



OAKLAND UNIFIED
SCHOOL DISTRICT

Community Schools, Thriving Students

MetWest High School

2016-17 Measure N Commission Presentation



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Grounded: Root-Cause Analysis

MetWest identified a historically severe science/technology gap in our program in analyzing the school's needs in 2015-2016. Data for concurrent enrollment in technology, in students matriculating post graduation into the sciences/technology/engineering, and students engaged in science/technology internships over the years had been very low. We, as a community, including students, staff, and families identified science/technology as the highest priority focus for our use of Measure N funding. We utilized funds that year for a STEAM prototype that was very successful, and expanded the program this year by bringing on a STEAM lead teacher to write curriculum and develop the program in all areas. We supported the work with additional math and science/technology instruction and materials

Implementation Successes - including data



- Curriculum written, initial classes held in Integrated Science I (NGSS aligned)
- 53 students in two Dual Enrollment Science Courses with Peralta CCD (Agro-Ecology and Physics) with Engineering to be added next year
- Concurrent Enrollment in Science and Math at Laney College increased (49 students concurrently enrolled)
- Coding, robotics, design and digital fabrication program launched
- Maker Space for design and fabrication established (see handout)
- Dramatic increase in internships in science and technology: 52 science, tech, and trade related internships this year. (up from less than a dozen)
- Focused, personalized math intervention strategies increased
- MESA Math program implemented (Math, Engineering, Science Achievement)
- Pilot School for Robert Moses' NSF Algebra Project Intervention program



Implementation Challenges

- It is a pilot year for an innovative program, new to the school. Developing an innovative, integrated STEAM curriculum, in the face of a system designed to parse the learning into siloed courses, is rewarding, but very labor intensive. It is the RIGHT, but not necessarily easy thing to do for our students.
- The Integrated Curriculum is to be the foundation for greater integration of math and science into our ELA and History/Social Science Curricula. We believe this is necessary to develop deep science and math literacy, as well as to sharpen student competence in history and ELA. It is breaking ground, thus challenging in that it demands a shift in school culture. We are working toward a standards based assessment system to facilitate the shift in our Instructional PD.



Learning from Implementation Year 1

We are still exploring the most effective ways to engage students, and develop their passions and skills.

- The student response was far more enthusiastic than we'd hoped for, or expected - both in the science classes, and the hands-on digital and tool based design/fabrication programs.
- Both hands-on programs attracted girls (especially girls of color) at least as strongly as boys
- Our Seed to Table Nutrition program well underway
- Our expectation is that we will see an immediate benefit in standardized test results - too soon to tell, but next year's 10th graders will be first cohort to have experienced the new curriculum



Moving forward

This is the great challenge: to create an integrated education for all our students.

- The next step in our Integrated STEAM program, is to work with our teachers who facilitate our integrated ELA/History-Social Studies curriculum across the grades to incorporate mathematical and scientific thinking and tools in their work - data and statistics, financial literacy, basic principles of human health, and environmental health.
- We are devoting resources (time and funding) toward PD designed to increase the communication and collaboration across the humanities and the sciences in the school.
- Conversely, our STEAM curriculum will incorporate issues of social relevance to our community, and purposefully reinforce literacy. I
- It all has to mesh if we are going to maximize our students' progress, and post secondary opportunities.



2017-18 Measure N Budget Allocations

Expense	Description	Rationale
\$129,618.74	Staff salaries: <ul style="list-style-type: none">certificated science and mathselected grade level advisors (teachers)	Continue and strengthen Science and Math instruction, support integration of math and science literacy into the humanities and ELA
\$7,231.26	Surplus	To be used for supplies, staff PD (technology, tools, lab materials, conferences, etc).

Implementation Year 2

Periodic reflection on the program will occur on several levels:

- Monthly STEAM Team meetings (Science, Math, Digital Design and Fabrication, Maker Space, and Garden/Nutrition)
- Weekly Staff PD
- Weekly Science Team, and weekly Math Team meetings
- Weekly Lead Team Meetings
- Weekly Instructional Lead Team meetings
- Continued PD cycle around standards based assessment that we have started this year. It is at least a three year project to establish implementation, longer to get really good at it.
- Data:
 - Dual/Concurrent Enrollment numbers and grades; Internships
 - Standardized tests - Cal. Science, SBAC, SRI, SMI, SAT
 - Matriculation into Sci/Tech programs

EVERY STUDENT THRIVES!



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