

# Activity Six Speed racer



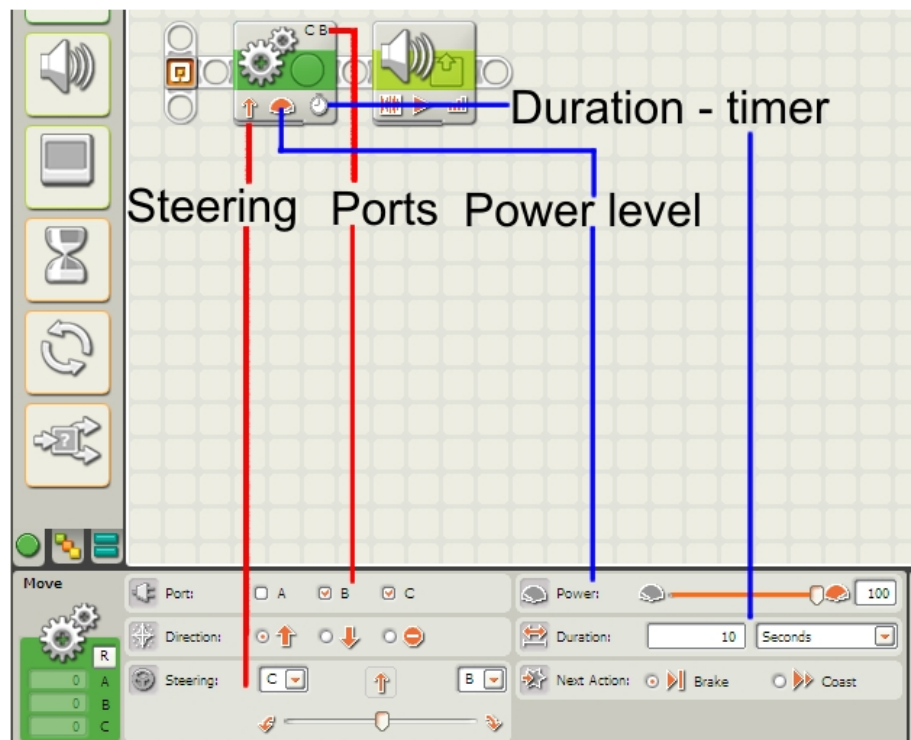
## Task Outline:

This task is a Speed trial.  $s = d.t$  or Speed=distance x time. You are going to modify your robot so it can move the biggest distance in a 10 second period. This is a standing start competition, your robot must have enough power or torque to start by itself.

Add your **motor block** and set the **Duration** to **10 seconds**. The motor also needs to be set to **brake** at the end of the task rather than **coast**.

You need to design your robot to go the largest distance possible in 10 seconds from a standing start, you are not allowed to push start your robot.

You will have three attempts during the competition with your best distance counting. You are allowed to modify your robot (but not the program) between attempts.



The Motor block Icons symbols correspond to setting within the block.

## Learning Outcomes:

- To design and modify a robot for a specific task.
- To develop an understanding of gearing ratios.
- To develop an understanding of power and torque.

### Hint:

The bigger the wheel perimeter, the greater the distance the robot moves per rotation. However the bigger the size difference or gearing ratio the more power required to start the robot.

