

Alpine students take robotics class

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STAFF WRITER

ALPINE – At first glance, the Alpine Public School science lab looks a bit like a play area.

Legos are scattered on student tables and in plastic containers. A baby pool is filled in an adjoining greenhouse.

The classroom is configured that way each Monday afternoon to teach a group of 20 seventh- and eighth-graders what it's like to be an engineer. Over the next four months, the youngsters will build and test underwater robotic vehicles.

The program, created by the Stevens Institute of Technology in Hoboken, teaches students about balance buoyancy and how gears and electrical circuits work, said Maureen McCann, who teaches the class with Rivka Rosenstein, a science and math instructor.

"They're figuring out how to design something and taking it without a plan and that's what an engineer does," McCann said, adding that they're also grasping how to persist when the vehicles don't work.

"It's this idea of having to work through something and take out the bugs," she said.

On a recent Monday, the students, who already built their underwater vehicles, faced their first test. Using combinations of Legos, propellers, gears, floats, elastic bands and battery packs, the vehicles had to motor quickly across the pool in a straight path.

Students Natasha Rosasco, 12, a seventh-grader, and Lianna Serko, were clearly satisfied with their design. The vehicle, anchored with floats and rubber bands, moved swiftly across the pool in a straight line.

A few more tries though, and it arced to the left.

"Why now?" asked 13-year-old Serko, an eighth-grader. "It was perfect before. We didn't change anything."

"Get the water out of the floats," suggested Rosenstein.

The girls squeezed the floats dry and tried again with no luck. Further tests and a side of the vehicle broke off.

"Every time a person touches it, it breaks," joked Serko.

The girls regrouped and made adjustments. Another attempt and it glided across the pool in a straight line.

"I think we're going to win," Serko said, referring to a planned race among the students to determine the fastest vehicle.

Eric Fox and Alexis Inguaggiato's vehicle still wouldn't go straight despite two days of building and tweaking.

Ten minutes before class ended, Fox, an eighth-grader, and seventh-grader Inguaggiato dismantled it. They would start from scratch the following week.

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The students will be tested further in the next few months. The vehicles will have to navigate an underwater slalom course, submerge and surface, grab balls underwater and place them in a net, said McCann.

The school is one of 33 in New Jersey and New York selected to participate in the institute's program. Tenafly High School is also participating.

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