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Photograph by Vicki Thompson

Wired: Members of Leland High School's Quixilver team (from left to right) Jenny Yang, Michael Su, Eugene Fang double-check their robot before testing.

Leland's Quixilver team gears up for robotics competition, again

By Lydia Sarraille

Programming and engineering may sound more like university fare than high school electives, but for the Leland High School robotics team, it's all in a day's work.

For the third consecutive year, the team of high school students calling itself Quixilver is entering the Silicon Valley regional For Inspiration and Recognition of Science and Technology (FIRST) robotics competition with a 4-foot, 120-pound robot designed to place lightweight inner tubes on an arrangement of racks.

The competition will be held in the San Jose State University Event Center on March 15-17. Admission is free.

Each year, FIRST sets a new task for team robots to complete. Teams are judged on how well their robot solves the problem.

Parents of the Quixilver team members built an exact replica of the competition rack in the Leland school library, which the team has been using for practice and to fine-tune the robot's controls.

In 2005, the team's rookie year, it walked away with the Oregon regional championship.

The team has won several other awards for safety and industrial design in the past two years as well.

Jenny Yang, a freshman and team member, said this year team members have had to attend programming and engineering workshops, raise funds for materials and competition fees and work an average of 12 hours a day designing and building their robot to strict specifications, all in the span of six weeks-- all during a time when they were supposed to be on vacation.

"We've been working during our winter break," team adviser Helen Arrington said. "These kids are heroes."

Arrington, who is also a math teacher at Leland, said the 28 students on the team have shown a remarkable amount of dedication to their project.

"They work very hard," Arrington said. "I don't even want to think about the number of hours we've spent doing this."

Team members are quick to point out that their teacher works just as hard.

"Mrs. Arrington spends a lot of time doing this, too," said Leland senior Caitlin Reyda, the team's treasurer. "Sometimes we're here until midnight or later, and she stays the whole time."

The team's robot has a large arm that can be moved to grasp and place the inner tubes. A platform that can be raised and lowered is built into the base of the robot for a section of the competition in which robots are required to lift other teams' robots.

"The idea is to see how far you can lift the other robots and how much weight you can bear," Jenny said.

Quixilver is being mentored by Jim Mori, whose daughter, Leland sophomore Jennifer Mori, is on the team. Mori has donated the use of the Exatron machine shop where he works as a manager to the team.

Jenny said corporate sponsors and family ties are two ways the team has been able to successfully raise the necessary funds to compete.

One of the team's biggest contributors was Google, which gave \$4,000 to the team.

Amy Qian, the club's president, said the team would not be able to compete without the generosity of the community.

"We live off of donations," Qian, a senior, said. "Donations and generous grandparents."

The team is currently fund-raising for the next level of the competition, the nationals in Atlanta, which the team will be able to attend regardless of the outcome of the regional competition. The team's win in 2005 gives it the right to go to nationals the following year.

For more information on FIRST and the robotics competition, go to www.usfirst.org.