

NSF Enhances Science in K-12 Classrooms

- US students **are falling behind** in **Science, Technology, Engineering and Math (STEM)**
- US high school seniors tested **below the international average** for 17 countries in mathematics and science (<http://nces.ed.gov/surveys/pisa>)
- High STEM skills are necessary to keep the US globally competitive



To address the problem National Science Foundation (NSF) funds **the Graduate Teaching Fellows in K-12 Education (GK-12) program** which places graduate students from STEM disciplines in K-12 classrooms to collaborate with K-12 teachers.

- Over **7400 graduate students** work with more than **600 000 K-12 students** in **5000 schools** (data from 1998-2008)
- **In California in 2011** there are **17 active projects** supporting close to 130 graduate and 10 undergraduate fellows (<http://www.gk12.org/projet-locator>)

The GK-12 program improves STEM instruction in K-12 schools



- Enriches the learning experience of K-12 students
- Engages students with up to date research
- Enhances teachers' content knowledge and understanding
- Provides K-12 students with role models for scientific careers

Future scientists gain additional qualification and training

- Improved teaching and communication skills of graduate students
- Greater frequency of collaboration
- Increased competitiveness in the job market



Universities and school districts benefit from new partnerships

- Improved access to scientific expertise, technical resources and equipment
- Enhanced outreach opportunities for faculty and graduate students



GK-12 Program CAMEOS



Coastal, **A**tmospheric, and **M**arine **E**nvironmental **O**bserving **S**tudies

Goal: to increase ocean literacy and scientific understanding in K-12 students through an open inquiry approach.



Fellows introduce scientific inquiry and share their passion for research



Students plan and execute their independent research projects



Students analyze their data and interpret their research



Students present their projects to teachers, fellows and peers

Resources:

General information about the GK-12 program: <http://www.gk12.org>

GK-12 Technical Report: <http://www.abtassociates.com/reports>

UC Davis GK-12 Program CAMEOS: <http://www-bml.ucdavis.edu/cameos/>

For further information contact:

Professor Susan L. Williams
slwilliams@ucdavis.edu

University of California Davis
Bodega Marine Lab

Director UC Davis GK-12 Program "CAMEOS"

Renate Eberl

reberl@ucdavis.edu

University of California Davis
Graduate Group in Ecology
GK-12 fellow, Project CAMEOS