UC SANTA BARBARA

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‘I Want To Do Chemistry’

This year’s rainiest day did not dampen the enthusiasm of approximately 500 junior high and high school students who participated in the 15th annual Science & Technology (S&T) MESA Day at UC Santa Barbara on Saturday, March 1. Mainly first-generation college-bound and underrepresented minority students in the science, technology, engineering and math (STEM) fields, these precollege students were given a firsthand look at university life.

The daylong event was hosted by Los Ingenieros; the National Society of Black Engineers; the Society for the Advancement of Chicanos/as and Native and Native Americans in Science; and the Mathematics, Engineering, Science Achievement (MESA) Program.

Designed to expose potential college students to STEM in a fun and accessible way, the event featured interactive workshops, demonstrations, presentations and project competitions, which expanded their knowledge of STEM and connections with college students and faculty.

The Amazing Chemistry workshop thrilled student participants. Paul Salcedo, a sixth-grader from Isbell Middle School in Santa Paula, watched in awe as demonstrators mixed chemicals that repeatedly turned different colors and then went clear before the color returned almost magically. “That was fun,” Salcedo said, after lighting a methane-filled bubble as it floated to the ceiling. “I want to do chemistry.”

This year’s guest speaker, Gerardo Aldana, associate dean of the College of Creative Studies and professor of Chicano and Chicana studies and of anthropology at UCSB, delivered his interpretation of the event’s theme, “Never Give Up: Take Action in STEM.” He used examples from his own research on Mayan astronomy and from the role of European immigrants in mid-20th-century chemistry to give students a different take on what science can be and how diversity and differences can provide new insights.

“We need to move society to be more inviting to you all, to welcome you into the world of science and technology,” he said. “But you need to meet us halfway. You need to keep pushing forward when people challenge you or question your interest in STEM fields.”

“The purpose of Science and Technology MESA Day is to immerse students in engaging science, technology, engineering and math activities that will allow them to envision themselves as future STEM college students and career professionals,” said Phyllis Brady, director of the MESA programs. “The experience reinforces their academic preparation and goal orientation for higher education, introduces them to college models and opportunities, lets them experience being on a university campus and allows them to picture themselves as future college students, even scientists of the future.”

Participants in S&T MESA Day also learned about academic preparation and the college application process and had an opportunity to meet with representatives from the Office of Education Partnerships and the Office of Financial Aid and Scholarships. Representatives provided assistance with admission procedures, including the Free Application for Federal Student Aid (FAFSA) preparation sessions, and information for students impacted by Assembly Bill 540, which allows qualified undocumented students to pay in-state tuition at California’s public colleges and universities.

The junior high and high school students — along with their parents — also attended college- and career-focused workshops, student panels and question-and-answer sessions. Throughout the day, students served as important role models in leadership, scholarship and community involvement.

“I’ve been involved with MESA since 1999,” said Emigdio Córdova, special programs counselor at Oxnard High School. “I have former students that participated in MESA

in middle school, then in high school and are alumni from UCSB in the engineering fields. I have many students now that are in various STEM fields at UC Santa Barbara. Not only are MESA students exposed to the STEM fields, they see people they can relate to."

Mario Castellanos, executive director of the Office of Education Partnerships, concurred. "Meeting these university students, who are exceptional in their families — and even in their communities — allows the young students to connect with real role models, get sympathetic answers to their questions and imagine themselves as confident college students who, one day, can also be involved and encouraging to other young students," Castellanos said.

The opportunity to witness the successes of the relatively large collective of underrepresented minority and first-generation students is unique and powerful, especially in the STEM fields, Castellanos noted. "S&T MESA Day lets us put a human face on STEM fields that have been known as obscure and inaccessible, especially for people of color from backgrounds with limited resources and higher education," he said.

"The cross-generational enthusiasm for STEM education — from young children, including younger siblings, through our MESA Schools Program students in sixth grade through 12th grade and the community college and university students as well as the advisers — was warming on such a cold and rainy day," Brady said. "Sharing that enthusiasm was actually contagious and the ultimate goal of the S&T MESA Day."

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.