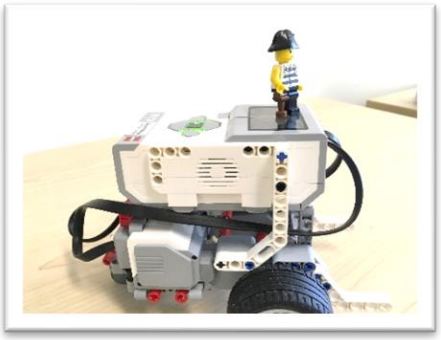
Race to the Wall Challenge

Task Description



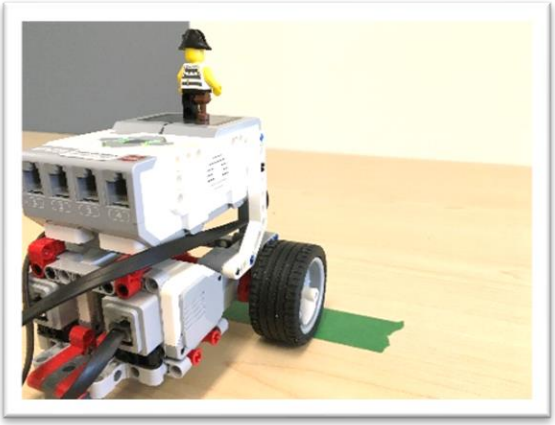
The goal is to get your robot as close to the wall as you can ***without touching it***, as fast as you can, and have your Lego person remain standing on top of the robot for the entire race.

- Which robot was the fastest?
- Which robot got the closest?
- Whose Lego person remained standing?

Watch a video of a *Race to the Wall Challenge* here:
https://vimeo.com/292340498

Rules

- The robot must start behind the start line.
- Your Lego person must stand freely on the robot. They cannot sit nor can they be strapped or tethered in anyway.
- The programming can make use of a sensor, but it is optional for this challenge.



Materials Needed

- EV 3 robot in base configuration.
- Masking tape to mark a starting line on the floor.
- The start line should be parallel and about 4-5 feet from a wall.
- 1 Lego person for each robot

Note for Teachers

- Students learn and practice estimating distance in this challenge, i.e., they associate distance travelled with the number of wheel rotations selected.
- If the robot starts with too much power, the Lego person will fall off.
- Mathematics: To push mathematical thinking, limit the number of tries students can have. With limited tries, students are more likely to use measurement and proportional thinking to complete the task.
- The robot travels 17.6 cm with each wheel rotation.
- Decimals may be needed to approach the wall as closely as possible.
- Sensors are optional for this challenge. The use of sensors is explained here: https://stem-education.ca/?page_id=310