

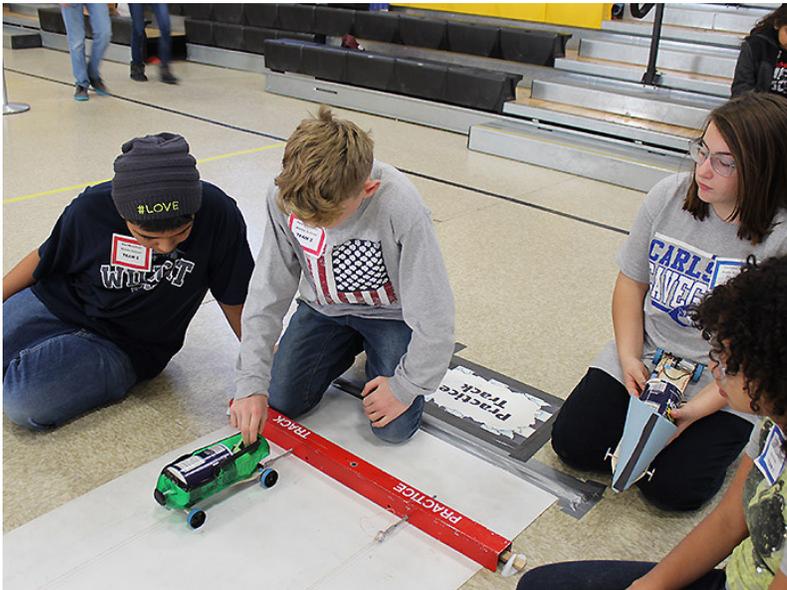


Middle schoolers prepare for statewide Electric Car Challenge

Students learn STEM concepts while building and racing model cars.

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<http://www.lanl.gov/discover/publications/connections/2017-09/education.php>



Students prepare their car to race at last year's Electric Car Challenge held at Albuquerque's Van Buren Middle School. CREDIT: David Moore

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Fully electric cars might still be a rare sight on roads, but Northern New Mexico's children are getting very familiar with building and racing smaller versions of the real things, and learning science and math in the process.

The [New Mexico Electric Car Challenge](#)—now in its 11th year—gives middle school students the chance to form a school team to design and build a small model racecar powered by a battery and motor.

“Applying their science and math skills to something as practical as building a car makes the subjects really come alive for the students,” says Los Alamos National Laboratory’s Janelle Vigil-Maestas, who helps coordinate the challenge.

Forty-seven teams took part in last year’s challenge, and teams are beginning to form now for this year’s event in November.

Gina Aranda’s sixth grade class at Turquoise Trail Charter School in Santa Fe have been participating in the challenge for four years. “The students like the rhythm of the day of the challenge very much, with so much attention given them from real scientists. The sense of competition grows as does the associated pride in their work,” she says.

“They also like the thrill of building and testing a model car before the event. Each year they want to go, even after I tell them that it will be a lot of hard work.”

Students learn about renewable energy sources and explore the emerging technology of electric vehicles, while learning to develop and use applied science and engineering skills, as they face the sort of technical challenges scientists and engineers face every day.

After working on their cars over the fall, the teams bring the finished vehicles to the final challenge where they are judged on the design and craftsmanship of the car, its performance in a series of races over a 10-meter course, and on an oral presentation discussing the challenges facing battery-powered electric vehicles.



Gina Aranda’s Turquoise Trail Charter School class won second place in the Oral Competition at the 2016 Electric Car Challenge. “Thanks to the way the competition is run the students feel like part of a community that cares about them and what they can contribute. No one is handing them anything, they know that they earned their score with weeks of work,” says Gina.