CANDO Creating Success

Converse Area New Development Organization

CANDO Robotz in Outer Space

Glenrock, WY

DAY 1

8:30 – 9:00	Introduction & Mission Assignment
9:00 – Noon	PowerPoint Instruction
Noon – 12:30	Bring Sack Lunch
12:30 – 2:30	Programming Instruction
2:30 – 5:00	Building Lego Robots

DAY 2

8:30 – 10:00	Leadership Instruction
10:00 – Noon	Form Teams & Begin Competition Preparation
Noon – 12:30	Bring Sack Lunch
12:30 – 5:00	Competition Preparation

DAY 3

8:30 – Noon	Competition Preparation
Noon – 12:30	Bring Sack Lunch
12:30 – 3:00	Competition Preparation
3:00 – 5:00	Competition (Parents/family invited to watch.)

Students work in teams of four or less to explore the mysterious planet H-99. The last mission to H-99 was never heard from again, leaving us only this garbled radio transmission: "huge sphere…everywhere…and they're orange." Their mission will be to create robots to accomplish the following: clear rocks for base camp, establish a base camp, rescue a moon rat abandoned from the previous mission, monitor volcanoes, gather minerals, investigate a cave and find methane gas. Finally, the crew must provide a mission report in PowerPoint format to their commanding officer on Earth.

Each lesson is designed to be student centered. The teacher becomes the facilitator and presents information on a need to know basis. Lessons are designed to reinforce math, science, and technology concepts. As the lessons evolve, students begin to recognize the importance of the academic concepts used because they are delivered in context.

Students will be immersed in activities that require the integration of software and hardware. Students are required to write programs to control their robots. They are introduced to conditional statements, loops and logic. Part of the project requires each team to document their work and prepare for a presentation using PowerPoint.

Students will be required to work in teams. The teams will consist of a project manager, a programmer, an engineer, and a communications specialist. Students will be encouraged to work together and exchange roles so they are able to experience each of the roles. The students will be immersed in activities that require them to manage time and materials to complete the project in a successful manner.

Students will build up to six robots to perform the above mentioned missions. They will also learn how to program using Motors & Timers, Touch Sensors, Light Sensors and Rotation Sensor. The teams will compete against each other and will be judged on successful completion of these six missions as well as documentation, teamwork and final presentations.