

STEM Service-Learning Getting Connected

Science Technology Engineering and Math



SMUD Energy & Technology Center
October 28, 2010

Agenda



4:00 pm	Opening Activity: Getting Connected
4:30 pm	Welcome & Introductions
4:45 pm	STEM Service-Learning: Students Leading the Way to Energy Efficiency <i>DaVinci Charter students; Zach Ronneberg, physics teacher & Gwynn Benner, UC Davis EPYC (Energy Project Youth Corps)</i>
5:00 pm	STEM Service Learning Network <ul style="list-style-type: none">• Overview• Partner Introductions

Agenda



5:30 pm	Dinner & Discussion
6:00 pm	Key Elements of STEM Service Learning <ul style="list-style-type: none">• Choosing a Meaningful Service Project with Integrated STEM Learning & Content• Building an Effective Support Team• Recruitment & Retention of Under-represented Students: Giving Youth a Voice• Career Connections
6:50 pm	Wrap-up & Next Steps

Getting Connected



Puzzle Pieces Activity

What is Service Learning?



- ▣ Service learning is a teaching strategy that enhances academic learning and civic responsibility by integrating the core curriculum with service to the community.

STEM Service Learning



- ❑ Service learning projects that **integrate** the STEM (Science, Technology, Engineering and Math) disciplines.
- ❑ STEM SL **partners** include higher education, community organizations, agencies, STEM professionals and mentors.
- ❑ Emphasis on recruiting and retaining women and **underrepresented** minority students in STEM courses.
- ❑ **Career connections & pathways** – developing 21st Century skills and experience.

STEM Service Learning



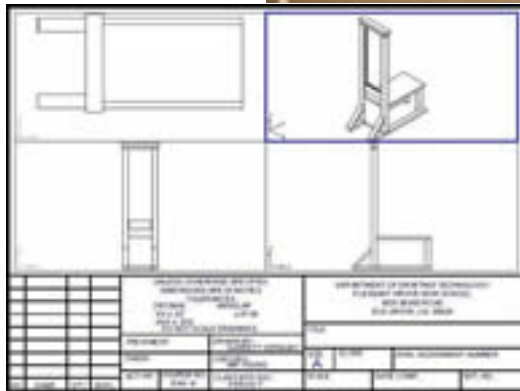
- ❑ Piloted STEM Service Learning in Region 3 in 2009-10.
- ❑ Teams at 25+ schools include secondary students & teachers working with higher education faculty & students, industry and/or community partners
- ❑ Teams design & implement projects to meet community and school needs in energy, health, environment and more.
- ❑ Funded by a grant from California Department of Education (CalServe)

Monterey Trail High School



- ❑ Students studied campus waste management & litter issues
- ❑ Designed prototype solar trash compactor
- ❑ Designed recycling video games to educate and raise awareness

Pleasant Grove High School



- Designing & building projects for partners
- Guitar rack for music class
- Bookcase for the Center for Fathers & Families
- Interactive display case for Stone Lakes Refuge Nature Center
- Tilt table for the Exploratorium
- And more....

Envirolution: Truckee High



- ❑ **Trashion Show**
- ❑ Raising awareness with fun and flair
- ❑ Student assemblies promote environmental stewardship
- ❑ Every student receives a conservation kit

Robotics for After School



- Einstein Education Center, Woodland
- Students learn how to build and program robots
- Teach students in elementary after school program

Calvine High School, Elk Grove



- ❑ Strawberry Creek Monitoring Project
- ❑ 5th year of science classes monitoring creek that is adjacent to the school
- ❑ Award winning project

McFarland Ranch, Galt



- Galt youth in an after school program partner with local construction firms and local historical society to restore an historical building



Want to learn more?



For more examples of STEM
Service Learning projects in the
Sacramento Region...

Visit www.calstem.org

Join the STEM Service Learning Network



- ❑ Form a team that includes students, higher education, industry, community organizations, agencies and mentors.

- ❑ Each team will work with a facilitator to identify resources and provide guidance in developing and implementing a project.

- ❑ Free professional development and networking events:
 - Getting Connected, October 28, 2010
 - STEM Service Learning Institute, January 27-9, 2011
 - STEM SL Networking Meetings, February – April, 2011
 - STEM SL Showcase, April 2011, date tbd
 - And more!

Join the STEM Service Learning Network



- ❑ Implement your project during the 2010-11 school year.
- ❑ Teams will participate in project evaluation and surveys as requested.
- ❑ Teams share project information and photos on the California STEM Service Learning website.
- ❑ Opportunities for release time substitutes and stipends – talk with your facilitator.

STEM Service Learning Network



- Introducing our Partners

Four Corners Discussion



Key Elements of STEM Service Learning

- **Integrating STEM Content within Service Projects - Bob**
- **Building an Effective Support Team - John**
- **Recruitment & Retention of Underrepresented Students: Giving Youth a Voice - Mike**
- **Career Connections - Deb**