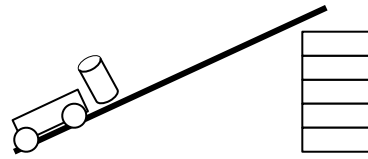


8.9R Robotics Challenge

Challenge 1

Aim

Design a car that can push full soft drink cans uphill.



Equipment

LEGO Mindstorms

Soft drink cans and an adjustable ramp (change height with bricks)

Procedures

- Gear designs are not the only important consideration for strength. Also consider wheels and weight.
- You'll need to test strength on the flat first and build up, gradually increasing the slope of the ramp.

Assessment

This is done by number of bricks in height and if necessary to determine the best one, increasing the number of cans pushed.

A further assessment is to deduce the efficiency of the cars' power measuring the ratio:

Total Cans weight / cars' weight

Challenge #2

Aim

Design a SUMOBOT to defeat other SUMOBOTS.

Equipment

LEGO Mindstorms gear

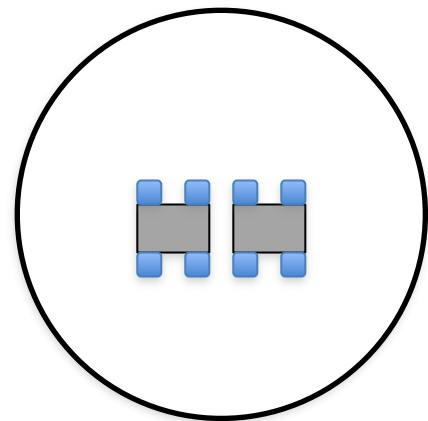
Two large motors for independent wheel movement

One motor for arm action.

Software to program movement

Sensors are allowed.

Marked circular field ~ 1m diameter



Rules

2 Bots start in the centre facing each other.

The aim is to push each other.

A win is determined by making your opponent's Bot touch the line, be flipped over or fall apart.

Restrictions on size should be 25cm

Time limit of 2 minutes for each match.