

## ROBOTICS

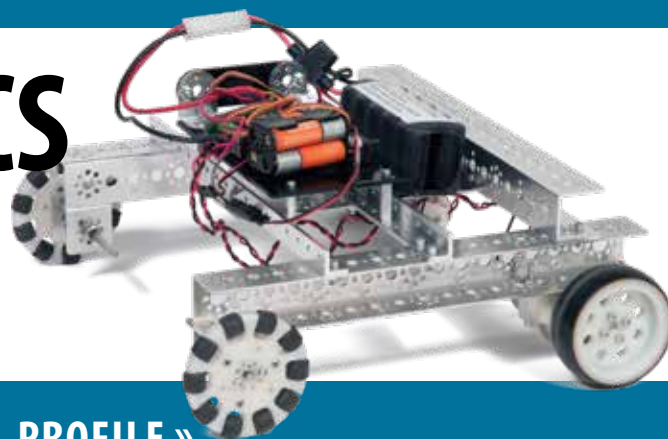


# TETRIX® ROBOTICS

Read how teachers and students are finding success with Pitsco Education products in their classrooms

Several years ago the robotics class at Los Alamos High School in New Mexico was in desperate need of a transformation. Enter Don Davis – the new robotics teacher of the pre-engineering program. He persuaded the district to allow him to purchase TETRIX® robotics kits, and his robotics class suddenly became very popular.

“I knew TETRIX was going to be a great teaching tool just by looking at the components they were using. I wrote a full-class set of TETRIX into a grant that I and teachers of other areas of Career-Tech collaborated on. We were awarded the grant, and I created a new robotics course – Robotics 2,” Don explains. The original robotics class, which used LEGO® NXT, became Robotics 1.



### PROFILE »

**SCHOOL:** Los Alamos High School, University of New Mexico-Los Alamos

**LOCATION:** Los Alamos, NM

**TEACHER:** Don Davis, pre-engineering program head at Los Alamos High School, assistant professor of Applied Sciences at University of New Mexico-Los Alamos

**GOAL:** Create successful robotics classes using TETRIX®

Since TETRIX was introduced to the class, Don's schedule has grown to eight classes of Robotics 1 and 2 per year. Don believes that part of this success is due to TETRIX being open-ended, allowing the kids to be creative. "I have come to realize the incredible amount of motivation a student has when allowed to create," Don says. "Solid skills and the opportunity to do creative problem-solving – that is a winning combination."

The students in Don's classes are learning skills that not only lead to success in his class but provide real-world applications as well. "I know the value of seeing all these fragments of knowledge that are picked up in various other classes and courses meld together into a 'toolbox' of skills that are now better understood and better able to be applied to real-world problem-solving," Don explains. "These robotics classes are specifically robotics classes. But robotics, by its very nature, is so engineering intensive and STEM intensive that the students are fully involved with the engineering design process. All my robotics challenges are open-ended engineering design-type activities."

TETRIX enables Don's students to work as a team and help each other problem-solve and create successful designs together. "If they see a group whose robot design is giving them a problem, they are more than willing to establish their 'personal expertise' by suggesting changes," he says.

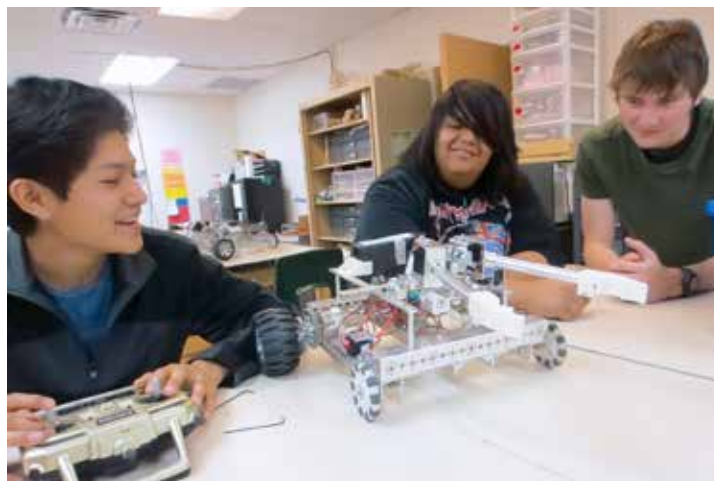
With students being encouraged to be creative, acquire practical skills, and work as a team, it's no wonder Don's classes have been so well received. "The TETRIX kits have been a huge factor in making these classes the success they are," he explains. So successful, in fact, that Don started two college courses at the University of New Mexico-Los Alamos (UNM-LA), Advanced Robotics 1 and Advanced Robotics 2, using TETRIX in both so that his high school students could continue working on robotics.

"At the high school, Robotics 1 and Robotics 2 can be taken as a dual-enrollment course, gaining the students three college credits through UNM-LA," says Don. "At the college, we now have the only undergraduate-degree program in robotics in the state of New Mexico. I have many, many students who go on to seek careers in engineering and science, and I am glad that these classes helped support that choice."



“ IT IS A LOT EASIER TO LEARN ABOUT MOTORS AND MECHANICAL PARTS AFTER YOU HAVE USED THEM TO BUILD SOMETHING. ”

– Ariel, Grade 11



“ THERE IS NO LIMIT TO WHAT YOU CAN DO WITH THESE PARTS. THEY CAN MAKE AN INNOVATIVE SOLUTION FOR EVERYTHING. ”

– Ben, Grade 9

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