LEGO® Education WeDo 2.0
Programming Blocks

Flow Blocks

Start Block
When used, always placed at the beginning of a program string. Press on it to start the program string you have written.

Start On Message Block
When used, always placed at the beginning of a program string.
It will wait for the correct message and then start the program string you have written.

Send Message
Sends a message to the Programming Canvas. Every Start On Message Block with the same message will be activated. The message can be in the form of text or numbers.

Wait For
Use this block to tell the program to wait for something to happen. It can wait for a set amount of time or for input from a sensor. This block always requires input in order to work properly.

Repeat Block
Use this block to repeat actions.
Blocks placed inside the Repeat Block will be looped. This can also be called the "loop block." The loop can be repeated forever, for a certain amount of time, or until something happens.

Start On Key Press Block
When used, always placed at the beginning of a program string. Press on it, or on the correct letter on the keyboard to start the program string you have written. All of the program strings with the same letter will start at the same time. To change the letter of activation, long press on the block to get access to the keyboard.
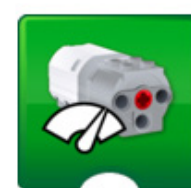
Motor Blocks

Motor This Way Block
Sets the motor to turn the axle in the direction shown and starts the motor. Tap on the block to quickly change the direction of the rotation.

Motor That Way Block
Sets the motor to turn the axle in the direction shown and starts the motor. Tap on the block to quickly change the direction of the rotation.
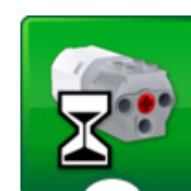
Motor Power Block
Sets the motor power to the specified level and starts the motor. The level can be set with a numeric input from 0 to 10.

Motor On For Block
Starts the motor for a chosen amount of time specified in seconds. The amount of time can be set with a numeric input, using whole or decimal numbers.

Motor Off Block
Stops any movement of the motor.

LED Blocks

Light Block
Lights up the LED on the Smarthub in a specific color. The color can be changed with a numeric input between 0 and 10.

Sound Blocks

Play Sound
Plays a sound. The sound is chosen from a list available within the software.
You can choose a sound using a numeric input. Choose sound number 0 to play a sound that you have recorded yourself.

Display Blocks

Display Background
Use this block to display an image chosen from a list available within the software. You can set an image using a numeric input.

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Display Block
Use this block to open the display area on the software screen. Numbers or text will appear in the display area.

Add to Display
Adds a quantity to the number currently shown on the display. Enter the number you wish to add. Tap on the block to change the mathematical operation.

Subtract from Display
Subtracts a quantity from the number shown on the display. Enter the number you wish to subtract. Tap on the block to change the mathematical operation.

Multiply Display
Multiplies the number shown on the display by a specified number.
Enter the number you wish to multiply by. Tap on the block to change the mathematical operation.

Divide Display
Divides the number shown on the display by another number. Enter the number you wish to divide by. Tap on the block to change the mathematical operation.

Display Closed
Use this block to close the display area on the software screen.
Tap on the block to change the size.

Display Medium Size
Use this block to set the display area to medium size.
Tap on the block to change the size.

Display Full Size
Use this block to set the display area to full size. Tap on the block to change the size.

Sensors Inputs

Any Distance Change
Inputs the Motion Sensor mode "Any Distance Change" to a block.

Distance Change Closer
Inputs the Motion Sensor mode "decreasing distance between the sensor and an object" to a block.

Distance Change Further
Inputs the Motion Sensor mode "increasing distance between the sensor and an object" to a block.

Shake
Inputs the Tilt Sensor mode "Shake" to a block.

Tilt Down
Inputs the Tilt Sensor mode "Tilt Down" to a block.

Tilt Up
Inputs the Tilt Sensor mode "Tilt Up" to a block.

Tilt That Way
Inputs the Tilt Sensor mode "Tilt That Way" to a block.

Tilt This Way
Inputs the Tilt Sensor mode "Tilt This Way" to a block.

Tilt Sensor No Tilt
Inputs the Tilt Sensor mode "No Tilt" (or horizontal position) to a block.

Distance Sensor Input
Inputs the value detected by the Motion Sensor (from 0 to 10) to a block.

Numeric and Text Inputs

Sound Sensor Change
Inputs the Sound Sensor (from the device) mode "sound level change" to a block.

Number Input
Inputs a numeric value to a block.

Text Input
Inputs a text value to a block.

Display Input
Inputs the numeric value shown on the display area to a block.

Random Input
Inputs a random value to a block.
The range of numbers is determined by the block to which it is attached.

Other Blocks

Bubble
Use the bubble to insert comments into your program. This is not a programming block.

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