**Obstacle Course**

In this obstacle course you will be challenged to use all the sensors you have received training on to date. Your objective for this challenge is to proceed thru the course as fast as possible.

Robot Requirements:

* Your robot must be an original design of your choosing.
* Must be 4x4 or 2x4
* Have a gear ratio 3:1 or better
* Max dimension of robot is 7x7in.
* Must have light, touch, clap, and ultrasonic sensors attached.
* One inch ground clearance.
* 3 days to build, 3 days to program.

Course:

* Robot will start on a clap sound
* Robot should move forward until the blue line – do not cross blue line if do fall off cliff and destroy your robot
* Turn right and move forward till you touch the obstacle. Do not knock it over as it will release unknown dangers
* After touching the obstacle turn left
* Proceed to the ramp
* Go up ramp, stop and pick up your lego man
* Turn 180 degrees go down ramp (Or Optional turn left 90degrees and exit ramp over rough terrain)
* Bottom of ramp turn right
* Go forward for 2- 4 rotations
* Turn right
* Go forward till obstacle
* Knock the obstacle over
* Turn right
* Proceed over a series of small bumps in the road
* Continue until you encounter a black finish line
* At the line execute a 360 degree turn in celebration of your completing the course. Must have your lego man with your robot when the robot finished the course.
* Stop

Turn in requirements:

- Written description of you robot. Discuss problems and solutions in construction of robot. Was your robot 2 or 4 wheel drive?

- Include at least two pictures of your robot

- Provide copy of your NXT program

- Provide best time you had in completing the course

- What was your gear ratio?

- What would you do different if you were to redo your robot?

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