

Education

Leland robotics team marching to Atlanta

By Anne Gelhaus

Leland High School's Quixsilver robotics team beat out 36 other teams from three states at a competition in Oregon in early March, a feat all the more impressive since no one on the team had competed in high school robotics before.

Quixsilver will move on from the Pacific Northwest regional tournament, sponsored by For Inspiration and Recognition of Science and Technology, to the FIRST national championships in Atlanta in April.

"We weren't expecting it at all," said team member Gabriel Arambula. "We never thought it would actually happen because this is everyone's first year, and when we got to robotics, it was a dying program."

Quixsilver is the fourth Leland team coached by math teacher Helen Arrington. Last year, Arrington said, the high school didn't have the funding for a robotics program. "We didn't even know we were going to have a team this year; then NASA came through" with a grant, Arrington added.

Now the team faces a new challenge: raising \$10,000 to fund its trip to Atlanta. In addition to fine-tuning their robot, team members are organizing fundraisers and appealing to the community for help with expenses.

"We don't want to miss an opportunity like this," Gabriel said. "We don't want to miss the nationals because we don't have enough money."

The FIRST Robotics Competition challenges students to solve a common

problem in a six-week time frame using a standard "kit of parts" and a common set of rules.

For this year's competition, students designed and built robots to play a live-action version of Tetris. As in the computer game, teams score points for stacking differently shaped tetra in configurations that create rows. The robot must be able to function autonomously, as well as by remote control.

Jennifer Mori and Caitlin Reyda were responsible for "driving" the robot during competition.

"We just had to keep doing it until we got it right," Jennifer said. "I like to play video games a lot, so the controls weren't so hard to master."

Sophomore Jonathan Boyd said the autonomous mode presented a programming challenge, particularly getting the robot's arm to move properly.

"It didn't like to cooperate with us," Jonathan said. "It would just kind of plunk along sometimes."

Most Leland team members competed in Lego League Robotics tournaments in elementary and middle school. Jennifer Mori, a freshman, was captain of the Super Nova Girls at Castellero Middle School last year. This will be her second trip to Atlanta, where the Lego League national tournament is held in tandem with the FIRST competition in the Georgia Dome.

Gabriel's younger brother, freshman Alex Arambula, competed in Lego League at River Glen School. Alex said Leland's "simple, efficient design" made the team's robot stand out in competition. "Lots of teams had more complicated robots," he added.

Jonathan, who also competed in LEGO League, said the FIRST competition was something of a wake-up call.

"You come to this level and realize [LEGO League] was really simple," he added.

With only nine members, Quixsilver is significantly smaller than past Leland teams, which have boasted 30-plus students.

"One benefit of having a small team is that every person gets to experience every aspect," said Amy Qian, who handled much of the building of the robot. "Everyone helped out where they could."

Jennifer said her father, Jim Mori, who coached Castillero's Super Nova Girls, also helped the Leland team.

"He manages a machine shop, so he helped us make the parts," she added.

More than 12,000 students from seven countries are expected to participate in the FIRST nationals. For some Leland students, peer pressure is a factor in the competition.

"You learn how to handle yourself in front of a crowd," Alex said.

For information about making a tax-deductible donation to Leland's Quixsilver robotics team, contact Helen Arrington at helen_arrington@sjusd.org.

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