

Programming

It can be challenging and that's why we're here.

Remember, the robot will always do exactly what you tell it to do, not necessarily what you want it to do.

The robot will also do everything in exactly the same order you tell it to.

The Move Block



This block will allow you to move your robot around. It can be set to run any combination of motors A, B, and C. It also allows you to control how much power to give the motors as well as how long to run them. You can choose between any amount of time, a number of rotations, a number of degrees, or simply tell it to start the motors running.

The Motor Block



The Motor Block is similar to the move block except that it can only move one motor at a time. Also, you have the option of using two motor blocks to move straight forward by telling the first block to not wait for completion.

The Wait Block



The Wait Block can be used to give your robot commands. This is usually done before another set of commands.

The Loop Block



Sometimes you will need to tell your robot to do something over and over again. In this case, using the Loop Block will allow you to create the command only once and have your robot do it multiple times.

Record/Play



The Record/Play block will allow you to record what you make the robot do by hand, then play it back. Simply tell the block to record and name the action. Then in another program or even the same one, tell it to play the same action.

The Sound Block



The Sound Block allows you to play either a sound file like "hello" or play a tone. If you combine multiple tones, you can have it play a song like "Twinkle, Twinkle, Little Star."

The Sound Sensor Block



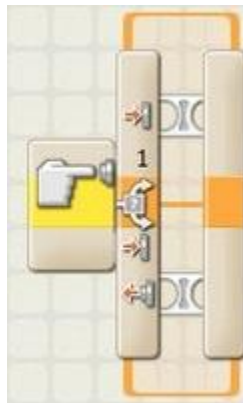
The Sound Sensor can be used to detect the level of sound in the room. This value can be used to have the robot decide what to do.

The Light Sensor Block



The Light Sensor will allow your robot to gather information about its surroundings by measuring the amount of light that is shining into the sensor, or by measuring the amount of light a surface will reflect. You can view these readings through the view option on the NXT menu.

The Switch Block



The Switch Block allows your robot to make its own decisions. For example to track a line, set the switch block for the light sensor, at a value between the line and its surrounding. Then, to track the left side of the line, place motor blocks in the switch so it will swing right when it sees a lighter value, and left for a lower value.

Questions?

You can email us at scwypl@googlegroups.com Also, more programming abilities are covered in the built in tutorial section of the Mindstorms software. You can find them by clicking on the orange LEGO™ beam on the top right of the program screen.

All of this information and more is available at <https://sites.google.com/site/scwypl/home>