Challenge #1: "The Maze"
Hand Coding A Robot Using All Its Sensors. (60pts.)
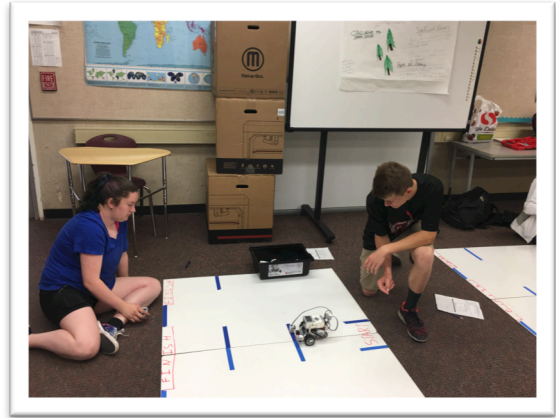
Goal: Students must <u>Hand Code</u> their Robots (Do not use your computer for this project) to successfully cross the board (being provided) through a maze using all the sensors being provided them.

Purpose: To test the student's coding abilities and knowledge of the sensors.

The sensors that must be used:

1. Color (15 pts.)
2. Gyroscope (15 pts.)
3. Pressure Plate (15 pts.)
4. Ultrasound (15 pts.)
   Note: The robot must approach a wall/block, sense the object with the ultrasound and react by slightly shifting course around the object. You may use your black bin as the wall/block.
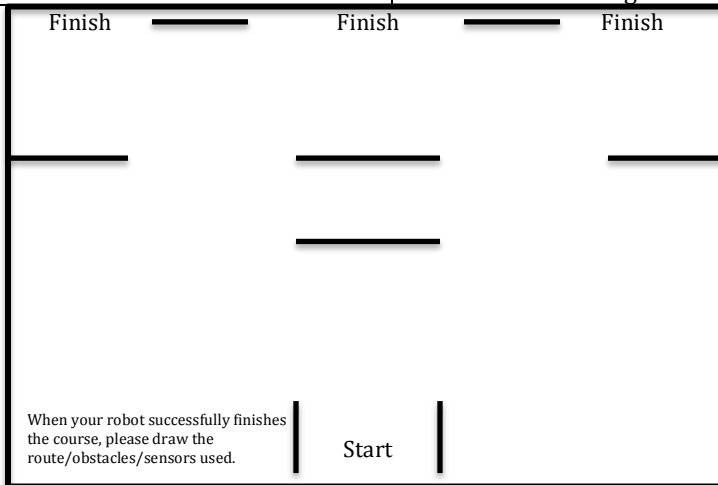
Training: View all the films in the online training module:

Logon: eLearning.legoeducation.com	View the Following Training Films:
• Select: "Getting Started" • Select: "On Brick Apps"	✓ EV3 Brick and Menu View ✓ On-Brick Port View ✓ On-Brick Programming ✓ Create an On-Brick program ✓ How to program. ✓ On Brick Data-Logging ✓ On-Brick Motor Control ✓ On-Brick IR Control ✓ Final Thoughts

Finish —— Finish —— Finish

When your robot successfully finishes the course, please draw the route/obstacles/sensors used.

Start

Explain in detail how you coded your robot to travel though the Maze.