



Contact: Maureen Falcon
553-9424 or falconm@mercyhigh.org

Maureen Davis
553-9424 or davism@mercyhigh.org

Mercy High School's Robotics Team Attends World Championship

Mercy High School's robotics team attended the FIRST Robotics World Championship in Atlanta, Georgia April 12—14, 2007.

General information about FIRST and this championship event can be found on the website www.usfirst.org. On that website, you'll find information about the three programs FIRST operates. Mercy competed in the "FIRST Vex Challenge," or "FVC" portion of the tournament which also included an "FRC" competition with large robots, and an "FLL" competition with small Lego robots.

The only Nebraska teams present at the World Championship were three FVC teams: Mercy, Mount Michael, and Crete. These teams qualified by winning the Midwest Regional Championship held February 24.

Mercy's team of seven girls worked together on all aspects of the competition. Each assumed specific roles on the team as described on the team flier created by the girls and distributed at the competition:

- ❖ Alyssa Hernandez is our arm operator and a builder
- ❖ Amanda Wiese is a builder, journalist and back up driver
- ❖ Anna Berg is a builder and in charge of batteries
- ❖ Liz Kinzer is a builder, morale booster, and in charge of the crystals
- ❖ Mandy Homan is a builder, recruited sponsors & is a back up arm operator
- ❖ Sarah Veys is our main driver and a builder
- ❖ Susan Davis is our programmer and a builder

Team Mentors:

- ❖ Mr. Phil Hernandez is Alyssa's dad, a computer programmer & an engineer

- ❖ Mrs. Maureen Davis is Susan's mom and a math teacher at Mercy

The team began working in late October. The team met every Thursday afternoon at Mercy to research the game rules, study design manuals, brainstorm ideas for the design of the robot and work on our engineering notebook. On Saturday afternoons they met out at Mount Michael where they had set up a lab and fully equipped it for eight teams. There they actually built, tested, rebuilt, programmed, redesigned, and practiced with the robot. They chose the team name of "GIR" which stands for "Gearheads Inventing Robots." The robot became known as "Sir Gir."

The team flier also gave recognition to our sponsors, who provided funding to cover tournament expenses:

- ❖ Peter Kiewit Foundation
- ❖ HDR Engineering
- ❖ American Society of Civil Engineers—Nebraska Chapter
- ❖ Lamp, Ryneerson & Associates
- ❖ Thiele Geotech Inc.
- ❖ Omaha Printing Company
- ❖ Loretta Davis
- ❖ Mercy High School

At the championship in Atlanta, they competed in 4 qualification matches, as well as an interview process. Each match consisted of two opposing alliances of two teams each, pitting their robots against each other to earn points by placing softballs in goals, by parking on a raised platform, by hanging from a bar, and by taking possession of a large atlas ball. During the first 20 seconds, the robots operate in autonomous mode, carrying out instructions that we pre-programmed in. Then there is a 2 minute driver-controlled mode, where students use remote control devices with joysticks to control the robot's movements.

Alliance partners for the qualification matches are randomly assigned. After the qualification matches, the top 8 teams each selected 2 alliance partners and moved on to elimination matches. In the end, the winning alliance consisted of teams from Ontario, New Jersey, and California.

There were 3 teams from Nebraska out of a total of 100 teams from the U.S., China, Singapore and Mexico. After the qualification matches, Mercy had a 1-3 win-loss record and was ranked #83. Mount Michael had a 1-2-1 record and ranked #63. Crete had a 1-3 record and ranked #76.

All the students agree that this experience had a positive impact on their lives. It exposed them to the engineering profession in an exciting way, and many of them are seriously considering careers in engineering. It allowed them to learn to work as a team, and gain attention from the school and community for their intellectual achievements. Mercy's team has been invited to

attend the next monthly meeting of the Nebraska Chapter of the American Society of Civil Engineers to talk about their experiences with this program.

Next year will bring a new game design and new challenges to the girls' creative problem-solving skills. With such a successful first year, we anticipate having many more students interested in joining robotics.