



Perris News

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High School Students Build a Solar-powered "Beast"

"The Beast" arrived in pieces and in a box at Rancho Verde High School.

For the last nine months, students from Perris and Moreno Valley have toiled putting together a solar-power boat to compete in speed and endurance races this weekend at Lake Skinner. They pieced the wooden hull together, designed a light-weight and sturdy steering system, installed the electric motor and batteries and painted the craft in the school's colors: red, white and black.

All told, students spent more than 1,000 hours bringing the boat to life.

Rancho Verde students named the sleek 16-foot-long, 42-inch wide, 11-inch high craft "The Beast," a meaner version of the school's mascot, the Mustang.

An air of confidence exuded from the work crew this week as they put the finishing paint touches and graphics on the kayak-like craft in a converted teachers' work area that doubles as its sloop until Saturday.



Edgar Sanchez, 18, of Perris, spent dozens of hours working on "The Beast," the boat Rancho Verde High School assembled to enter into the annual Solar Cup competition at Lake Skinner near Temecula.



Dave Largent helps install a graphic on the hull.

They've taken it out on several shakedown cruises at nearby Lake Perris, learning its handling characteristics and analyzing how it moves through the water. During one test, the boat crashed, slightly damaging the bow. No problem.

"We're confident, very confident," said Edgar Sanchez, 18, of Perris. "If we mess something up, we know we can fix it. I have no fear of making a mistake. It's time for a lot of learning."

The Solar Cup, sponsored by the Metropolitan Water District in Los Angeles, features about 40 teams of high school students vying to create the fastest and longest-running boats powered only by solar energy. Each boat is built from a kit provided to the schools, although teams are allowed to modify their entries in pursuit of speed and endurance.

For instance, the Rancho Verde team opted for a rudder control system instead of a steering wheel. By removing as much weight as possible, they shaved about 25 pounds off last year's entry. A 12-square foot solar panel provides about 170 watts of power per boat.

The winners receive the Solar Cup, a traveling trophy with the names of the victorious schools. The competition is part of the ongoing effort to stress green technologies and drive home the need for water conservation.

Students from the various teams produced Public Service Announcements about the need to use water wisely. At Rancho Verde, the team wrote a 30-second radio spot and called upon the language skills of students fluent in Spanish, German, Urdu, Russian, Arabic and Farsi as well as an English to get the message out.

Each team includes four "pilots," who will steer the boats during the competition. Rancho Verde students hope to get the Beast up to between 20 and 23 mph, so the 200 meter sprint race will be over in about 30 seconds. The endurance tests call upon the boats to complete as many one-mile laps as possible in 90 minutes.

Perris resident Michelle Ahmed, 18, a Rancho Verde senior and one of the boat's pilots, said she is nervous and excited about steering The Beast. She's worked on the project since last summer.

"Since we've worked on it for so long, we know everything is going to be okay," Michelle said. A group of science teachers is assisting the Rancho Verde team. Dave Largent said the students should be praised for their efforts at taking classroom skills like math, chemistry and physics, and applying them in a real-world scenario.

"This project is a collaboration among many disciplines," he said. "We did not have to force feed the students to get them to learn. They applied all their energy."

Senior Luis Rodriguez, of Moreno Valley, said the best part of the project is "making something out of nothing."

"I'm a very competitive person," he said. "I love the competition."



Senior Michelle Ahmed, 18, of Perris, will pilot the Rancho Verde entry at the Solar Cup.