

UC SANTA BARBARA

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UCSB Scientists and Students Mentor Eighth and Ninth Grade Santa Barbara Students and Help Teachers

Students from UC Santa Barbara are mentoring students in eighth and ninth grade science classes in Santa Barbara as part of a special outreach program funded by the National Science Foundation. The media is invited to observe classes at Santa Barbara Junior High on Sept. 13 and 14.*

The science outreach program is called "Let's Explore Applied Physical Science" or "LEAPS." It aims to improve the skills of undergraduate and graduate students in communicating science to the public. As a central part of the program, it engages UCSB graduate and undergraduate "fellows" as instructors and mentors for exciting science projects in physical sciences in eighth and ninth grade classrooms.

LEAPS establishes collaboration among fellows, school science teachers, and UCSB faculty scientists. The experience benefits the fellows, but also increases the number of teachers present during experimental science lessons, which greatly benefits the students, said Wendy Ibsen, LEAPS coordinator at UCSB.

Bridget Owens will return for a second year as a LEAPS fellow at Santa Barbara Junior High. She is studying for a Ph.D. in chemistry at UCSB with a research focus on inorganic chemistry and photochemistry.

"I really like working with the students," said Owens. "I love the outreach, being able to share my enthusiasm for science." Owens plans to pursue teaching after she completes her degree.

Beth Gwinn, professor of physics at UCSB, is the LEAPS director. Her field of research is experimental condensed matter physics.

"LEAPS helps people-oriented science and engineering students thrive at UCSB by giving them the opportunity to share their enthusiasm for science with school children, while enjoying a close working relationship with teachers," said Gwinn. "It has been rewarding for me to see the fellows' confidence and ability to communicate grow through their participation in LEAPS. The dedication and creativity of the teachers involved inspires my own enthusiasm for teaching at the university level."

Lead science teacher Marilyn Garza of Santa Barbara Junior High School welcomes the media to observe the LEAPS program in her classroom on September 13 and 14. Garza received her B.S. in materials science engineering from UC Berkeley and after working in industry for a year returned to school to pursue a higher degree in engineering. Once there she discovered a passion for teaching. Garza changed plans and obtained her teaching credential and master's degree in education at UCSB. She has taught at Santa Barbara Junior High School for nine years.

This week the students in her classroom will be working with finger mazes, mazes on paper that have a raised line that the students can complete with their eyes closed, explained Ibsen. "The objective is for the students to create an experiment, carry it out, and report their data. It is a way for students to learn about controls, variables and experimental design."

LEAPS mentors are also involved in science fair projects and family science nights. A list of LEAPS projects includes demonstrating states of matter using liquid nitrogen, building musical instruments as an engineering project, constructing egg drop containers and taking field trips to UCSB to test them, designing both combustion and water rockets, and creating take home electrical circuit building projects.

At a celebration of the continued funding of LEAPS, Michael Grundmann, a UCSB Ph.D. student in electrical engineering, said that his participation in the program had changed the course of his career. He enjoyed the teaching and mentoring so much that he decided he is more interested in academia than industry. He hopes to become a professor.

The program continues this year thanks to continued funding from the National Science Foundation. LEAPS is based in the university's California NanoSystems Institute directed by Evelyn Hu, with Fiona Goodchild as CNSI education director.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.