

Cristen Dias, a sophomore at Pajaro Valley High School, reads her mousetrap car for a distance and accuracy competition Saturday at UC Santa Cruz at the annual MESA Day preliminary competition.

Tarmo Hannula
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Students refine engineering, math skills

MESA competition at UC Santa Cruz draws more than 400 students

By TARMO HANNULA

OF THE REGISTER-PAJARONIAN

SANTA CRUZ — Local students rolled up their sleeves and showed their might Saturday at the annual Math Engineering Science Achievement Day preliminary competition at Jack Baskin School of Engineering at UC Santa Cruz.

The one-day event drew about 450 middle and high school students from around Santa Cruz County. Math competitions included tests in algebra, trigonometry, geometry, precalculus

and calculus. Hands-on physics competitions included student-created balloons, sawwood gliders and planes, mousetrap cars, egg drops, speak easy, digital 3-D models of a human eye, robotics and wood stick bridge construction.

"I built a mousetrap car this year," Pajaro Valley High freshman Adrian Rocha said. "It only took me about 45 minutes to build, but I had to make some modifications and that took another 90 minutes or so. It's pretty challenging. It's tough, but at the same

time it's rewarding. You really learn a lot from being around all these people." Pajaro Valley High sophomore Cristen Dias said her mousetrap competition was "very difficult" to build. "I made it the first time and it failed," she said. "So I made a second one and snapped in half. Then I remade another one and it turned out pretty good. It is my second year at MESA. It's a great event; it's fun."

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Rocha finished third and Dias placed first. Dias' entry, in fact, crept up the test strip about 9 feet and stopped just inches from the target mark to a roar of applause for onlookers. Mousetrap cars, for that competition, are graded for distance and accuracy. Many of the entries simply stood still once tripped. Some even rolled backward. One car flipped over while another stopped halfway across the start line. Students and onlookers quickly got the idea that to have a mousetrap car move at all is an accomplishment, let alone roll a calculated distance and then brake near a target.

Dias was visibly overjoyed by her success.

Watsonville High freshman Sara Benavidez and sophomore Gabriel Sanchez said they competed in the solo math event.

"We were tested on algebra II and some trigonometry," Benavidez said. "It was a 50-minute test. I think I did all right."

Pajaro Valley High physics instructor Don Freitas said four students from his school were taking part in MESA Day.

"Some of our students love these events and they can't wait to just sink their teeth into the projects — it's really encouraging," he said.

Watsonville High senior Frank Torres said he entered the balsa wood stick bridge competition.

"It took about three weeks to build," he said. "It's a challenge; you have to get all the angles right. No matter what you think, you never know what's going to happen when they put pressure on the bridge."

The goal of MESA Day is to provide an opportunity for students to apply mathematics, science and engineering principles to individual and team academic contests, encourage students to explore attending college, build self-esteem, and expose students to cutting-edge technology and a college campus and faculty.

Finalists in the 22 MESA contests across California will now move on to finals in San Luis Obispo and then on to a national competition.

ABOVE: Watsonville High students Sara Benavidez (right) and Gabriela Sanchez control an underwater robot at the MESA event. BELOW: Pajaro Valley High freshman Adrian Rocha launches his mouse trap car.

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