

File ID Number	14-1580
Introduction Date	8-27-14
Enactment Number	14-1576
Enactment Date	8-28-14
By	



**OAKLAND UNIFIED SCHOOL DISTRICT**

*Community Schools, Thriving Students*

**OAKLAND UNIFIED SCHOOL DISTRICT  
Office of the Board of Education**

To: Board of Education  
From: Antwan Wilson, Superintendent

Subject: **District Submitting Grant Application**

**ACTION REQUESTED:**

Approval and support by the Board of Education of District applicant submitting grant application for OUSD schools for fiscal years to accept same, if granted, in whole or in part, pursuant to the terms and conditions thereof and to submit amendments thereto, for the grant year, if any.

**BACKGROUND:**

Grant proposal for OUSD schools for the FY14-18 fiscal year was submitted for funding as indicated in the chart below. The Grant Face Sheet and grant application packets are attached.

File ID #	Backup Document Included	Type	Recipient	Grant's Purpose	Time Period	Funding Source	Grant Amount
14-1580	Yes	Grant	Oakland Unified School District Leadership Curriculum and Instruction Science Department	Funds and support structures for K-8 principal and teacher professional learning and resources to implement Next Generation Science Standards	July 1, 2014 to June 30, 2018	WestEd	\$640,000.00

**DISCUSSION:**

The district created a Grant Face sheet process to:

- Review proposed grant projects at OUSD sites and assess their contribution to sustained student achievement
- Identify OUSD resources required for program success

OUSD received a Grant Face Sheet and a completed grant application for the program listed in the chart by the school.

**FISCAL IMPACT:**

The total amount of grants will be provided to OUSD schools from the funders.

- Grants valued at: \$640,000

**RECOMMENDATION:**

Approval and support by the Board of Education of District applicant submitting a grant proposal for OUSD schools for fiscal year to accept same, if granted, in whole or in part, pursuant to the terms and conditions thereof and to submit amendments thereto, for the grant year, if any.

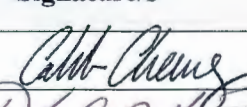
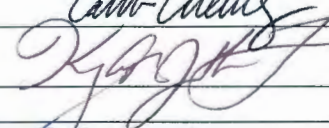
**ATTACHMENTS:** Grant Face Sheet, Budget, Grant Application, Board Memo

OUSD Grants Management Face Sheet

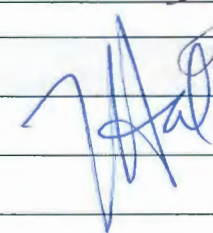
<b>Title of Grant:</b> K-8 CA NGSS Early Implementation Initiative	<b>Funding Cycle Dates:</b> July 1, 2014 to June 30, 2018
<b>Grant's Fiscal Agent:</b> Oakland Unified School District	<b>Grant Amount for Full Funding Cycle:</b> \$640,000
<b>Funding Agency:</b> WestEd	<b>Grant Focus:</b> Leadership and infrastructure for implementing the Next Generation Science Standards (NGSS) in K-8 Science
<b>List all School(s) or Department(s) to be Served:</b> All middle and elementary schools	

Information Needed	School or Department Response
How will this grant contribute to sustained student achievement or academic standards?	As a result of this grant, all OUSD's elementary school teachers and middle school science teachers will be better prepared and resourced to teach science aligned to Next Generation Science Standards (NGSS). Principals will be prepared to become strong instructional leaders for science at their sites. The district will develop an NGSS implementation plan.
How will this grant be evaluated for impact upon student achievement?	Principal and teacher surveys, evaluations, and planning documents; student assessments and observations; tools and resources developed.
Does the grant require any resources from the school(s) or district? If so, describe.	Yes, partial funding in years 3 and 4 for teacher leaders stipends, 50% of the directors salary, and substitutes for lesson study. Most of these expenses are already part of the current budget. The district would provide facilities and incentives for after school professional learning experiences for classroom teachers and access to district media for on-line professional learning modules. Professional Development will also take place for teachers during districtwide Buy Back Days focusing on NGSS.
Are services being supported by an OUSD funded grant or by a contractor paid through an OUSD contract or MOU?	No
Will the proposed program take students out of the classroom for any portion of the school day?	No
Who is the contact managing and assuring grant compliance?	Caleb Cheung 4551 Steele Street, Portable J Oakland, CA, 94619 510-336-7613, caleb.cheung@ousd.k12.ca.us

**Applicant Obtained Approval Signatures:**

Entity	Name/s	Signature/s	Date
Science Manager	Caleb Cheung		7/1/2014
Associate Superintendent of LCI	Kyla Johnson		7/1/2014

**Grant Office Obtained Approval Signatures:**

Entity	Name/s	Signature/s	Date
Fiscal Officer	Vernon Hal		
Superintendent	Antwan Wilson		

**Request for Application  
to participate in the**

**K-8 CA NGSS Early Implementation Initiative**

**An initiative under the direction of the  
K-12 Alliance/WestEd  
funded by the S.D. Bechtel, Jr. Foundation**

**Letter of Intent due April 30, 2014 5:00 pm  
Application due May 19, 2014 5:00 pm**



## Introduction/Background

The K-8 CA NGSS Early Implementation Initiative is a 4-year fast-start demonstration project developed by the K-12 Alliance with close collaborative input from the leadership of the California Department of Education, the California State Board of Education, and Achieve to build district leadership capacity to implement NGSS district-wide. The Initiative is funded by the S.D. Bechtel, Jr. Foundation.

California adopted the NGSS in 2013 with a projected state-wide implementation in the year 2016-17. This Initiative is designed to meet the needs of districts that are eager to be early implementers, who have the capacity and fortitude to be visionary in their implementation, and who are willing to collaborate to help other districts as they begin their implementation.

The Initiative is designed to provide professional learning and networking opportunities for district administrators and teachers that will result in the development and implementation of a strategic plan for the district's science program. The goals of the initiative are to:

- Build district and school capacity to implement the CA NGSS through administrator and teacher leadership;
- Increase teacher content knowledge and pedagogical skills to implement the CA NGSS including the CA SBE Preferred Integrated Model for grades 6-8;
- Increase student opportunities to learn via CA NGSS to increase science (i.e., disciplinary core ideas, science and engineering practices and cross-cutting concepts) understanding;
- Build a collaborative school culture that supports the CA NGSS;
- Develop a CA NGSS Collaborative as a cross-district learning community for implementation including networking and pilot testing tools and processes for quality implementation; and
- Disseminate tools/processes to other CA districts who are implementing NGSS.

## Timeline

April 30 5:00 pm     **Letter of Intent is due.**

May 19 5:00 pm     **Completed Application is due.**

- Week of June 2      **Interviews.** Top district candidates will be interviewed during this time. Reviewers will contact districts to arrange a one-hour phone call
- Week of June 9      **Notification of selected districts**
- Week of August 4    **Leadership Academy.** The leadership team of up to 6-9 teachers and 3 administrators must attend this week-long professional learning opportunity. Location TBD in southern California

### **Application Process**

1.      Submit the Letter of Intent by April 30 at 5:00 pm by faxing the signed letter of intent to 714.848.2441 or emailing, with an electronic signature, to [dwaters@wested.org](mailto:dwaters@wested.org). **Reviewers will consider applications only from the school districts that submit a Letter of Intent by the deadline.**
2.      Complete the application, email one copy as a pdf to [dwaters@wested.org](mailto:dwaters@wested.org) by May 19 at 5:00 pm and **submit two hard copies** to be postmarked by May 19 to:

Doris Waters  
K-12 Alliance Office Manager  
15662 Fox Hills Street  
Westminster, CA 92683

3.      Use the following guidelines for completing the application:
  - a.      Please complete the application in a word document using size 12 font, with 1 inch margins and 1.5 spacing.
  - b.      In the footer, please list the district name and the page number.
  - c.      The completed application should be no more than 15 pages. Reviewers will look favorably on applications that answer each question in a succinct manner.
  - d.      Please include the Cover Page (not included in the page count) found at the end of the RFA.
  - e.      You may also include a Table of Contents (not included in the page count) if you wish.
  - f.      You do not need to write the question in your answer, but please number each question as indicated.



## Criteria for Participation

The Initiative is looking for districts that have a history of productive science professional development and a vision and capacity to make CA NGSS a reality for all of their students. To participate in the Initiative, the district must agree to:

- implement K-5 science education as a core subject in the district's schools
- implement the SBE-preferred CA Integrated Model for grades 6-8
- assemble a leadership team (up to 6-9 teachers and 3 administrators) to attend the Leadership Academy August 4-8, 2014 with continuing involvement during the remainder of the Initiative
- provide resources (e.g., through LCFF and LCAP) over the four years of the Initiative to the implementation of the NGSS as part of the district's vision and goals
- provide a project director to oversee the program for years 2-4
- commit financial resources to support project director, teacher stipends and release time with the Initiative covering most of these costs in years 1-2 and the districts covering a larger portion in years 3-4. (Please see District Financial Commitment in the RFA).
- provide in year 1, four (4) days of release time for leadership team on-site professional learning
- provide in years 2-4 four (4) days of release time for leadership team AND participating teachers (up to 60) for on-site professional learning
- provide in years 1-4 six (6) days of release time for the 12-person leadership team for technical assistance
- provide opportunities for on-site implementation (e.g., dedicated PLC time) in years 2-4 and one to two (1-2) district-wide dedicated science professional learning days for all K-8 teachers
- provide facilities and incentives for after school professional learning experiences for district teachers
- provide access to district media for on-line professional learning modules
- commit to the implementation of K-8 CA NGSS district wide by 2017-2018 and sustain its implementation beyond that date

**Application Questions.** Please answer the following questions in paragraph form. You do not have to repeat the question, but please number them as they appear below.

**A. District Description (limit 2 pages)**

1. Describe the demographics of your district in grades K-8 including percentage of ELL students and students in free or reduced lunch program.
2. Describe your current structure (e.g., K-5 self-contained classrooms, 6-8 middle schools, K-8 schools, K-6 and 7-8). Please indicate whether or not your current middle school model includes 3 full years of science.
3. Describe your district's past three year K-8 science program, including curriculum, science instructional minutes/day or week at both elementary and middle school, measures of student achievement/understanding, professional learning opportunities for teachers and administrators, etc.

**B. Vision/Strategic Plan/Structures and Sustainability for CA NGSS Implementation (up to 13 pages)**

4. Describe the district's vision and goals for science education in the next 5 years and how participation in the NGSS Early Implementation Initiative will further those goals.
5. Every LEA must finalize a Local Control and Accountability Plan by July 1, 2014. Several of the new state priorities include NGSS: for example, Priority #2 is about implementation of academic content and performance standards adopted by the SBE. Priority #7 is about pupil enrollment in a broad course of study that includes all of the subject areas in Ed Code.
  - a. Address how you will include science education in your district's Local Control Accountability Plan to improve science education for all students.
  - b. Describe how you might engage your stakeholders to understand the value to student learning of NGSS implementation.
  - c. Address how you might allocate funding from your Local Control Funding Formula in the next three years (beginning in 2014-2015) to improving science education for all students, and how you might use any supplemental or concentration funding to improve science education for low income, EL, and foster youth.
6. CA's NGSS adoption is aligned across grade levels with Common Core State Standards ELA and Math.



- a. Describe your LEA's current efforts and future plans for ensuring that elementary teachers have the professional development (PD) and professional learning community (PLC) time and support to collaborate. Address how collaboration will leverage the instructional opportunities available to reinforce deeper student learning across all three core subjects (ELA, Math, and Science). Include in your answer a description of your PLC time and structure.
  - b. Describe your LEA's current efforts and future plans for ensuring that middle school ELA, Math, and Science teachers have the professional development (PD) and professional learning community (PLC) time and support to collaborate. Address how collaboration will leverage the instructional opportunities available to reinforce deeper student learning across all three core subjects. Include in your answer a description of your PLC time and structure
7. The quality implementation of CA NGSS K-8 will require creative configurations at the elementary and middle school.
- a. How will you ensure that the schools in your district are enabled to increase emphasis and science instructional minutes in the elementary and intermediate grades?
  - b. For middle grades, how might you restructure to build on teacher expertise to implement the CA NGSS Integrated Model for 6-8?
8. What structures/programs (e.g., STEM related programs, business/science informal partnerships, PLCs, etc.) do you currently have in place that would assist in on-site implementation of NGSS? In district-wide implementation?
9. How will you retain teachers and administrators in the K-8 CA NGSS Early Implementation Initiative for 4 years?
10. In chart form please list the proposed project director and indicate their current status (e.g., TOSA, district office, science coordinator), teacher members of the leadership team and their grade levels, and administrators and their titles.
11. How will the district/LEA continue to support the work of the Leadership Team after completion of the 4-year commitment?



**Scoring**

Reviewers will rubric score all applications that have an approved Letter of Intent on file and that meet formatting guidelines. Questions will be weighted as follows:

Section A District Description Questions 1-3	10 points
Section B Question 4 Vision	15 points
Section B Questions 5 and 6 Alignment with LCAP Current and future plans for establishing and science as a core part of the district's curriculum	35 points
Section B Questions 7 and 8 Structures	25 points
Section B Questions 9 and 10 Sustainability	15 points

Selection decisions are final.

**Questions:** Please contact Kathy DiRanna ([kdirann@wested.org](mailto:kdirann@wested.org)) or 714.812.0288

## District Financial Commitment

Full implementation of the NGSS requires time, energy and financial resources. The grant is poised to assist districts as they begin the implementation in years 1 and 2 of the program, with the district assuming a larger responsibility in years 3 and 4. The following costs are part of the implementation:

### Teacher Release Time

Year	Description	Grant	District
Year 1	4 days for the 6-9 Core Leadership Teachers for lesson study 6 days for the 6-9 Core Leadership Teachers for technical assistance (e.g. developing district implementation plan)	X X	
Year 2	4 days for the 6-9 Core Leadership Teachers for lesson study 6 days for the 6-9 Core Leadership Teachers for technical assistance (e.g. developing district implementation plan) 4 days for the (up to 60) Teacher Leaders for lesson study	X X X	
Year 3	4 days for the 6-9 Core Leadership Teachers for lesson study 6 days for the 6-9 Core Leadership Teachers for technical assistance (e.g. developing district implementation plan) 4 days for the (up to 60) Teacher Leaders for lesson study	X X	
Year 4	4 days for the 6-9 Core Leadership Teachers for lesson study 6 days for the 6-9 Core Leadership Teachers for technical assistance (e.g. developing district implementation plan) 4 days for the (up to 60) Teacher Leaders for lesson study		X X X

Note: 3 administrators are expected to participate in the Core Leadership Activities

### Teacher Stipends

Year	Description	Grant	District
Year 1	6-9 Core Leadership Teachers @\$2000	X	
Year 2	6-9 Core Leadership Teachers @\$4000 Up to 60 Teacher Leaders @ \$2000	X X	
Year 3	6-9 Core Leadership Teachers@ \$4000 Up to 60 Teacher Leaders @ \$2000	X 75%	25%
Year 4	6-9 Core Leadership Teachers@ \$4000 Up to 60 Teacher Leaders @ \$2000	X 50%	50%

Note: 3 administrators are expected to participate in the Core Leadership as part of their administrative duties.

### Project Director

Year	Description	Grant	District
Year 1	A stipend of \$8,000 for additional work beyond the person's current position (e.g., teacher, TOSA, district office employee)	X	
Year 2	Salary and benefits	50%	50%
Year 3	Salary and benefits	50%	50%
Year 4	Salary and benefits	50%	50%

### District Wide Professional Development Buy Back Days

Year 1	none
Year 2	none
Year 3	District expense
Year 4	District expense

### Other Resources


In years 3 and 4 of the grant, the district would provide facilities and incentives for after school professional learning experiences for classroom teachers and access to district media for on-line professional learning modules.




**Estimated Costs to the District**

The following examples are for illustrative purposes only. The actual district cost will be dependent on the actual teams that are selected to participate. In the following scenarios, release time was calculated at \$125/day; stipends as indicated in the chart on the previous page; and a project director at \$120,000 for salary and benefits.

District Size/Participation	Approximate district cost over 4 years
Less than 15,000 K-8 Students: based on 5 Core Teachers, 2 Administrators and 15 teachers for all 4 years	\$223,750
15,000-30,000 K-8 Students: based on 6 Core Teachers, 3 Administrators and 30 Teacher Leaders for all 4 years	\$262,500
30,000 and above K-8 Students: based on 9 Core Teacher Leaders, 3 Administrators and 60 Teacher Leaders for all 4 years	\$341,250

  
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 David Kakis  
 President, Board of Education

8/28/14

  
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 Antwan Wilson  
 Secretary, Board of Education

8/28/14

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# K-8 CA NGSS Early Implementation Initiative

## Cover Page

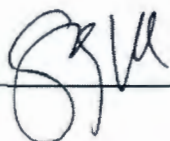
LEA Name: Oakland Unified School District

LEA Address: 4551 Steele Street, Portable H, Oakland, CA 94619

County: Alameda

Superintendent Name: Gary Yee

Superintendent Signature \_\_\_\_\_



Date: 5/16/14

### Contact for Grant Related Questions/Interview:

Name: Caleb Cheung

Title: Science Manager

Phone: 510-418-0607

Email: caleb.cheung@ousd.k12.ca.us

Fax: none



## A. District Description

1. Oakland Unified School District (OUSD) operates 86 public schools (50 K-5, 4 K-8, 13 6-8, 3 6-12, 7 9-12, 9 alternative/continuation schools) serving over 37,000 students. Students of color make up over 86% of the student population with 42% Latinos and 29% African Americans. 69% of OUSD students are eligible for free and reduced lunch, and approximately 25% of students live in public housing. 31% of the students are English Language Learners.
2. Most of the district is comprised of K-5 elementary schools (50) and 6-8 grade middle schools (13). Four elementary schools are converting into K-8 sites. Three sites core English Language Arts (ELA)/Social Studies core and a math/science core. The fourth site has self-contained classrooms. Additionally, three schools are converting to 6-12 sites.

The majority of K-5<sup>th</sup> grade classrooms are self-contained with multiple subject credentialed teachers, where science instruction is taught by the mainstreamed teacher. Thirteen elementary schools this year have a science prep model where a different teacher is responsible for teaching science to most or all the students at a school. In the last two years we have encouraged these schools to not only have the prep teacher provide time for science investigations, but also have the main teacher teach the literacy connections with the science content. This allows the science learning to be integrated with the ELA Arts Common Core State Standards (CCSS).

With the exceptions noted above, most schools have a 6-8<sup>th</sup> grade middle school model utilizing single subject credentialed teachers, teaching science daily in a yearlong course for all three grades. For most of the district, math and science is cored at the 6<sup>th</sup> grade with one teacher teaching both subjects to the same group of students. 7<sup>th</sup> and 8<sup>th</sup> grade science are singletons, taught by a science credentialed teachers.

3. For the past seven years, OUSD has adopted and fully implemented the California Edition of the FOSS curriculum for grades K-5. A systemwide support structure for the materials was developed and the 1300+ kits have since been maintained, delivered, and rotated centrally to all sites and classrooms three times a year. A rotation schedule allows a third of the district at any given time to be on one of three strands. During the summer all kits are brought back to our Science Resource Center and all 3400 boxes of materials are inventoried and restocked by

high school student interns. The budget for the entire operation is covered by the district. The middle schools adopted the CPO curriculum during the same time, but because the kits were the responsibility of school sites, they are now in a state of disarray.

A science board policy was passed four years ago, requiring minimum of number of science instructional minutes weekly elementary (60 minutes K-2, 90 minutes 3-5). Middle Schools have a daily period of science for ~56 minutes in grades 6-8<sup>th</sup>. K-8 Principals are accountable for these minutes and most school are currently meeting or exceeding them, which is required to be in all site plans.

Professional development (PD) for elementary teachers consists mainly of site-based sessions presented to the entire staff and the principal one to five times a year. This shift from traditional districtwide sessions took place four years ago when we realized that the schools need to move forward as a unit of change as opposed to individual teachers. PD sessions are customized with input from the principal and teacher leaders. The topic is selected from a menu of 30+ sessions ranging from introductory sessions to advanced practices depending on the needs of the school site along a continuum. All middle school teachers have a monthly centralized PD session.

Four additional summer science institutes take place each summer for different groups of 30-60 K-8 teachers who are involved in more intensive PD projects. There are also thirteen elementary Science Focus Schools that are focused on deep science implementation with additional coaching and PD events.

There is support for teacher leadership at every school. Each K-12 school site has a designated Science Teacher Leader who attends monthly meetings at the district level to plan science instruction, develop leadership skills, and collaborate with colleagues. There is a Principal Science PD series that is a part of the district's principal meetings each year: 30 hours for elementary, 5 hours for middle school.

Districtwide assessments include the Science Writing Task (SWT) and Science and Instructional Resource and Assessment, both for grade 3-5. Systemic assessments for K-8 remain problematic as the California Standards Test is the only available standardized assessment and only administered twice at grades five and eight.



## **B. Vision/Strategic Plan/Structures and Sustainability for CA NGSS Implementation**

4. With the completion of the Next Generation Science Standards (NGSS) and the adoption by California Department of Education (CDE) this past year, Oakland hopes to continue preparing teachers and principals to engage and utilize the standards to transform science learning in every classroom. Preparation began two years ago with a focus on science and engineering practices in many of our professional learning settings. Oakland is now positioned to become an early adopter of the standards in California. As a result, much of the work ahead will build upon prior work that focuses on the tools and resources for implementing the new standards at all grade levels.

Over the past eight years, OUSD has nurtured a districtwide elementary science program. What started as a science materials resource center has evolved into a districtwide system of support and innovation for science education. Thanks to the on-going support foundations, informal science institutions, university partners, and state and federal grants, Oakland has emerged as one of the top district Science Departments in California with a team of fifteen specialists, coordinators, and administrative staff. The Department also supports health, garden, and physical education in the District.

Although 6-8<sup>th</sup> grade science work has continued on a parallel developmental process over the past eight years, progress has been significantly limited by funding and staffing. These constraints are not because of a lack of interest or priority, but rather, it is due to all available grants being focused at the elementary level. Some funding has been secured for the 2014-15 school year to write and pilot an integrated NGSS curriculum for grades 6-8 and provide coaching at six pilot sites who are implementing the curriculum.

On a broader scale, the theory of action for improving student achievement in science centers on five key areas: central district leaders, school site leadership, teachers, the classroom, and students. It is our belief that if central leadership provides quality professional learning, appropriate resources, and accountability that supports the implementation of innovative practices in science, and if site leadership shares that responsibility and creates the culture, conditions, and competencies necessary at each school site, then teachers will develop science knowledge for teaching and use the inquiry cycle to shift their professional practices,

and implement those practices in the instructional core in every classroom for every student; and in turn, students will shift their practices, resulting in increased achievement. A detailed description of this Theory of Action is provided in the following table.

OUSD Theory of Action for Improving Student Achievement in Science				
Central Leaders	Site Leaders	Teachers	Classrooms	Students
If <b>Central Leadership</b> provides quality professional learning, appropriate resources, and accountability that supports the implementation of innovative practices in science,	And if <b>Site Leadership</b> shares that responsibility and creates the culture, conditions, and competencies necessary at each school site,	Then <b>Teachers</b> will develop science knowledge for teaching and use the Inquiry Cycle to shift their professional practices,	And they will implement those practices in the Instructional Core of every <b>Classroom</b> for every student,	And in turn, <b>Students</b> will also shift their practices resulting in increased achievement.
<ul style="list-style-type: none"> <li>Develop and manage a vision with clear goals</li> <li>Promote professional capital</li> <li>Nurture the academic demand of the content and curriculum, and understand grade level expectations</li> <li>Employs evidence-informed decision making</li> <li>Allocate resources strategically</li> <li>Model the collaborative practices envisioned for sites and students</li> </ul>	<ul style="list-style-type: none"> <li>Develop and manage a vision with clear goals</li> <li>Develop and build high functioning teams within schools</li> <li>Create a culture of observation and feedback, implement an evaluation cycle, use effective coaching strategies, and engage courageous conversations in service of student achievement</li> <li>Build strong curriculum and content, understand grade level expectations, use data for instructional decisions</li> <li>Gather, compile, use, and communicate evidence and data competently as a lever for change</li> </ul>	<ul style="list-style-type: none"> <li>Understand deeply the science they are teaching</li> <li>Reflect constantly on their practice</li> <li>Build their human capital through social capital</li> <li>Use the Inquiry Cycle and formative assessment evidence in collaboration with each other to plan and adjust instruction</li> <li>Keep parents and other partners informed and engaged</li> <li>Work with school leaders to support change efforts</li> <li>Connect everything back to their students</li> </ul>	<p><b>Instruction</b></p> <ul style="list-style-type: none"> <li>Provide students with common engaging and relevant sciences experiences</li> <li>Focus on deeper understanding through academic discussions, writing, and reading</li> <li>Use sound pedagogical strategies (e.g., hands-on, science talk, and scaffolds)</li> <li>Connect science and literacy to accelerate language learning for ELs.</li> <li>Teach, model, and reinforce socio-emotional competencies</li> <li>Hold students accountable for explaining their reasoning</li> </ul> <p><b>Curriculum</b></p> <ul style="list-style-type: none"> <li>Focus on the 3 dimensions of NGSS</li> <li>Create new units or adapt current units aligned to NGSS</li> </ul> <p><b>Assessment</b></p> <ul style="list-style-type: none"> <li>Use formative assessment strategies</li> <li>Analyze student work and engage around key science concepts</li> </ul>	<ul style="list-style-type: none"> <li>Communicate their reasoning effectively through <b>academic discussions</b>, revised explanations, and viable arguments</li> <li>Perform well on <b>performance tasks</b> and other assessments that require explanation and reasoning</li> <li>Build a positive science identity and be metacognitive about their learning with a <b>growth mindset</b></li> </ul>

The OUSD Science Department will focus on three major goals in 2014-15. The first is to develop instructional tools, curriculum, and resources for K-8 teachers and classrooms aligned to the NGSS. The second is to foster teacher expertise in content, skills and practices along a continuum aligned to the NGSS. The third goal is to continue to build science instructional leadership for teacher leaders, principals, and district administration. These three goals are embedded in six major areas of work: curriculum & assessment, teacher professional learning, teacher leadership, principal leadership, family & community outreach, and partnerships.



With support from the Early Implementation Initiative, the OUSD Science Department will be able to provide a systemwide strategic plan for K-8 and create a more articulated program between the different grade spans that builds on the successes of the elementary program. The initiative will also provide the opportunity to convene a district science leadership team that can serve as an advisory group to the work.

A five year implementation timeline has been developed for the elementary and middle schools, and also represents our current plans for building a successful and NGSS aligned science program. While many of the components have not been created, it provides a road map for the work ahead. (See attachments at the end)

5. While the Local Control Accountability Plan is still being finalized, OUSD is committed to supporting the Science Department by funding Science Specialist (TSA), Coordinator, and Manager positions. This district team will develop curriculum resources and assessments aligned to NGSS. In 2014-15, they will also provide coaching at fourteen K-8 Science Focus Schools who are piloting the materials, placing a heavy emphasis on science as a major focus for the site. These schools will become pilot sites for the rest of the district as the materials are implemented districtwide in subsequent years.

Additionally, district funding will cover all costs related to the on-going systemic implementation of the Elementary FOSS curriculum. This includes consumable and permanent equipment in all 1300 kits, hiring summer interns to refurbish all kit materials, staffing to deliver and rotate the kits among all the schools four times a year, and costs for all live organisms for the life science kits. With the existing Board policy requiring minimal weekly minutes of science instruction, it is essential that materials are provided to every K-5 classroom.

Science will continue to be a required subject at all K-8 grade levels and is currently valued at the same level as ELA and math. While the implementation of NGSS is two years behind CCSS, Science and NGSS is represented in all district level curricular meetings and programming.

Stakeholder engagement is extremely important. For teachers and principals, the value of NGSS has already been emphasized for the past two years at all professional development

sessions for teachers, teacher leaders, and principals as mentioned in the previous sections. Moving ahead, NGSS will continue to be the central to all PD and communications with school sites.

For the past two years, parent and community engagement events have taken place four times a year in Oakland to introduce and address the challenges of CCSS. Starting next year, the Science Department hopes to participate in these session to address similar issues related to NGSS. An additional site-based presentation will be developed by the science department for either Specialists, Teacher Leaders, or Principals to use for community events such as Back to School Night, Open House, and other meetings (PTA, ELAC, Site Council). Additional resources for supporting teachers and parents will be available on the District Science website as they emerge.

OUSD also supports a series of year end science events including a large District K-12 Science Fair and four Dinner with a Scientist events. Packaged Family Science Night kits are being developed this summer to support school sites in organizing these high engagement events. All of these will highlight the components and importance of NGSS.

The Science Department hosts a large Oakland Science Partners Meeting once a year. Over 75 organizations are invited to learn about our district level work and NGSS, engage in science learning, and network with each other. These include university departments, informal science institutions, corporations, non-profit organizations, and funders. All are interested in working with our teachers or students to improve science education in Oakland. Many are beginning to be engaged with NGSS and serve as potential partners for our district science work.

In addition to the services that have already been committed for 2014-2015, the science department plans to pursue additional investments in the future from the district and external funders for middle and high school science materials and equipment to support the curriculum development and implementation districtwide.

With a higher percentage of low income, EL, and foster youth in our district, any systemic support structure will automatically improve science education for these special populations. This is especially true for middle and high schools that have even higher



percentages due to more affluent families moving their children to private and charter schools after elementary school.

Additional efforts are being made to collaborate with the district's English Language Learners Department to ensure that teaching resources include strategies and outreach to EL students. The dual language programs were actively recruited to be Elementary Science Focus Schools for 2014-15 and now support four of the six district's dual language school sites.

With the implementation of Smarter Balanced Assessments, there is a large districtwide investment into technology infrastructure. The Science Department hopes to capitalize on this to provide more digital learning tools and one to one computer access.

6. With self-contained classrooms, elementary teachers are easily overwhelmed with all the curricular, pedagogical, and assessment changes related to CCSS and NGSS. During the past school year, the Math, ELA, and Science Departments have actively worked on resolving the implementation challenges of too many changes taking place at once. This includes creating common expectations and communication about the transition to the new standards, collaborating among the Teacher Leader for each content area from each school site, and collaborating on PD sessions. Starting this school year, there was also a districtwide common focus on practices that overlap between NGSS and CCSS. For 2013-14, it was academic discussions.

All middle school principals are asked to provide monthly PCL collaboration time for their Math, ELA, and science teachers by department. The District's Science Department will provide guidance and planning tools help their each Teacher Leader lead their PLC meetings. Additionally, districtwide monthly PD sessions will also take place in each of these subject areas. Combined with monthly Teacher Leader meetings, these three meeting structures will provide the pedagogical expertise, leadership support, and local collaboration time needed for teachers to successfully implement changes to their instruction.

7. OUSD will build on the existing expectations for science instructional minutes for elementary and middle school. For Elementary, Principals establish site expectations and are



often the gatekeepers of science instruction. By continuing to provide 30 hours of PD time each year for principals, we continue to emphasize the importance and critical role science education plays in our students' lives. As an urban district, science teaching must robustly take place or we risk putting our students at a disadvantage. This is a fundamental equity issue that Oakland must address.

For middle school, the areas for improvement are less about the instructional minutes, but more about instructional quality, access to science PD for core teachers, and teacher turnover. We are working to provide tools, resources, and curriculum in order for teachers to utilize the best pedagogical strategies available and to be successful. It is successful teaching that will lead to stability, develop leaders and retain our secondary teachers. As for implementing the integrated model of NGSS, we plan on having cross grade level teams within the curriculum writing project and among the pilot teachers. This will allow us to leverage teachers with different traditional single subject background and experiences to provide expertise at each grade level.

8. Currently there are multiple structures and programs that could assist in the implementation and integration of NGSS across the district. Other than the previously mentioned Oakland Science Partners, the OUSD Science Department is also working with other internal departments and offices to improve their science programming and provide assistance in the transition to NGSS. These include the After School Programs, Summer School Office, Pre-K/TK Programs, Garden Education, Health Education, and Nutrition Services. All have fledgling science programs that have been traditionally operated independently of the science programs during the K-12 school day. By collaborating with them, a more cohesive educational experience can be provided for our students, allowing NGSS to be present in and out of the school day.

The Science Department is also serving on the working groups for a STEM related engineering program called Project Lead the Way at two high schools and four elementary sites, and a computer programming initiative. This program also has correlated NGSS practices.

9. Selection of teachers and administrators involved in the Early Implementation Initiative focuses on those who have a long track record of science leadership in the district. Most have worked closely with the Science Department for at least 5 years on various professional development programs, grants, and have advised the direction of the district science program in various settings. The team also represents a diverse cross-section of school demographics and leadership experiences, with an emphasis on teachers and principals who are in a Science Focus Schools.

10. The following is the proposed list of leadership team members. We have a large list of potential members and participation will be dependent on district and school site commitments during August that have yet to be finalized.

<b>Role</b>	<b>Name</b>	<b>Title</b>
Project Director	Caleb Cheung	Science Manager, Science Department
Administrators	Paulette Smith	Principal, Joaquin Miller Elementary
	Tom Hughes	Principal, Bret Harte Middle School
Teachers	Brenda Tuohy	K-5 Science Prep Teacher, Think College Now Academy
	Channon Jackson	5 <sup>th</sup> grade Teacher, New Highland Academy
	Elizabeth Woodward	K-5 Science Prep Teacher, International Community School
	Sara Rusche	K-5 Science Prep Teacher, Korematsu Discovery Academy
	Nessa Mahmoudi	3 <sup>rd</sup> Grade Teacher, Melrose Leadership Academy
	Laura Prival	Elementary Specialist (TSA), Science Department
	Jesus Alvarez	8 <sup>th</sup> Grade Science Teacher, United for Success
	Chris Albeck	6 <sup>th</sup> Grade Science Teacher, Westlake Middle School
Alison Ball	7 <sup>th</sup> Grade Science Teacher, Urban Promise Academy	

11. If the past eight years is any indicator, OUSD has a deep commitment to science education in our schools and the larger community. We believe in a distributed leadership model, one that encourages and shares leadership across the system at all levels. By building expertise and leadership at school sites and investing in tools and resources, we hope to continue to build an infrastructure for science education that outlives any individual teacher, leader, or school site. OUSD will continue the work of the Leadership Team after the four year commitment.



## Elementary NGSS Implementation Timeline

### Science Vision Statement

All Oakland students will graduate science literate with the skills that they need to succeed in college, career and community.

	Overview	Teachers	Teacher Leaders	Administrators	Tools/Resources
Year 1 2013-2014 Awareness	District, teacher leaders, principals and site PL align tightly to build a shared vision and identify needs for successful K-5 NGSS implementation for all students.	<ul style="list-style-type: none"> <li>• Make explicit connections between FOSS and CCSS</li> <li>• Use science notebooks to support students' writing</li> <li>• Implement Academic Discussions as a districtwide focus</li> <li>• Support students' reading complex science textbooks</li> <li>• Support science and language learning for ELs through science</li> <li>• Attend school-site science PL</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with principal</li> <li>• Collaborate with ELA and math counterparts to implement instructional shifts</li> <li>• Participate in science-focused instructional rounds</li> <li>• Coordinate and provide on-site PL sessions</li> <li>• Participate in the development of SIRA</li> <li>• Attend monthly LST meetings</li> <li>• Attend Summer Leadership Institute</li> </ul>	<ul style="list-style-type: none"> <li>• Be able to explain NGSS connection to CCSS</li> <li>• Advocate for science content in CCSS-ELA instruction</li> <li>• Develop and build high functioning leadership teams within schools</li> <li>• Support teacher collaboration and leadership</li> <li>• Participate in instructional rounds and walk-throughs</li> <li>• Attend Principal Science PL</li> </ul>	<ul style="list-style-type: none"> <li>• Science 5x8 Card</li> <li>• Observation Protocol</li> <li>• Summer PL and Leadership Institute</li> <li>• School site PL Materials</li> <li>• FOSS Curriculum</li> <li>• SWT</li> <li>• SIRA</li> </ul>
Year 2 2014-2015 Initiation	District implements NGSS tools and assessments within the FOSS curriculum.	<ul style="list-style-type: none"> <li>• Use formative assessment collaboratively to plan and adjust instruction</li> <li>• Attend district PL on SIRA</li> <li>• Implement and analyze the SWT and the SIRA data in teams</li> <li>• Focus on high impact NGSS Practices and Crosscutting concepts in FOSS</li> <li>• Attend school-site science PL</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with ELA and math counterparts, ILT and administration to develop site goals, master schedule, and site PL</li> <li>• Participates in instructional rounds and walk-throughs</li> <li>• Facilitate peer observations using 5x8 card</li> <li>• Participate in the SIRA development and pilot</li> <li>• Facilitate 6 site-based PLs for all teachers</li> <li>• Attend monthly LST meetings</li> <li>• Attend Summer Leadership Institute</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with science, ELA and math TLs to articulate vision/goals for elementary science</li> <li>• Create a culture of observation and feedback</li> <li>• Facilitate peer observations and feedback using 5X8 card</li> <li>• Support teacher collaboration and leadership</li> <li>• Participate in instructional rounds and walk-throughs</li> <li>• Attend Principal Science PL</li> </ul>	<ul style="list-style-type: none"> <li>• SIRA</li> <li>• Summer PL and Leadership Institute</li> <li>• School site PL Materials</li> </ul>
Year 3 – 5 2015-2018 Implementation	Implementation of a new NGSS aligned curriculum based on state timeline. District assessment data and teacher collaborations inform the direction of continued professional learning for teachers, teacher leaders, and administrators.	<ul style="list-style-type: none"> <li>• Implement district recommended NGSS curricula</li> <li>• Continue to use NGSS aligned instructional practices</li> <li>• Administer district assessments and analyze data as a site team</li> <li>• Attend school-site and district science PL</li> <li>• Plan and execute showcases of student learning for families and community</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with ELA and math counterparts, ILT and administration to revise and implement site goals, master schedule, and site PL</li> <li>• Participates in science-focused instructional rounds and walk-throughs</li> <li>• Facilitate peer observations using 5x8 card</li> <li>• Facilitate site-based PL on NGSS implementation</li> <li>• Attend monthly LST meetings</li> <li>• Attend Summer Leadership Institute</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with science, ELA and math TLs to revise and implement vision/goals for elementary science</li> <li>• Support teacher collaboration and leadership</li> <li>• Participate in instructional rounds and walk-throughs</li> <li>• Attend Principal Science PL</li> </ul>	<ul style="list-style-type: none"> <li>• New Curriculum Materials</li> <li>• Summer PL and Leadership Institute</li> <li>• School site PL Materials</li> </ul>



## Secondary NGSS Implementation Timeline

### Science Vision Statement

All Oakland students will graduate science literate with the skills that they need to succeed in college, career and community.

	Overview	Teachers	Teacher Leaders	Administrators	Tools/Resources
Year 1 2013-2014 Awareness	District, teacher leaders, principals and site PL align tightly to build a shared vision and identify needs for successful 6-12 NGSS implementation for all students.	<ul style="list-style-type: none"> <li>Implement and share pilot lessons that teach, scaffold &amp; assess NGSS</li> <li>Meet monthly on site to align instruction around a shared vision for all students</li> <li>Attend monthly district second Wed PL</li> <li>Establish content-specific communities of teachers</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with principal</li> <li>Collaborate with ELA and math counterparts to implement aligned protocols</li> <li>Facilitate monthly science PLC on site</li> <li>Facilitate peer observations</li> <li>Attend monthly district PL and teacher leader PL</li> <li>Attend Summer Leadership Institute</li> <li>Support hiring and induction</li> </ul>	<ul style="list-style-type: none"> <li>Able to explain NGSS, 5x8 card, CER (claims, evidence, and reasoning), and inquiry/engineering practices</li> <li>Can articulate vision and goals of science department</li> <li>Support teacher collaboration and leadership</li> <li>Collaborate to map site assets and needs</li> <li>Attend Principal Science PL</li> </ul>	<ul style="list-style-type: none"> <li>NGSS Implementation Rubric</li> <li>Science 5x8 Card</li> <li>Observation Protocol</li> <li>Teacher Leader Site Planning Documents</li> <li>CER Discourse Protocols</li> <li>Summer PL and Leadership Institute</li> <li>Pilot lessons</li> <li>All PL materials on website</li> </ul>
Year 2 2014-2015 Initiation	District implements pilot NGSS curriculum and assessments.	<ul style="list-style-type: none"> <li>Implement pilot curriculum units that teach, scaffold &amp; assess NGSS</li> <li>Meet monthly on site to support effective collaboration</li> <li>Attend monthly district second Wed PL</li> <li>Maintain content-specific communities of teachers</li> <li>Plan and execute at least one showcase of student learning for families and community</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with ELA and math counterparts, ILT and administration to develop site goals, master schedule, and site PL</li> <li>Facilitate monthly department PLC aligned to department vision/goals</li> <li>Facilitate peer observations using 5X8 card</li> <li>Attend monthly district PL and teacher leader PL</li> <li>Attend Summer Leadership Institute</li> <li>Support hiring and induction</li> </ul>	<ul style="list-style-type: none"> <li>Uses 5x8 card as a tool to observe and provide feedback to teachers</li> <li>Support vision/goals of science department</li> <li>Support teacher collaboration and leadership</li> <li>Meet monthly with teacher leaders</li> <li>Elicit input from teacher leaders on school site PL, hiring, master schedule and site goals</li> <li>Attend Principal Science PL</li> </ul>	<ul style="list-style-type: none"> <li>Course scope and sequences</li> <li>Pilot curriculum units</li> <li>Science materials</li> <li>Technology to support NGSS</li> <li>Pilot district assessments</li> <li>Summer PL and Leadership Institute</li> <li>Initial data analysis</li> </ul>
Year 3 – 5 2015-2018 Implementation	All science courses embed NGSS Practices, Concepts and Core Content. District assessment data and teacher collaborations inform the direction of continued professional learning for teachers, teacher leaders, and administrators.	<ul style="list-style-type: none"> <li>Implement district recommended curricula that teach, scaffold &amp; assess NGSS</li> <li>Administer district assessments and analyze data as a site team</li> <li>Meet monthly on site to support highly effective collaboration</li> <li>Attend monthly district second Wed PL</li> <li>Maintain content-specific communities of teachers</li> <li>Student learning reflects the science 5x8 card</li> <li>Plan and execute showcases of student learning for families and community</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with ELA and math counterparts, ILT and administration to revise and implement site goals, master schedule, and site PL</li> <li>Facilitate monthly department PLC aligned to department vision/goals and data</li> <li>Facilitate peer observations using 5x8 card</li> <li>Attend monthly district PL and teacher leader PL</li> <li>Attend Summer Leadership Institute</li> <li>Support the Science Department in building partnerships and acquiring resources</li> <li>Support hiring and induction</li> </ul>	<ul style="list-style-type: none"> <li>Use 5x8 card and site specific metrics to observe and provide feedback to teachers</li> <li>Support vision/goals of science department</li> <li>Support teacher collaboration and leadership</li> <li>Meet monthly with teacher leaders</li> <li>Elicit input from teacher leaders on school site PL, hiring, master schedule and site goals</li> <li>Ensure all science course offerings are NGSS focused and fulfill UC a-g lab requirement</li> <li>Attend Principal Science PL</li> </ul>	<ul style="list-style-type: none"> <li>NGSS-based curricula</li> <li>Revised Linked Learning science curricula</li> <li>District assessments</li> <li>Summer PL and Leadership Institute</li> </ul>