



ROBOTICS CHALLENGE

Challenge Description

“Volcano Garbage Disposal”

Design a robot that will locate a heat source and bring items to the heat source.

Specifications

Challenge starts at the bottom of the ramp.

- 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



Design a robot to climb a ramp and locate the heat source at the top of the ramp. Upon locating the heat source, the robot returns to the bottom of the ramp and transports the “garbage” to the top of the ramp and deposits the garbage within 10 cm around the volcano.

The challenge is 3 minutes maximum. There are

Adaptations

Scoring

120 point challenge

-5 points each pickup

-10 points each time robot falls off the playing area

Up to 5 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

You’ll need a temperature sensor to find the heat source, a light sensor to find the green zone (and notice the red zones so as not to fall off the play area), and a touch sensor to find the “garbage”.