ 185,000.00	\$ 185,000.00	\$ 185,000.00	\$ 185,000.00	\$ 185,000.00
Sub-total other Revenue						
Percent of Revenue/Resources	9.93%	9.01%	8.11%	7.74%	7.66%	

TOTAL REVENUE & RESOURCES

EXPENDITURES

1000 - Total Certificated Salary	\$ 680,329.78	\$ 726,978.36	\$ 809,090.12	\$ 878,451.47	\$ 900,933.97
2000 - Total Classified (Non Certified) Salary	\$ 84,460.00	\$ 108,211.80	\$ 122,385.42	\$ 126,056.99	\$ 129,838.70
3000 - Total Employee Benefits	\$ 206,148.17	\$ 223,434.72	\$ 249,601.55	\$ 265,475.58	\$ 269,059.84
4000 - Total Books and Supplies	\$ 85,728.00	\$ 72,739.00	\$ 79,214.00	\$ 77,944.00	\$ 73,114.00
5000 - Total Services & Other	\$ 688,785.38	\$ 794,216.78	\$ 819,082.01	\$ 845,520.61	\$ 848,152.70
6000 - Total Capital Outlay	\$ -	\$ -	\$ -	\$ -	\$ -
7000 - Other Outgo	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL EXPENDITURES	\$ 1,745,451.32	\$ 1,925,580.67	\$ 2,079,373.10	\$ 2,193,448.65	\$ 2,221,099.20

EXPENDITURES

1000 - Certificated Salary	14	15	16	17	17
Total Certificated FTE's					
1100 - Teachers' Salaries	\$ 492,469.78	\$ 537,239.76	\$ 617,454.13	\$ 684,899.12	\$ 705,446.10
1300 - School Supervisors' and Administrator's Sa	\$ 187,860.00	\$ 189,738.60	\$ 191,635.99	\$ 193,552.35	\$ 195,487.87
1000 - Total Certificated Salary	\$ 680,329.78	\$ 726,978.36	\$ 809,090.12	\$ 878,451.47	\$ 900,933.97
Percent of Revenue/Resources	38.98%	37.75%	38.91%	40.05%	40.56%

2000 - Classified (Non Certified) Salary

Total Classified (Non Certified) FTE	2	2	3	3	3
2300 - Non Certified Supervisors' Administrator's	\$ -	\$ -	\$ -	\$ -	\$ -
2400 - Clerical and Office Salaries	\$ 43,260.00	\$ 44,557.80	\$ 56,821.80	\$ 58,526.46	\$ 60,282.25
2500 - Other Non Certified Salaries	\$ -	\$ -	\$ -	\$ -	\$ -

2600 - Total Part Employees
2000 - Total Classified (Non Certified) Salary
 Percent of Revenue/Resources

\$	41,200.00	\$	63,654.00	\$	65,563.62	\$	67,530.53	\$	69,556.44
\$	84,460.00	\$	108,211.80	\$	122,385.42	\$	126,056.99	\$	129,838.70
	4.84%		5.62%		5.89%		5.75%		5.85%

1000 & 2000 - Total Salaries
 Percent of Total Salaries

\$	764,789.78	\$	835,190.16	\$	931,475.54	\$	1,004,508.46	\$	1,030,772.66
	43.8162%		43.3734%		44.7960%		45.7959%		46.4082%

3000 - Employee Benefits

3100 - State Teacher Retirement System-STRS
 3200 - Public Employee Retirement System-PERS
 3300 - OASDI / Medicare / Alternative
 3400 - Health and Welfare Benefits
 3500 - Unemployment Insurance
 3600 - Worker's Compensation
3000 - Total Employee Benefits
 Percent of Revenue/Resources

\$	56,127.21	\$	59,975.71	\$	66,749.93	\$	72,472.25	\$	74,327.05
\$	9,045.67	\$	11,589.48	\$	13,107.48	\$	13,500.70	\$	13,905.72
\$	16,325.97	\$	18,819.39	\$	21,094.29	\$	22,380.91	\$	22,996.20
\$	104,000.00	\$	110,500.00	\$	123,500.00	\$	130,000.00	\$	130,000.00
\$	9,177.48	\$	10,022.28	\$	11,177.71	\$	12,054.10	\$	12,369.27
\$	11,471.85	\$	12,527.85	\$	13,972.13	\$	15,067.63	\$	15,461.59
\$	206,148.17	\$	223,434.72	\$	249,601.55	\$	265,475.58	\$	269,059.84
	11.81%		11.60%		12.00%		12.10%		12.11%

1000 & 2000 & 3000 - Total Salaries and Benefits
 Percent of Total Salaries and Benefits

\$	970,937.95	\$	1,058,624.88	\$	1,181,077.09	\$	1,269,984.04	\$	1,299,832.50
	55.63%		54.98%		56.80%		57.90%		58.52%

4000 - Books and Supplies

4100 - Approved Textbooks & Curricula Materials
 4200 - Books and Other Reference Materials
 4300 - Materials & Supplies
 4400 - Noncapitalized Equipment
 4700 - Food
4000 - Total Books and Supplies
 Percent of Revenue/Resources

\$	22,260.00	\$	9,000.00	\$	13,750.00	\$	11,450.00	\$	8,000.00
\$	8,125.00	\$	5,000.00	\$	8,125.00	\$	8,125.00	\$	8,125.00
\$	34,118.00	\$	33,089.00	\$	34,914.00	\$	35,644.00	\$	34,264.00
\$	21,225.00	\$	25,650.00	\$	22,425.00	\$	22,725.00	\$	22,725.00
\$	-	\$	-	\$	-	\$	-	\$	-
\$	85,728.00	\$	72,739.00	\$	79,214.00	\$	77,944.00	\$	73,114.00
	4.91%		3.78%		3.81%		3.55%		3.29%

5000 - Services & Other Operating Expenses

5200 - Travel & Conferences
 5300 - Dues & Memberships
 5400 - Insurance (Umbrella liability)
 5500 - Operations & Housekeeping
 5600 - Rentals, Leases, Repairs & NonCap Improv
 5792 - District Fees and Services
 5800 - Professional/Consulting Serv and Operatin
 5900-Communications
5000 - Total Services & Other
 Percent of Revenue/Resources

\$	29,000.00	\$	31,000.00	\$	31,000.00	\$	31,000.00	\$	31,000.00
\$	3,000.00	\$	3,000.00	\$	4,452.00	\$	4,452.00	\$	4,452.00
\$	34,425.00	\$	39,150.00	\$	42,525.00	\$	44,550.00	\$	44,550.00
\$	83,940.00	\$	89,940.00	\$	89,940.00	\$	89,940.00	\$	89,940.00
\$	90,000.00	\$	93,800.00	\$	105,000.00	\$	105,000.00	\$	105,000.00
\$	18,627.72	\$	16,507.68	\$	22,805.71	\$	23,897.07	\$	24,160.28
\$	421,392.66	\$	512,419.11	\$	514,959.30	\$	538,281.54	\$	540,650.42
\$	8,400.00	\$	8,400.00	\$	8,400.00	\$	8,400.00	\$	8,400.00
\$	688,785.38	\$	794,216.78	\$	819,082.01	\$	845,520.61	\$	848,152.70
	39.46%		41.25%		39.39%		38.55%		38.19%

6000 - Capital Outlay

6100 - Site & Improvements of Sites
 6200 - Building & Improvements of Buildings

\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-

6300 - Books/Media expension for Libraries
 6400 Equipment (Furniture, etc..)
 6500 - Equipment Replacemnet

6000 - Total Capital Outlay

Percent of Revenue/Resources

\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
	0.00%		0.00%		0.00%		0.00%		0.00%

7000 - Other Outgo

7110 - Tuition to Other Schools
 7211 - Transfers of Pass-through Revenues to Oth
 7221 - Special Ed Selpa Trsf
 7280 - All Other Transfers/ Outgo
 7438 - Interest
 7439 - Principal
 7300 - Transfers of Indirect/Direct Support Cost
 7320 - After School Education And Safety Grant-A

7000 - Total Other Outgo

Percent of Revenue/Resources

\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
	0.00%		0.00%		0.00%		0.00%		0.00%

TOTAL EXPENDITURES

\$	1,745,451.32	\$	1,925,580.67	\$	2,079,373.10	\$	2,193,448.65	\$	2,221,099.20
----	--------------	----	--------------	----	--------------	----	--------------	----	--------------

Cashflow Worksheet
Bay Area Technology School

2013-14

			July	August	September	October	November	December	January	February	March	April	May	June	Accruals	TOTAL
A. BEGINNING CASH	9110															
B. RECEIPTS			23,545	5,098	21,651	32,462	19,290	11,119	26,930	28,758	80,586	106,398	108,226	110,054		
Revenue Limit Sources																
Property Taxes	8020-8079	\$ 419,839.43														
Principal Apportionment	8010-8019	\$ 979,625.33	20,992	20,992	37,786	37,786	37,786	37,786	37,786	37,786	37,786					
Miscellaneous Funds	8080-8099		48,981	48,981	88,166	88,166	88,166	88,166	88,166	88,166	88,166	37,786	37,786	37,786		
Federal Revenue	8100-8299	\$ 95,931.00														419,839
Other State Revenue	8300-8599	\$ 182,376.01			23,983		23,983					88,166	88,166	88,166		979,625
Other Local Revenue	8600-8799	\$ 35,000.00	9,119	9,119	16,414	16,414	16,414	16,414	16,414	16,414	16,414					0
After School	8910-8929	\$ 150,000.00	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	95,931
All Other Financing Sources	8930-8979			100,000												182,376
Other Receipts/Non-Revenue										50,000						35,000
TOTAL RECEIPTS			55,000													150,000
C. DISBURSEMENTS			137,009	182,009	169,265	145,282	145,282	169,265	145,282	195,282	169,265	145,282	145,282	169,265		55,000
Certificated Salaries	1000-1999	\$ 680,329.78	56,694	56,694	56,694	56,694	56,694	56,694	56,694	56,694	56,694	56,694	56,694	56,694		1,917,772
Classified Salaries	2000-2999	\$ 84,460.00	7,038	7,038	7,038	7,038	7,038	7,038	7,038	7,038	7,038	7,038	7,038	7,038		
Employee Benefits	3000-3999	\$ 206,148.17	17,179	17,179	17,179	17,179	17,179	17,179	17,179	17,179	17,179	17,179	17,179	17,179		680,330
Books, Supplies and Services	4000-4999	\$ 85,728.00	17,146	17,146	5,144	5,144	5,144	5,144	5,144	5,144	5,144	5,144	5,144	5,144		84,460
Services	5000-5999	\$ 688,785.38	57,399	57,399	57,399	57,399	57,399	57,399	57,399	57,399	57,399	57,399	57,399	57,399		206,148
Other Outgo	7000-7499															85,728
Interfund Transfers Out	7600-7629															688,785
All Other Financing Uses	7630-7699															0
Other Disbursements/ Non Expenditures																0
TOTAL DISBURSEMENTS			10,000	15,000	15,000	10,000	10,000									0
D. PRIOR YEAR TRANSACTIONS, Other			155,456	165,456	158,454	158,454	153,454	153,454	143,454	143,454	143,454	143,454	143,454	143,454	0	60,000
Accounts Receivable	9200-9399															1,805,451
Accounts Payable	9500-9630,															
(Liabilities, including Def Rev)	9650															0
TOTAL PRIOR YEAR TRANSACTIONS, Other																0
E. NET INCREASE/DECREASE (B - C + D)			(18,447)	16,553	10,811	(13,172)	(8,172)	15,811	1,828	51,828	25,811	1,828	1,828	25,811	0	0

Bay Area Technology School

2014-15

2014-15			July	August	September	October	November	December	January	February	March	April	May	June	Accruals	TOTAL
			135,865	57,825	79,785	109,599	112,138	114,677	144,491	147,030	199,569	229,383	231,922	234,461		
A. BEGINNING CASH			9110													
B. RECEIPTS																462,170
Revenue Limit Sources																
Property Taxes	8020-8079	\$ 462,170.25	23,109	23,109	41,595	41,595	41,595	41,595	41,595	41,595	41,595	41,595	41,595	41,595	41,595	1,078,397
Principal Apportionment	8010-8019	\$ 1,078,397.25	53,920	53,920	97,056	97,056	97,056	97,056	97,056	97,056	97,056	97,056	97,056	97,056	97,056	0
Miscellaneous Funds	8080-8099				27,275			27,275			27,275			27,275		109,098
Federal Revenue	8100-8299	\$ 109,098.00						19,739	19,739	19,739	19,739	19,739	19,739	19,739	19,739	219,324
Other State Revenue	8300-8599	\$ 219,324.13	10,966	10,966	19,739	19,739	19,739	19,739	19,739	19,739	19,739	19,739	19,739	19,739	19,739	35,000
Other Local Revenue	8600-8799	\$ 35,000.00	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	150,000
After School	8910-8929	\$ 150,000.00		100,000												0
All Other Financing Sources	8930-8979															0
Other Receipts/Non-Revenue																
TOTAL RECEIPTS			90,911	190,911	188,581	161,307	161,307	188,581	161,307	211,307	188,581	161,307	161,307	188,581		2,053,990
C. DISBURSEMENTS																726,978
Certificated Salaries	1000-1999	\$ 726,978.36	60,582	60,582	60,582	60,582	60,582	60,582	60,582	60,582	60,582	60,582	60,582	60,582	60,582	108,212
Classified Salaries	2000-2999	\$ 108,211.80	9,018	9,018	9,018	9,018	9,018	9,018	9,018	9,018	9,018	9,018	9,018	9,018	9,018	223,435
Employee Benefits	3000-3999	\$ 223,434.72	18,620	18,620	18,620	18,620	18,620	18,620	18,620	18,620	18,620	18,620	18,620	18,620	18,620	72,739
Books, Supplies and Services	4000-4999	\$ 72,739.00	14,548	14,548	4,364	4,364	4,364	4,364	4,364	4,364	4,364	4,364	4,364	4,364	4,364	0
Services	5000-5999	\$ 794,216.78	66,185	66,185	66,185	66,185	66,185	66,185	66,185	66,185	66,185	66,185	66,185	66,185	66,185	0
Other Outgo	7000-7499															0
Interfund Transfers Out	7600-7629															0
All Other Financing Uses	7630-7699															0
Other Disbursements/ Non Expenditures																0
TOTAL DISBURSEMENTS			168,951	168,951	158,768	158,768	158,768	158,768	158,768	158,768	158,768	158,768	158,768	158,768	0	1,925,581
D. PRIOR YEAR TRANSACTIONS, Other																0
Accounts Receivable	9200-9399															0
Accounts Payable	9500-9630,															0
(Liabilities, including Def Rev)	9650						0	0	0	0	0	0	0	0	0	0
TOTAL PRIOR YEAR TRANSACTIONS, Other																0
E. NET INCREASE/DECREASE (B - C + D)																128,409
F. ENDING CASH (A + E)																264,274
G. ENDING CASH, PLUS ACCRUALS																

Bay Area Technology School

2015-16

			July	August	September	October	November	December	January	February	March	April	May	June	Accruals	TOTAL
A. BEGINNING CASH	9110															
B. RECEIPTS			135,865	55,113	74,360	113,406	122,826	132,246	171,292	180,712	240,132	279,178	288,598	298,018		
Revenue Limit Sources																
Property Taxes	8020-8079	\$ 520,116.98														
Principal Apportionment	8010-8019	\$ 1,213,606.28	26,006	26,006	46,811	46,811	46,811	46,811	46,811	46,811	46,811	46,811	46,811	46,811		
Miscellaneous Funds	8080-8099		60,680	60,680	109,225	109,225	109,225	109,225	109,225	109,225	109,225	109,225	109,225	109,225	46,811	520,117
Federal Revenue	8100-8299	\$ 118,503.00														1,213,606
Other State Revenue	8300-8599	\$ 243,344.88			29,626			29,626			29,626					0
Other Local Revenue	8600-8799	\$ 35,000.00	12,167	12,167	21,901	21,901	21,901	21,901	21,901	21,901	21,901	21,901	21,901	21,901	29,626	118,503
After School	8910-8929	\$ 150,000.00	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	21,901	243,345
All Other Financing Sources	8930-8979			100,000											2,917	35,000
Other Receipts/Non-Revenue										50,000						150,000
TOTAL RECEIPTS			101,770	201,770	210,479	180,853	180,853	210,479	180,853	230,853	210,479	180,853	180,853	210,479		0
C. DISBURSEMENTS																0
Certificated Salaries	1000-1999	\$ 809,090.12	67,424	67,424	67,424	67,424	67,424	67,424	67,424	67,424	67,424	67,424	67,424	67,424		2,280,571
Classified Salaries	2000-2999	\$ 122,385.42	10,199	10,199	10,199	10,199	10,199	10,199	10,199	10,199	10,199	10,199	10,199	10,199		
Employee Benefits	3000-3999	\$ 249,601.55	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800	20,800		809,090
Books, Supplies and Services	4000-4999	\$ 79,214.00	15,843	15,843	4,753	4,753	4,753	4,753	4,753	4,753	4,753	4,753	4,753	4,753		122,385
Services	5000-5999	\$ 819,082.01	68,257	68,257	68,257	68,257	68,257	68,257	68,257	68,257	68,257	68,257	68,257	68,257		249,602
Other Outgo	7000-7499															79,214
Interfund Transfers Out	7600-7629															819,082
All Other Financing Uses	7630-7699															0
Other Disbursements/ Non Expenditures																0
TOTAL DISBURSEMENTS			182,523	182,523	171,433	171,433	171,433	171,433	171,433	171,433	171,433	171,433	171,433	171,433		0
D. PRIOR YEAR TRANSACTIONS, Other																0
Accounts Receivable	9200-9399															2,079,373
Accounts Payable	9500-9630,															
(Liabilities, including Def Rev)	9650															0
TOTAL PRIOR YEAR TRANSACTIONS, Other																0
E. NET INCREASE/DECREASE (B - C + D)			(80,753)	19,247	39,046	9,420	9,420	39,046	9,420	59,420	39,046	9,420	9,420	39,046	0	0
F. ENDING CASH (A + E)			55,113	74,360	113,406	122,826	132,246	171,292	180,712	240,132	279,178	288,598	298,018	337,063	0	201,198
G. ENDING CASH, PLUS ACCRUALS																337,063