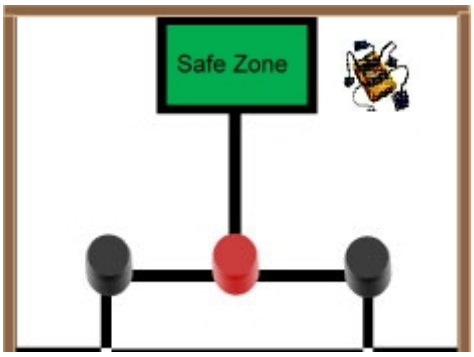
ROBOTICS CHALLENGE

Challenge Description

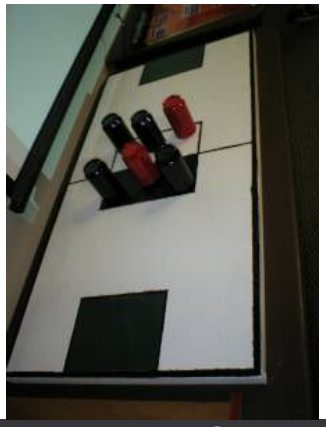
“Nuclear Waste Collector”

Design a robot that collects barrels of nuclear waste and brings them into the safe zone for storage.

Specifications



- The trial takes place on the Woots and Snarks playing field. ***Three*** barrels will be lined up in a straight line on center field in front of the black line (so that your robotwill not cross any dark line to get to the barrels). The “safe zone” for storage is a goal on the opposite playing field. Starting from the safe zone, the robot should proceed straight ahead to search for barrels. Once found, the robot should bring each barrel to the safe zone.
- You may begin the challenge with the robot directly facing the first barrel if you wish.



- 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

Scoring

- 80 points for EACH barrel successfully brought back to the safe zone.

Hints

- Grab the barrels with pincers that are low (the barrels are weighted on the bottom so they do not fall down easily).
- Maybe use tired in the pincers to grip the barrel.
- Pincers need not actually grab onto the barrel, but designers will need to work out a way to keep the barrel from rolling out when it turns.
- Use a light sensor on the ground to see where the safe zone is by its darkness.

David Jones 7/22/2005