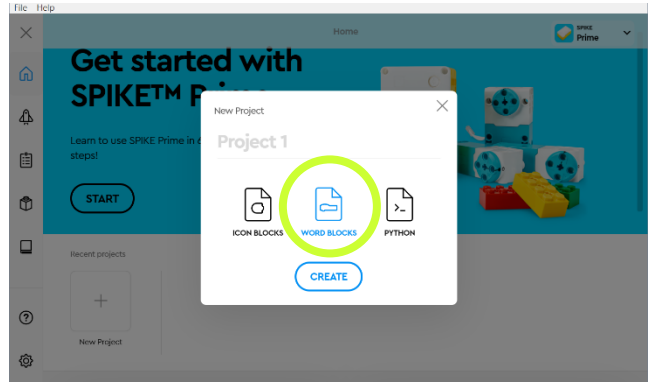
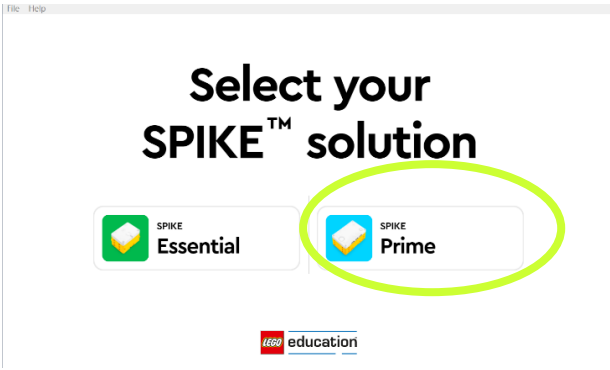
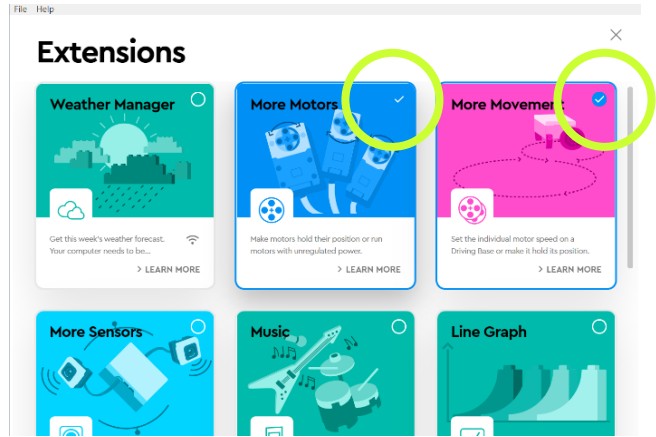
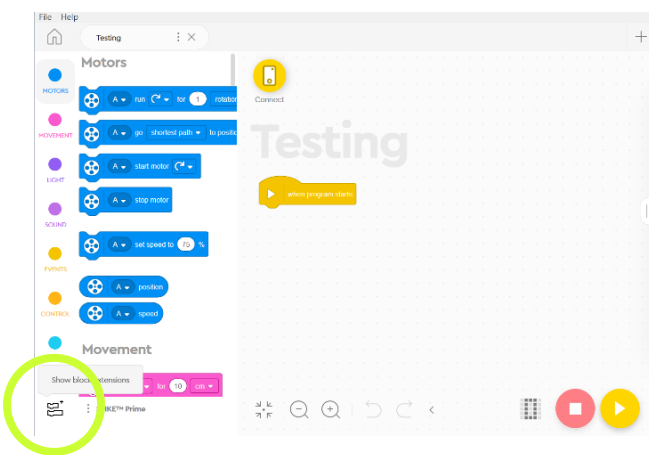


SPIKE Prime > +New Project > Word Blocks

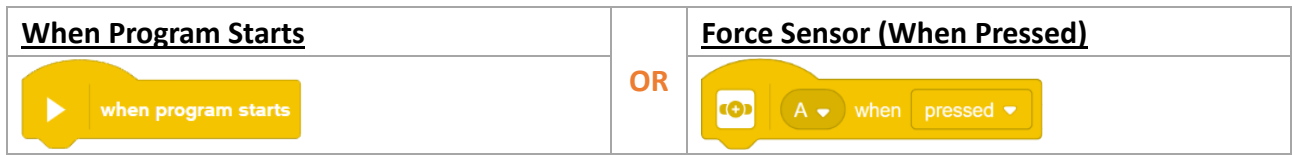


Add Extensions (More Motors, More Movements)



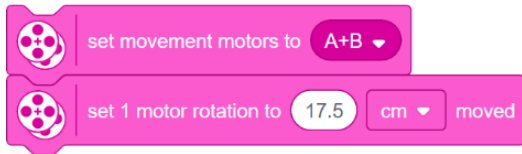
Start Program

MUST ADD at least ONE “Event Program” at the beginning (as head) to activate the programs



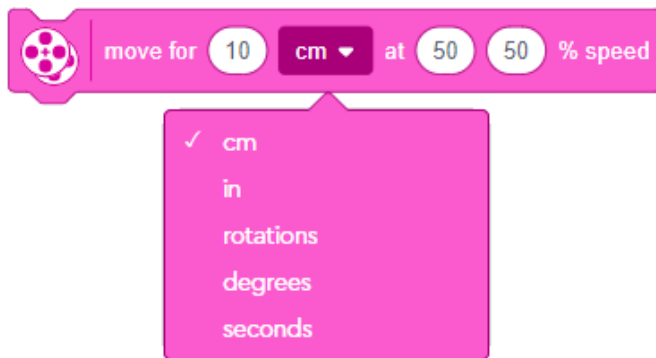
Movement (Control 2 motors at the same time)

MUST ADD at least ONE set of the following program at the beginning when controls motors



Moving Directions (Measure Unit & Speed)

Better use this program to control 2 motors movement. You can find this program in “More Movement”.



Measure Unit

You may choose to run the motor at CM/IN/Rotations/Degrees/Seconds.

We used to apply “CM” to Car movements, while apply “Seconds” to Robot Arm movements.

Speed

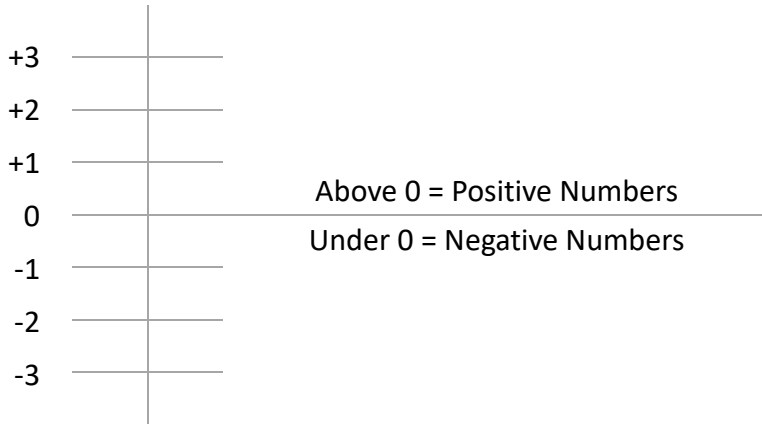
There 2 places for you to input speed

The left speed = output port set on left-side in the program (not the real robot)

The right speed = output port set on right-side in the program (not the real robot)

We used to put “Positive / Negative Numbers” to “Speed” to change the motors’ moving direction (Forwards / Backwards)

Positive / Negative Numbers



Positive Numbers x Positive Numbers = Positive Numbers (50 x 1 = 50)

Positive Numbers x Negative Numbers = Negative Numbers (50 x -1 = -50)

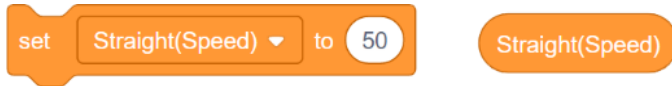
Negative Numbers x Negative Numbers = Positive Numbers (-50 x -1 = 50)

So, we should always use the following method to turn the positive numbers to negative numbers for better cross check: (50 x -1 = -50)

Moving Directions (More Movement)

Test the following programs ONE by ONE to examine the car movement (Pls put tick to record the result)		↑	↓	↷	↶
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

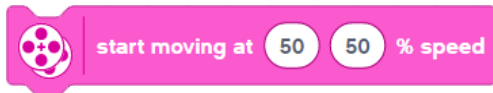
Variables



Sensor

When apply Sensors to robot movement, we should not set any “fixed distance” to the motor (e.g. cm/in/rotations/degrees/seconds).

Please let the motor keep turning, until the sensor’s data reaching the condition you set, then run the next command (e.g. stop the motor).

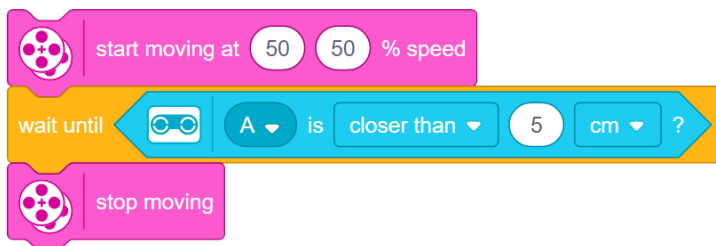


Distance Sensor

It can detect the distance from 5cm to 255cm.

It will be more effective if you set it right straight to the direction (Front, Side, Up down...) which needs to detect the distance/objects.

Example: Stop when getting Closer to Objects



Colour Sensor

We used to detect colours in 2 modes:

1. Colour mode (LEGO Colours): No Color, Black, Blue, Green, Yellow, Red, White, Brown

Reflected Light: detect the reflected light intensity 0-100% (Difficult)

Example: Stop when detected Red Color

