Learning with LEGOs

Robotics camp makes science, math fun.

By JANESE HEAVIN of the Tribune's staff
Published Wednesday, March 28, 2007

Roughly 20 Columbia students are using part of their spring break this week to learn how to program miniature vehicles as part of a new University of Missouri-Columbia LEGO Robotics Camp.

The three-day program is teaching students in fourth through seventh grades how to apply lessons they've learned in science and math classes to the world of technology, said Ashwin Mohan, a doctoral student in MU's Electrical and Computer Engineering Department and co-coordinator of the program.

"LEGO robotics is a means to transfer technology to kids," Mohan said. "We show them how robots can be fun stuff while at the same time integrating learning."

Students are building and programming LEGO carts that can run various tracks and obstacles courses. Students will demonstrate their motorized devices as the camp comes to a close today.

MU's InSITE Team - a program funded by the National Science Foundation that aims to integrate science, technology and engineering - offers robotics materials to students at eight Columbia public schools. Mohan said the camp provides a way to reach out to students in schools that don't currently have a robotics program.

For Zane Kullman, a seventh-grader at Smithton Middle School, the camp was his first introduction to the world of LEGO robotics.

Nick King photo

Smithton Middle School seventh-grader Russley Shaw, left, builds a robot to move as slow as possible as classmate Zane Kullman watches yesterday during LEGO Robot Camp at Lafferre Hall on the University of Missouri-Columbia campus.

"I'm learning programming, wiring and that you can build stuff with LEGOs besides squares," the 13-year-old said. "I'm having fun and learning a lot. Now I just have to convince my parents to buy me one of these."

LEGO robotics materials can be pricey, Mohan admitted. A kit, which includes a programming device that looks like a hand-held computer made of LEGOs, runs about $300.

Sachin Nair, 12, already has LEGO robotics kits at home, but he said the camp is teaching him new ways to program the models. At home, Sachin said, he spent three days trying to figure out one program that he was able to master in about an hour during the camp.

Sachin hopes eventually to get a LEGO robotics program started at Columbia Independent School, where he's a seventh-grader.

"I'm not sure my classmates have ever heard about this," he said. "I'd like to show them. I know they're interested in cars, and you can do a lot of things with the" robotics kits.

MU engineering doctoral students hope to offer similar robotics camps this summer. Mohan said they would like to host an introductory program for first and second-graders and offer more advanced courses for eighth and ninth-grade students.

"We want this to be a fun event for spring break," Mohan said. "We want these kids to get excited about this so they'll come back over the summer."

Reach Janese Heavin at (573) 815-1705 or jheavin@tribmail.com. (Columbia Tribune, Columbia MO)

Fourth- through seventh-graders put their robot know-how to the test at MU's Lego Robotics Camp

Columbia Missourian, 28 Mar 07

(ANDREI PUNGOVSCHI/Missourian)

Lily Faren and Nicholas Orazio get ready to race their Lego vehicles in the snail race.

Bennett Rennier, lower right, watches other children build their Lego vehicles before the snail race at the second day of the MU College of Engineering's Lego Robotics Camp on Tuesday. The camp aims to increase kids' interest in science, industrial technology and engineering through hands-on, challenging design projects.