

UC San Diego

UC San Diego News Center

By Erika Johnson

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Dianna Cowern, outreach coordinator for the UC San Diego Center for Astrophysics and Space Sciences, conducted physics experiments with 7th graders from Albert Einstein Academy at Coronado Beach to spark an interest in science. Photos by Erika Johnson/University Communications.

KFMB's INNOVATE 8 Initiative Shines a Light on UC San Diego STEM Outreach Efforts

It's a sunny afternoon on Coronado Beach and 7th graders from Albert Einstein Academy are taking in some rays...that is, viewing a solar eclipse through specialized gear. The students were taking part in hands-on physics experiments on the beach to engage them in STEM learning—science, technology, education and mathematics. Led by Dianna Cowern, outreach coordinator for the UC San Diego Center for Astrophysics and Space Sciences, the physics workshop was filmed by a CBS News 8 crew for an INNOVATE 8 feature, a collaborative initiative to encourage exploration and inspire innovation in STEM learning.

“The ultimate goal is to change the idea of what physics is, spark some curiosity, get them asking questions about the world around them,” said Cowern in the feature. “When I see a kid go, ‘Wow!’ it makes me excited...I see myself as a kid.”

Established last year, INNOVATE 8 is a partnership between UC San Diego, CBS 8 News and the San Diego County Office of Education designed to inspire and engage K-12 students to excel in STEM learning through interactive, educational opportunities. The INNOVATE 8 initiative strives to awaken a sense of wonder in young students by involving them in hands-on science experiments where they can learn what it’s like to be a scientist and imagine themselves as key players in the search for solutions to national and global issues.

“Just over half of San Diego County’s 500,000 students are socio-economically disadvantaged. For many of those students, STEM is something you learn in class or something other people do; they don’t have regular contact with real-life role models who work in the field,” said Music Watson, chief communications officer at the San Diego County Office of Education. “The beauty of INNOVATE 8 is students can turn on the TV and see kids who look like them actively engaged in hands-on science or engineering or technology. They start to think ‘I can do it, too!’”



Working with simple ingredients like dry ice, dish soap and eggs, students learned about basic physics principles like sublimation in hands-on experiments.

“CBS 8 is proud to engage and inspire thousands of K-12 students in STEM learning through INNOVATE 8,” said Patricia Elwood, community services director at CBS 8. “Our kids are the next generation of innovators and game changers and together with the San Diego County Office of Education and UC San Diego, INNOVATE 8 recognizes our county’s brightest STEM students, profiles relevant STEM programs and provides hands-on STEM learning through mentoring.”

Numerous STEM outreach programs at UC San Diego have been broadcast, including the UC San Diego Center for Research on Educational Equity, Assessment and Teaching Excellence (CREATE). “The INNOVATE 8 partnership with UC San Diego has helped to increase awareness about the campus’s commitment to improving STEM learning opportunities on campus,” said Mica Pollock, professor of education studies and director of CREATE. “We have so many colleagues committed to expanding support to schools, neighborhoods, teachers and students on- and off-campus. It’s great to showcase these collective efforts.”

UC San Diego chemistry and biochemistry lecturer Robert “Skip” Pomeroy recently visited Castle Park High School in Chula Vista to show students how vegetable oil can be converted into biodiesel. “I wanted to come back and do some outreach in the community I came from,” said Pomeroy in the



Students from Castle Park High School visited the laboratory of JoAnn Trejo in the department of pharmacology, where they learned from Terri Stoner about the blood brain barrier and vascular endothelial cells.

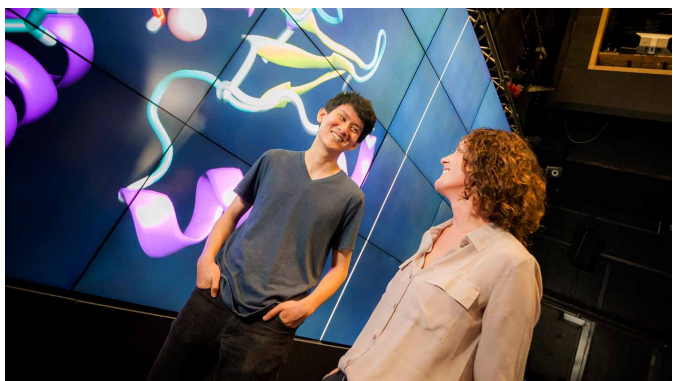
feature, who attended Castle Park High School. “I’ve been using this mechanism of biofuels as a way to try to teach chemistry to students to help prepare them for going to college. I want them to have academic persistence...I want them to walk away with the feeling that even if it seems difficult, it can be done.”

The INNOVATE 8 crew shadows students as they visit UC San Diego laboratories, meet scientists and engineers in the field and take part in high-level research projects.

During the summer, local teens delved into the mysteries of the universe, crafting models and plotting data on the rise and fall of the moon and stars as part of an astronomy

course at the San Diego Supercomputer Center (SDSC) at UC San Diego. Other students took part in computational research projects in topics ranging from osteology to geographical topography and searching for a cure for cancer.

“I like to see them getting in there and thinking critically about what they see in the world around them,” said Sebastien Cormier, program representative at SDSC, in a recent INNOVATE 8 feature. “I can see that in some of them I’m awakening that interest, that spark of curiosity, which, hopefully, will burn for a long time.”



2013 Google Science Fair winner Eric Chen. Photo by Erik Jepsen/UC San Diego Publications

An additional feature profiled 2013 Google Science Fair winner Eric Chen and his mentor UC San Diego Professor Rommie Amaro. Also highlighted were graduate students who started ThoughtSTEM to teach coding to local elementary children and an interactive programmable robot called MiP co-developed by UC San Diego’s Coordinated Robotics Lab to engage kids in STEM.

UC San Diego’s partnership with the INNOVATE 8 initiative includes 30-second spots, public

service announcements and news segments featuring UC San Diego’s STEM outreach efforts and programs in K-12 classrooms countywide. This broadcast campaign has served 22,581,000 impressions, reaching 93.5 percent of San Diego TV households. The digital campaign has served 1,018,149 impressions which resulted in 6,191 click throughs to UC San Diego websites. To view UC San Diego’s INNOVATE 8 news features, visit the UC San Diego You Tube playlist [here](#).

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