



**All-OPAS Workshop 2009:
ETIC Internal OUS Grant Reporting
February 4, 2009**

**OSU SMILE
Engineering the Future: Youth
Engagement in STEM
\$73,500**

**Community Engagement and Middle School
Engineering Challenge Events**

OPAS Vision for the Year 2020 - All Oregonians have the opportunity to choose and successfully pursue engineering or applied science as their field of study and career, thereby helping Oregon's industries innovate and prosper in the global economy.



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- Goal: Provide curricular, professional development and event support for Family Math/Science Nights and the Middle School Engineering Challenge
- Best Practices: Enable students to see themselves as college-capable through contextual STEM experiences

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Target Audience:	Grade Level	Subject Areas	participants	contacthrs	Recruitment efforts/results
Teachers (26 leading 13 clubs) Classroom teachers serving as advisors for afterschool clubs	Middle school (6-8)	Science and mathematics	24	40	Each partner school district has signed a contract for the operation of the SMILE Club and the participation of the classroom teachers as club advisors.
Students (260 in 13 clubs; average 20 per club)	Middle school (6-8)	Science and mathematics	261 (08-09 263)	48	Club members were successfully recruited through an application and selection process, using very clear eligibility criteria
Underrepresented Populations	Middle school (6-8)	Science and mathematics	185	48	Diverse club members were successfully recruited through an application and selection process, using very clear eligibility criteria.
Other Adult family members of club members	Not applicable	Not applicable		8	Adult family member have been encouraged to participate through informal channels. New efforts are underway to extend in-person invitations to family members through SMILE Liaisons in partner communities.
Other MAT students in project-based learning cohort at OSU	Middle school (6-8) and high school (9-12)	Science and mathematics	26	18	While the cohort has been a part of the SMILE Middle School Challenge, this year marked the first time that the participation of the MAT students was a requirement of the course. It is expected that this collaboration will continue.
Other Senior mechanical engineering capstone students at OSU	Middle school (6-8)	Engineering	3	18	A team of three male ME students selected the SMILE project for their capstone experience. It is expected that The SMILE Program will continue as a project sponsor for the ME Capstone

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Key Learnings

- Contextual learning is important.
- Families are critical partners.
- Schools are looking for support in addressing career related learning standards.
- OST programs offer valuable learning opportunities for pre-service educators.

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- **Biggest Challenges**
 - Meaningful engagement of Science and Math Education cohort
 - Recruiting college student mentors
- **Best News**
 - 2008 Capstone Project – the Mechanical Music Machine – is a hit and conversation starter at Family Math & Science Nights
 - Science Education Faculty have made the Engineering Challenge integral to their Master's Program
 - STEM career awareness focus with families

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