

Engineering is winning at Citrus Valley

By Hector Hernandez, Jr., Highland Community News

Posted: Thursday, May 4, 2017 3:43 p.m.

Five Citrus Valley High School engineering students brought home three top awards in the recent regional and state Skills USA engineering and career technology competitions by winning a Regional Championship in Welded Sculpture and taking first and second in the State Robotic Search and Rescue Championship held in San Diego April 20-23.

The Skills USA championships pits high school students from schools across the state, and eventually the nation, against each other in competitions designed to develop career and technical skills for a variety of careers from culinary arts to automotive design.

The team of Torry Linton and Doug Herrin won the State Championship for Robotics: Urban Search and Rescue and their classmates Aaron Perez and Brian Steedley took second place with their design.

To meet the challenge, each team designed and built a remote-controlled robot to search a model urban environment, grab and evacuate two wooden block "bombs" in the best time. Linton and Herrin completed the task in two minutes and 30 seconds and Perez and Seedley completed it in 3:33. Linton and Herrin will now be taking their winning design to the national championships to be held in Louisville, Ky. in June.

"It's very exciting for everyone," said pre-engineering teacher Brian Bartlett. "They've been working on the robots since November and winning state is a good pay off. Including regional and state championships they competed against about 100 other teams and came out top two in California."

To build the robots they designed and built electronic systems to control motors and a camera, constructed the chassis of steel and a plastic 3D-printed claw.

Linton and Herrin credit their win largely to designing a platform on which their robot could carry a block.

"This helped us win because all the other teams could only grab and transport one block at a time," Linton said. "Because we were able to carry one on the platform and hold another in the claw we were faster than the other teams that had to take two trips."

Perez and Steedley's design also had a platform but they had difficulty placing the block on it. They felt that using caterpillar tracks helped them traverse the course, especially a ramp, quicker than those using traditional wheels.

The teams also made quick adaptations that Bartlett says showed a good practical application of skills when they added a bright light when they discovered the course was too dark for their cameras.

Andrew Dean also went to the state championship after winning the regional welded sculpture championship with his sculpture of a short-shinned hawk inspired by Citrus Valley's Blackhawk mascot.

Dean first took up welding last school year when learning the skill from the teacher of his architectural drafting class.

The architectural drafting and engineering courses are each part of the school's Engineering Design career pathway.