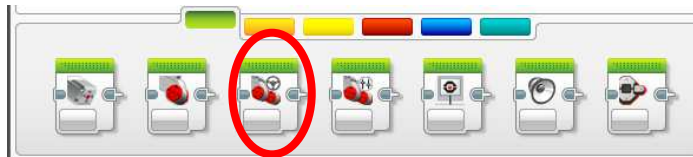# MOVING THE ROBOT TO MILLIMETER-LEVEL ACCURACY

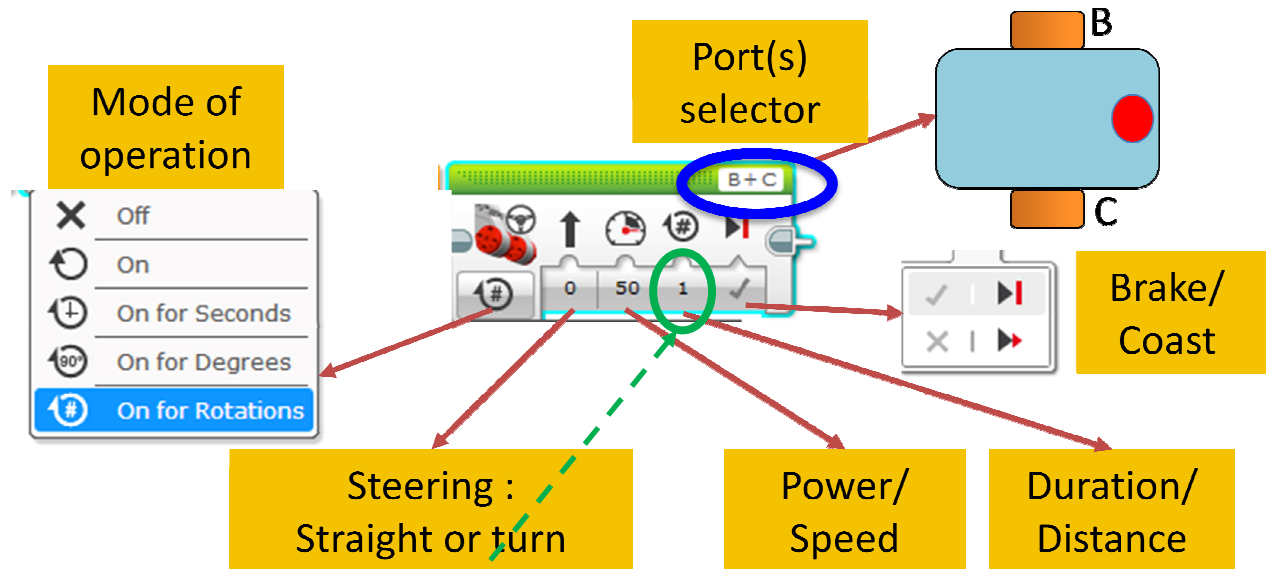We use the **"Move steering block"**.

NB : We will not use « On for seconds » mode because when you move in seconds, battery levels change the power.

STEP 1: Green Block Tab, Click and hold Move Steering and drag to programming area.

STEP 2: Drop next to the Start Block (green arrow).

STEP 3 : Change the settings.

Mode of operation

Off
On
On for Seconds
On for Degrees
On for Rotations

Port(s) selector

B
C

Brake/ Coast

Steering : Straight or turn

Power/ Speed

Duration/ Distance

How far will the robot drive if the wheels turn Y rotations? How far will the robot drive if the wheels turn X degrees?
To control the advance of the robot to the millimeter-level accuracy, you need to know the relationship between the distance traveled by the robot and the amplitude (X degrees or Y rotations) from the mode of operation (degrees or rotations).

I remember :

Mode of operation : "On for rotations" :

$$Y_{(Number\ of\ rotations)} = \frac{Distance}{\pi \times Diameter\ of\ the\ wheel}$$

Mode of operation "On for degrees" :

$$X_{(Number\ of\ degrees)} = \frac{2 \times Distance}{Diameter\ of\ the\ wheel} \times \frac{180}{\pi}$$

Distance travelled for X°
or for Y rotations

Circumference
Distance travelled for 1 rotation or 360°