

Final Robotics Project

It's time to make an awesome robot. With your group, make use of everything you've learned to make a robot to perform some task. You are given significant creative freedom as to what the robot should do, so think of something interesting. The only requirement is that the robot must make use of both motors and sensors. Other than that, you should try to come up with something cool. Here are some ideas for what you can do:

- Make a robot which has an arm! You can use the arm to pick up objects, or push them around.
- You can put a launcher on a robot to shoot balls forward. You can detect nearby targets and then shoot balls at them.
- If you have a light sensor facing straight down at the ground, and then put strips of black electrical tape on the ground, then the robot can detect when it is passing over tape. There are various things you can do with this. For example, you could use the strips of tape to make a maze on the ground, and then the robot can try to solve the maze without driving over any of the "walls."
- Using the ultrasonic sensor and possibly other sensors, make a robot which navigates around a room full of obstacles. You could make the robot try to move forward in a room as far as possible, moving around anything that gets in its path.
- Using the light sensor, make a robot which tries to move towards light. The robot will need to look around to determine which direction is brightest, and then move in that direction. You could then shine a flashlight to tell the robot where to go.
- The robot doesn't actually have to move around a room! Another option is a stationary robot that uses multiple motors to have precise control over an arm. You could make a robot which grips a dry-erase marker and uses it to write on a paper.

Your group will present your robot to the class on Friday, the last day of class. Be excited!