

# In the name of science

**By Jennifer Moody, Albany Democrat-Herald | Posted: Saturday, May 29, 2010 11:00 am**

The mission: Teach a handful of fourth- and fifth-graders at Albany's Central Elementary School about force, range, arc and other basic principles of physics.

The tools: plastic Lego building blocks, a cardboard box and a jar of gummy bears.

The plan (of course): Build a catapult that will launch a gummy bear across the gym floor and into the cardboard box.

"Bears in flight!" teacher Mark Gullickson, adviser of the after-school STEM Club, crowed as a hail of multicolored candies filled the air.

"Mr. Gullickson?" Mariah Paul Bryant, 10, paused in her assault. "Can I get a drink of water? I think I'm getting sick from eating candy off the ground."

"It's in the name of science," Gullickson assured her.

STEM, which stands for Science, Technology, Engineering and Math, has been meeting once a week after school for the past few months. Club members have worked with computer engineering programs and done tsunami studies. But mostly, they build with Legos.

Gullickson fell in love with using the interlocking blocks as a teaching tool through a summer program he took eight years ago. When he taught at Seven Oak Middle School in Lebanon, Gullickson had a Lego lab that prompted the company to choose his school as a pilot site for the company's "NXT" robot technology.

Now, Lego Education has chosen Gullickson's club among just 12 nationwide to test the curriculum for its new engineering tools. Gullickson's group is the only class on the West Coast — and the only elementary school — to be selected.

The STEM Club got its first look May 19 at the package of the special Legos and the design book. By this past Wednesday, they'd built a robot car that runs on stored energy from a hand crank, and made several notations to the instructions. Their feedback was due Friday.

One of diagrams had a wire circled with a large question mark written next to it. "It had a long wire and we didn't know where it went and what to do with it," said Ashley Klampe, 11.

The book said the wire was supposed to be 20 centimeters, but Lego sent one 50 centimeters, Gullickson explained. "So we caught that, and other teachers did, too."

Other special Lego science kits have included solar panels about the size of a deck of cards, and tiny tubes and pumps to make an air-powered Lego scissor lift.

Kids like Legos, Gullickson said. The toys make it easy to explore a variety of scientific principles.

Illa McCaulou, 9, agreed, saying the Legos drew her to join the club.

Nodding at the scissor lift, she said: "I think it's interesting to see that things in real life can be built out of Legos."