Loggerbots Head to First Competition of the Season

Vernonia team participate in area robotics competitions

By Scott Laird

The Vernonia Loggerbots, team 4127, had a good showing at their initial FIRST Robotics competition of the year at the Clackamas Academy of Industrial Sciences in Oregon City on March 15-

Engineering instructor Brett Costley, along with Educational Assistant Camrin Eyrrick, have been assisting the students with developing their robot, receiving mechanical, technical, and construction expertise from volunteers Jack Finzel and Jay Anderson.

"We got a lot of help from OMIC (Oregon Manufacturing and Industry Center) this year," said Costley. "OMIC provided a lot of financial support for the three teams from Columbia County schools, along with providing other components of the robot. They've been really generous and really seem like they want to help."

FIRST (For Inspiration and Recognition of Science and Technology) Robotics competitions prepare students to solve real world problems through robotics challenges that inspire innovation and leadership while igniting curiosity and passion to explore the worlds of science, engineering, and technology.

FIRST offers four international programs for K-12 students. The Vernonia Loggerbots participate in FIRST Robotics Challenge, designed for students in grades 9-12. FIRST also offers a Tech Challenge for students in grades 7-12, and two LEGO competitions for students K-8.

The Loggerbots compete in the Pacific Northwest Division and can attend two of 10 scheduled regional events during six weekends in March and early April. They compete against teams from





all over Washington and Oregon, including Portland, Hillsboro, Gresham, Eugene, Hood River, Bend, Ashland, Astoria, Brookings, Blachly, Battleground, Chehalis, and even a team from Anchorage, Alaska. Teams from all over the United States compete in FIRST events each spring.

Each year FIRST develops a new test for the Robotics Challenge, with several opportunities for competing teams to create a moving robot that perform tasks to score points.

This year's challenge is called Destination: Deep Space in which two competing alliances are collecting samples on planet Primus. Unpredictable terrain and weather patterns make remote robot operation essential to their mission on the planet. With only 2:30 until liftoff, the alliances must gather as many cargo pods as possible and prepare their spaceships before the next sandstorm arrives.

Instructor Brett Costley helped explain what his robotics team actually needs to do during the competition. "Teams are randomly matched with two other teams to form an alliance and

work together. At the start of each 2:30 round driver visibility is reduced for 15 seconds so the robots have to independently follow pre-programmed instructions or are operated by human drivers by video camera; our team is using video. Alliances score points by gathering hatch panels and placing them at different heights on a rocket ship or loading cargo, which are balls. At the end they score points by climbing a three-tiered platform in the playing area."

Teams score more points in a variety of ways for placing hatches higher on the rocket, for climbing higher on the platform, and for cooperating with the other teams in their alliance. Costley says the Loggerbots robot can climb to the second tier and can place hatches on the lowest level of the rocket. Their robot is unable to move the cargo (balls).

Costley says one unique feature of the Loggerbot robot is a ramp they

can deploy which will allow another team in their alliance to reach the highest level on the platform and earn extra "ranking points." "Our team made a design decision at the beginning to develop the ramp and make us a valuable alliance partner for other teams," explains Costley. "Every year there is some kind of a climb at the end. Getting to the highest level is always a fairly complicated task and is worth a lot of points and worth ranking points, which is what really matters for advancing. We think it's a really cool idea, and it's cooperative."

The Loggerbots struggled early in the first day of the two-day competition, but ended strong, winning their final three matches in a row. They ended day one with 3 wins, 6 loses and 1 tie and were in 23rd place out of 36 teams heading into the second day of competition. The Loggerbots did especially well continued on page 17

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