Spartaneering LEGO Robotics - Commuter

6/19-23, 6/26-30, 7/10-14

Audience

Three separate sessions throughout the summer were attended by 62 total participants. Students were in the 4th through 8th grade. Students came from mid-Michigan as this was a Commuter Camp.

Funding

Participants paid a fee of $295. This fee pays for the use of a NXT LEGO Mindstorms Robot, a VEX IQ Robot, NXTG software, RobotC software and use of a computer.

Objectives

The program goals are to:

Apply **STEM** (Science, Technology, Engineering and Math) knowledge to solve problems

- Students have fun while learning to build with LEGOS and VEX IQ robot platforms
- Build Teamwork and communication skills
- Develop problem-solving skills
- Learn about robots and what they do.
- Build LEGO NXT robot and program using NXTG programming language.
- Build VEX IQ Robot and program with RobotC programming language
- Apply STEM(Science, Technology, Engineering and Math) knowledge to solve problems

Description

Designed for students to improve communication skills, develop problem identification and problem solving skills, to learn basic engineering principals and apply them to building using the NXT Robotics Invention System and the VEX IQ Robotic System. Additionally, the students are introduced to programming using both the NXTG and RobotC programming languages.

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Outcomes

All Students build a LEGO Mindstorms NXT Tribot. Students using the NXTG software learn to program the robot to move, and respond to 4 sensors (Light, Touch, Sound and Ultrasonic). Next they build a VEX IQ Clawbot. They use RobotC programming software to make it move, and respond to a touch and ultrasonic sensors. The VEX IQ robot can also be controlled by a remote control. We mix all of the learning with some competition and the room fills with the excitement of a sporting event.

- Having fun while learning
- Improving communication skills
- Knowledge of what robots do
- Engineering concepts of problem solving
- Learning to work in teams
- Development of problem solving skills

Additional Significant Information

Staff includes personnel from the office of Recruitment & K-12 Outreach, college and high school mentors.

Contact Information

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