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Ravenswood middle schoolers headed to world robotics championships

By Angela Swartz

In only its second year of existence, the Cesar Chavez Ravenswood Middle School robotics club is headed to Dallas this spring to compete in the VEX Robotics World Championship.

Ravenswood engineering, robotics and leadership teacher Tina Collier at the East Palo Alto School started a robotics class and club, known as the RMS Lions, at the school in 2020. It's grown from eight students last year to 36 this year. Eleven students, who will attend the competition in May, are working to redesign their robots for the championship.

One of the students, seventh grader Uriel Farias, 12, placed third in his division in the world last year. Students competed , virtually last year because of the COVID-19 pandemic.

"I was picking electives and got interested in robotics because I like building things," said Uriel during a club meeting on March 22. He's interested in an engineering career down the line.

His sister, Elizabeth, 14, an eighth grader at the East Palo Alto Charter School down the street, joined the club last fall and also will go to Texas in May to compete with the metal robots. She's interested in electrical engineering.

Collier established the engineering program two years ago when she joined the school. Before that, the school just had a makerspace. Now, there's a onehour daily robotics class and the robotics club meets for two hours on Tuesdays and Thursdays after school.

Collier, who became involved in robotics in 2004, also runs Modesto Robotics and Technology, which is aimed at robotics education for kids in the community she lives in.

She enjoys seeing the robotics students have "ah-ha moments."

"They seem to challenge each

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Magali Gauthier

Sixth grader Arturo Elizalde makes an adjustment on his robot during the robotics club meeting at Cesar Chavez Ravenswood Middle School in East Palo Alto on March 22. The club, which is in its second year, is competing in the VEX Robotics World Championship in May.

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other frequently to step up," she said. "They drive what (projects)

they want to do." She's also happy the students are learning skills, especially design expertise, they can use in their future professional lives, she said. In addition to metal and plastic robots, students are building chairs out of cardboard, hydraulic devices, laptop cases and other items.

"There's so much industry around that they can become part of," Collier said.

Preparing for the trip to Texas

Colliers bought special boxes for the metal robots, which protect them if they move around in the cargo area of the plane en route to Dallas.

Student-led teams — from elementary to the university level — will showcase their game strategy, design and teamwork skills at the competition, which takes place from May 3 to 12.

The competition is run by the Robotics Education & Competition (REC) Foundation. The foundation aims to increase student interest and involvement in science, technology, engineering, and mathematics (STEM) by engaging students in hands-on, affordable, and sustainable robotics engineering programs.

The school is funding the trip to the world championship this year, but they will have to start fundraising in the future, Collier said.

Grant funding

Collier said she applied for grants to make the robotics

program possible at the East Palo Alto school.

Last school year, she won a \$50,000 state implementation grant that funded equipment like a 3D printer, commercial printer and other robotics equipment.

She also secured a \$144,000 grant to build engineering career pathways from the elementary to community college levels in the area. She and her students will introduce district elementary schoolers to robotics.

"The younger they get started in design thinking, the more it helps them in school and life in general," she said. "They learn to problem solve."

For more on the upcoming competition, go to robotics education.org/vex-roboticsworld-championship.

Other local schools competing in the championship in the Ravenswood school's division include Sandpiper Elementary School in Redwood City, according to the VEX Robotics website.

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Elizabeth Farias, an eighth grader at East Palo Alto Charter School, works on her robot during the robotics club meeting at Cesar Chavez Ravenswood Middle School.