HISPANICS IN ENGINEERING

Watsonville youth get help from Cabrillo students

College society introduces Latino youth to careers in math, science-related fields

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WATSONVILLE: Gabriel Murillo, 12, began to think he'd like engineering when he started helping his father, a berry farmer, lay irrigation pipes.

He also loves building with LEGOs, he said.

Gabriel helped design a paper wind turbine Thursday, as part of Alianza Charter School's Math, Engineering, Science Achievement after-school program. The project, overseen by students from Cabrillo College's Society of Hispanic Professional Engineers chapter, was the start of a partnership introducing Latino youth to college role models and science careers.

At the back of a busy portable classroom, Gabriel and classmate Adrian Navarro hunched over their design, drawing and re-drawing turbine blades.

"Make it bigger," said Adrian.

"But then it's gonna be more weight," Gabriel said. They played with different shapes.

"Look at the fan, Gabriel," Adrian said, pointing to one humming nearby. "The things are tilted. You can't draw it."

Minutes later, the pair came up with a design that looked surprisingly similar to the real thing.

Jose Jimenez, 21, and president of the Cabrillo chapter, said he was once in their shoes.

A 2011 Watsonville High graduate, Jimenez started the chapter this fall, wanting to work with low-income Latino youth.

"When I was their age, people never came to my school and told me what engineering was," Jimenez said. "I didn't find out until college."

Growing up in Pajaro Valley schools, Jimenez said he saw plenty of outreach for careers in agriculture, but not enough in science, technology, engineering and math.

"I want to increase the number of Latinos in STEM careers," he said. "It motivates me too. Engineering is not an easy thing."

The chapter, which has around 10 active members, visited Santa Cruz's Beach Flats.

Cabrillo engineering student Ivan Ayala, center, explains wind turbine design to Alianza Charter School students in Watsonville on Thursday.

Mel Pardo — Contributed

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Community Center in December, to build bridges and marshmallow towers with around 35 elementary and middle school students. The chapter also plans to attend a conference and tour a water treatment plant and Santa Cruz Bicycles this spring.

Only 34 percent of Cabrillo STEM majors are Latino, compared to a 39 percent Latino rate in the college overall, said Kelli Horner, Cabrillo's STEM coordinator.

The gap, now 5 percent, is decreasing, said Horner. Five years ago, STEM majors had 10 percent less Latinos than the general population, she said.

Alianza's MESA program is part of a statewide network for educationally disadvantaged students, with chapters at Watsonville High, Cabrillo and UC Santa Cruz.

Evelyn Veal, a teacher who heads Alianza's MESA group, said her students can access the MESA pipeline all the way through college. Middle school is a crucial time, when students tend to lose interest in math, she said.

Veal said she especially wants to reach Latino girls, since so few enter engineering. Having role models that look like them makes goals tangible, she said.

"They see someone else who has clearly done it, who can say 'I like science. I like technology,'" she said.

"It's not just a guy thing."

Melissa Pedro — Contributed

Pedro Ascencio, Alianza Charter School teacher and MESA adviser, encourages students Ximena Greatorex, left, and Maia Madrigal on their wind turbine design.

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