ROBOTICS CHALLENGE

Challenge Description

“Maze Crawler”

Design a robot that finds it way completely through the maze using (a) touch sensor(s).

Specifications

- Challenge starts at the beginning of the maze
- Robots must be made with LEGO Mindstorms Robotics Invention System and be programmed with Robolab programming environments.
- Robots can consist of a maximum 1 RCX, 8 Wires, and 3 motors.
- Nothing can be added or removed from the robot during a round.
- No non-lego parts are allowed
- Challenge is maximum 3 minutes long

Adaptations

- Light sensor to notice red “quick sand” areas and back out.
- Try designing a robot to follow the black line through the maze

Scoring

- 100 point challenge
- -5 points each time the robot is handled or gets stuck
- 20 point bonus for adaptation noted above
- Up to 25 points will be deducted from the total score for the total amount of damage sustained by the robot, as determined by the judge.

Hints and Tips

Certain areas of the maze are so narrow that, if the robot goes into them, it will get stuck. These “quicksand” areas are painted red. You could use a light sensor to get out of them.
Bumpers than run the width of the robot are more effective than a small front bumper.

David Jones 7/20/2005