HIGH DESERT DAILY PRESS
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Students build robots

'One of a kind' class offered at Lewis Center

April 23, 2012 8:43 AM
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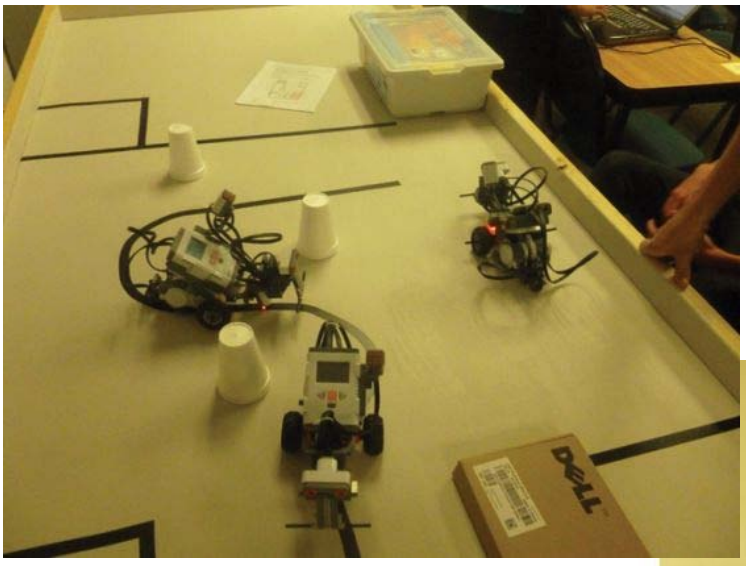

FINAL TEST: Robots built by Lewis Center for Educational Research students maneuver through an obstacle course.

PHOTO BY LYNNEA LOMBARDO, SPECIAL TO THE DAILY PRESS

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FINAL TOUCHES: Students Skyler Doss, left, and Phoenix Solis work on robots during the Lewis Center for Educational Research class.

VICTORVILLE • Ryan Dorcey's eyes light up when he talks about his work. It is easy to tell that this largely self-taught computer whiz is passionate about his career, sharing his knowledge of information technology and computer programming with young people.

The 32-year-old Apple Valley resident is in charge of a brand new robotics class at the Lewis Center for Educational Research. The school is one of three locations for the Academy of Academic Excellence, a group of standards-based charter schools that centers its education on specific areas of learning.

The campus that Dorcey works at is located next to the Mojave River, and tailors its curriculum to have a hands-on focus on science and math. This campus is known mostly for its work with GAVRT, the Goldstone Apple Valley Radio Telescope. This telescope allows middle- and high-school age students to remotely collect data from outer space via a massive satellite located in the Mojave Desert, and send their findings to NASA and JPL.

Dorcey, who has worked with the GAVRT program since 2002, collaborated with David Kenneally, director of technology, and together created a curriculum where 11th- and 12thgrade students can learn how to build and program robots using a programming language called Robot C.

The robots used in Dorcey's program are delivered unassembled and left up to the students to piece together successfully. As part of a mid-term, they had to build a robot and create an algorithm that allowed it to solve a Rubik's cube. The robot mapped the surface of the cube, noting color and location, and was able to physically manipulate the cubes' colors back into their original positions. From start to finish, the robot could solve the cube in an average of six minutes.

"It's amazing," said Dorcey. "We can make a robot that solves a Rubik's cube, but we can't do it ourselves. That's the fun part about working here. It's a great challenge and we solve problems together."

Dorcey, who has three boys of his own, enjoys imparting the complex world of technology to young people, and hopes to extend the robotics program to the elementary level.

"Their little minds are like sponges. We can teach them so much," Dorcey said. "We shouldn't limit what they're capable of learning. There's no reason why they can't learn it (technology)."

Currently, his class has about 10 students, which were paired off at the beginning of the year to work on five robots. Each student was assigned to their own laptop and work on the programming is largely a collaborative effort. Dorcey energetically works through problems the students encounter, offering them advice so they can reach solutions by themselves.

"This class is really cool," said Alanna Carroll, 18. "Right now, we are programming our robots to navigate an obstacle course." Alanna is one of only two female students in the class.