



Education

Battle of the brains

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Jose Nunez, 17, of Providence, reacts to a poor performance by his team.

WARWICK — Robots that scoop. Robots that shovel. Robots that push. Robots that sweep.

All were on display yesterday — all handmade by Rhode Island high school students — in a robotics tournament at the New England Institute of Technology.

Gallery

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At stake was the championship prize, the opportunity for four teams to compete in the national tournament in Atlanta in two weeks.

Against a background of pumping techno music, students — many wearing team T-shirts — coached their teammates from bleachers on the sidelines: “Open the jaws!” “Back it up!”

The tournament brought together 26 high school teams and more than 200 students from around the state. Dubbed the Vex Challenge, the program is an initiative of FIRST, a New Hampshire-based nonprofit group founded by Dean Kamen, inventor of the Segway scooter, with the goal of getting children excited about math and science so they’ll learn the skills needed for careers in technology, engineering and other related fields.

Yesterday’s tournament applied the fast-paced, competitive model of sports to an engineering challenge, the lesson

being that “inventing and innovating can be just as much fun as playing sports,” said Bruce Linton, senior director of planning and development for FIRST.

The students built their robots from kits, but the robots were far from identical. Each kit contained a variety of parts from which the students could choose, but it was up to the students to decide which parts to use and how to put them together.

All the robots were designed for yesterday’s game, which combined a particular set of tasks: dropping fluorescent-yellow baseballs into high-walled baskets; corralling the balls into designated areas; and pushing a larger ball, then keeping the opposing team from stealing it. All this took place within a boxing-style ring, complete with referees — clad in black-and-white striped shirts — who rushed into the ring between rounds to tally points and declare a winner.

Some robots excelled at slam-dunking the baseballs, others at guiding balls along the ground. In the early rounds, teams paired up with other teams whose robots possessed complementary talents. Each round pitted two alliances — each including three schools — against one another.

In the final round, an electrified crowd stood up from their seats to watch. The teams were neck-and-neck until a fatal blow for the red team: one of its robots rolled over a baseball and became stuck, one set of wheels spinning futilely in the air. In the time it took to right the robot, the blue team stole the “Atlas ball” — a giant exercise ball twice as tall as any of the robots, and crucial because it automatically doubled a team’s score.

Still, it wasn’t clear whether the Atlas ball would be enough to surmount the points the red team had managed to score. A tense silence lingered as the referees counted.

The announcer began in a booming voice: “The winner...

“Of the first...

“Rhode Island...”

(“You’re killing us!” a mom shouted from the stands.)

“Vex...

“Challenge...

“Is the blue team!”

And the crowd went wild.

One of the winning team’s member schools, Burrillville High School, won not only a berth in the national competition but also a Connect Award, given to the team that fostered the best connection with its local community and the engineering community.

“I can’t put it into words right now,” said the team’s adviser, Andrew Aldrich, a 23-year-old first-year teacher at Burrillville High School. “Unbelievable.”

Over the six-week period between the time the kits became available and the tournament, “we had almost 100 hours of work go into this,” Aldrich said. “We met after school at least three times a week. Kids took it home. We met during school vacations. They sacrificed everything.”

The other members of the winning team were Ponaganset High School and Mount Hope High School. Those involved said the winning combination of schools was particularly noteworthy in light of the longstanding rivalry between Ponaganset and Burrillville in sports.

As the winner of the Inspire Award — a model of teamwork — Cumberland High School’s team also qualifies for

the national tournament.

Money for yesterday's contest came from the office of Governor Carcieri, the Rhode Island Economic Development Corporation, the Rhode Island Science and Technology Advisory Council and the Business Innovation Factory. EDC spokesman Andy Cutler said those entities would also help the winning teams come up with money for the trip to Atlanta.

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