Introduction to Robotics

I can program an LED to turn on

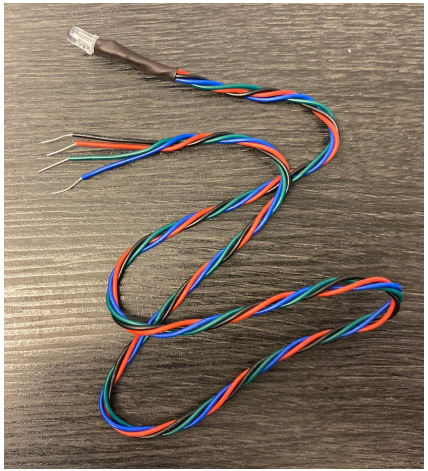
What is in the Kit?

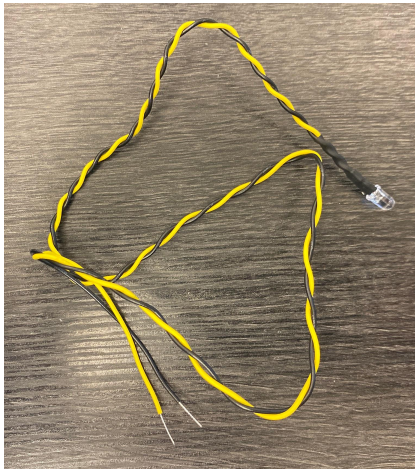
https://www.birdbraintechnologies.com/products/hummingbird-bit-robotics-kit/

LEDs

An LED is a light emitting diode. More simply, it’s a light!

An LED looks like:





Servo Motors

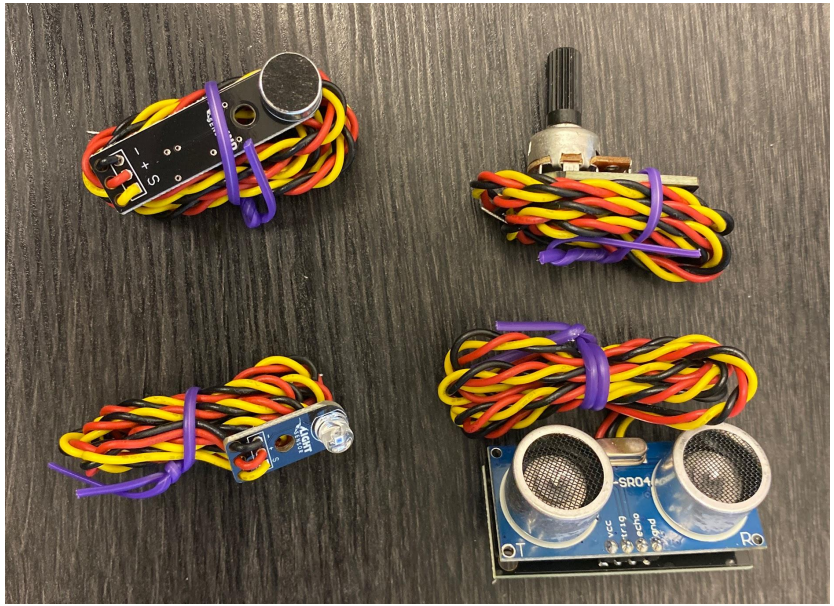
A servo motor is a robot part that moves in a circular motion. These motions are precise.

A servo motor looks like:

Sensors

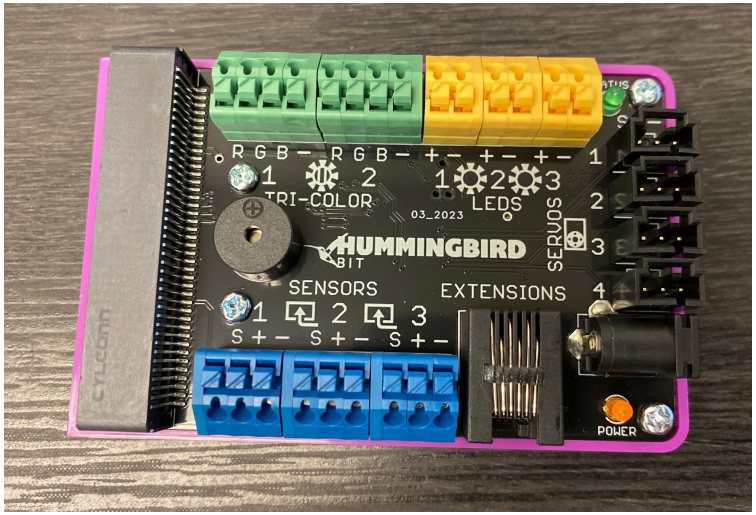
A sensor is a robot part that takes input from the environment. It acts like the robots eyes, ears, or skin.

A sensor looks like

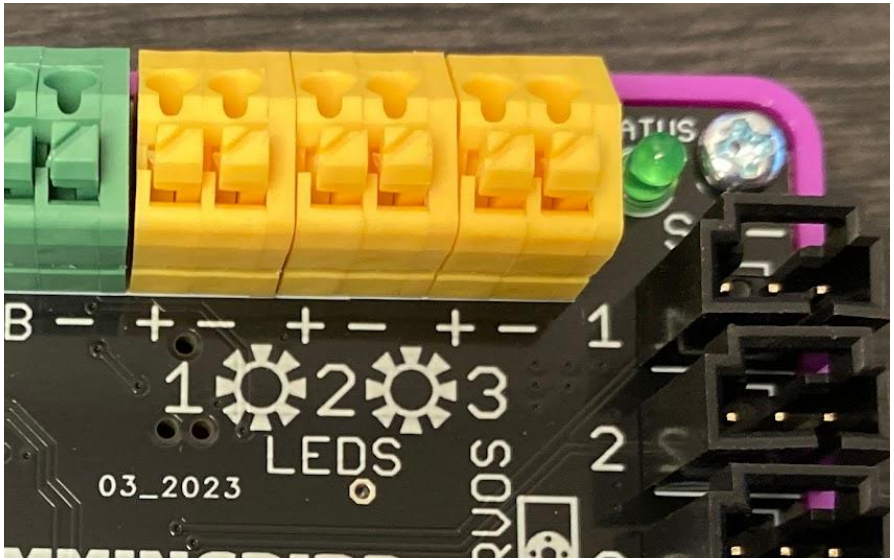


The Hummingbird Board - Circuit Board

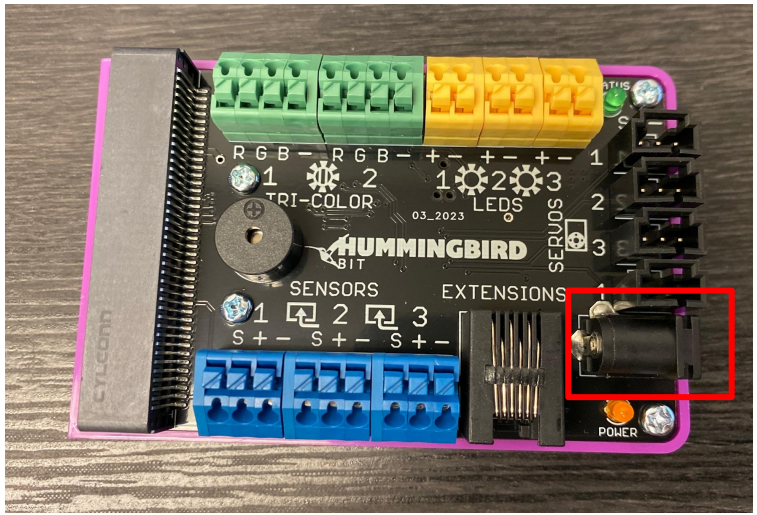
Negative(-) is black



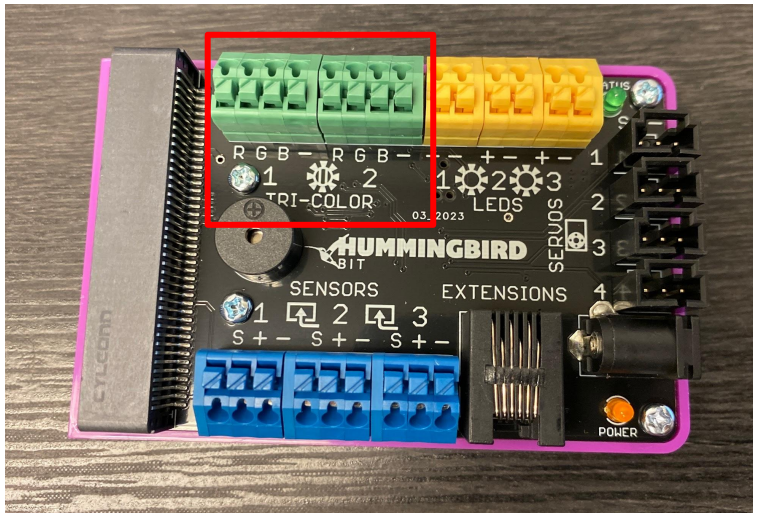
The Hummingbird Board - Circuit Board



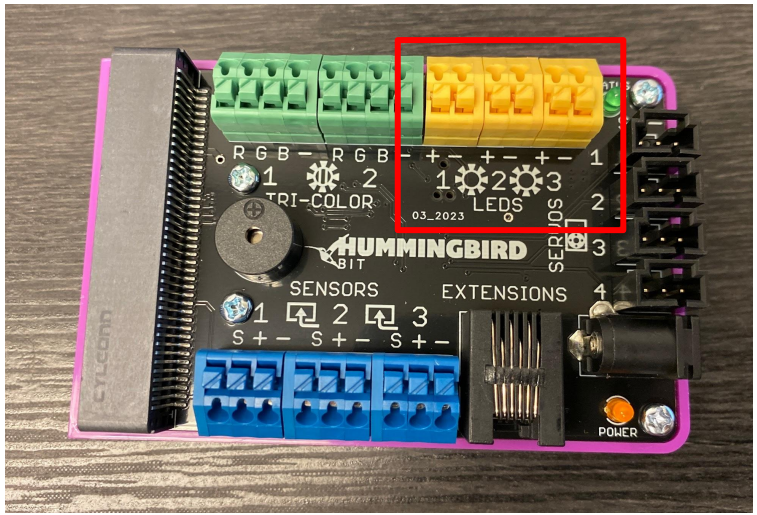
Battery Connector



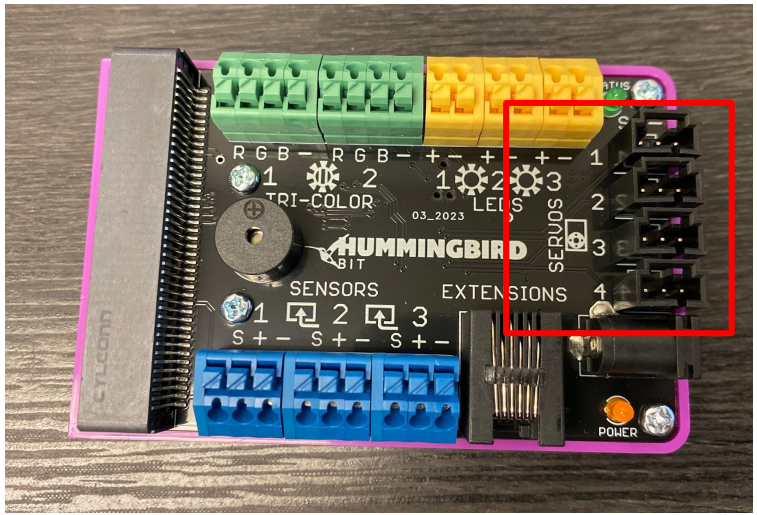
Tri-Color LED Connectors



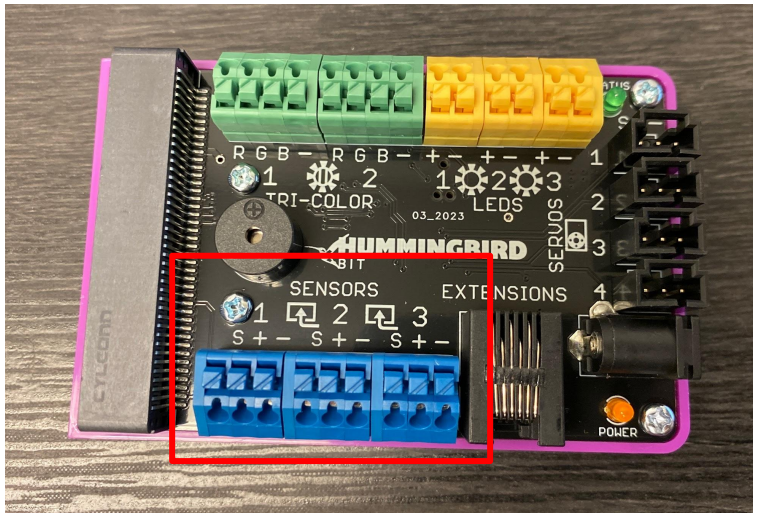
Single Colored LED Connectors



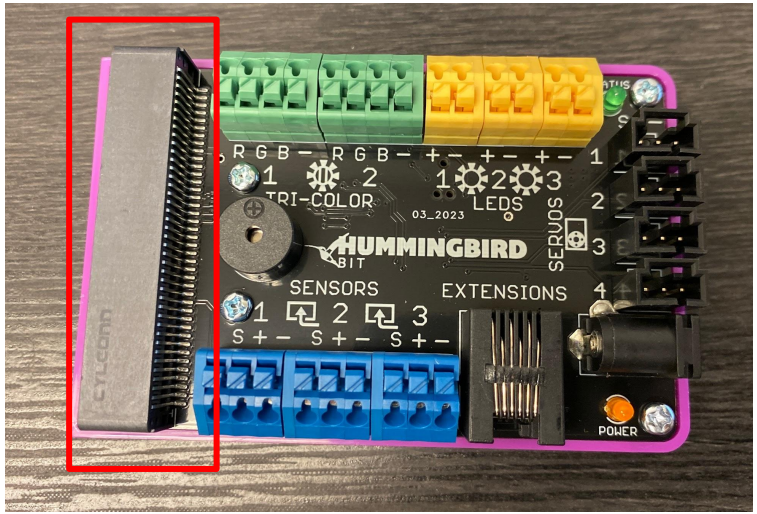
Server Connectors



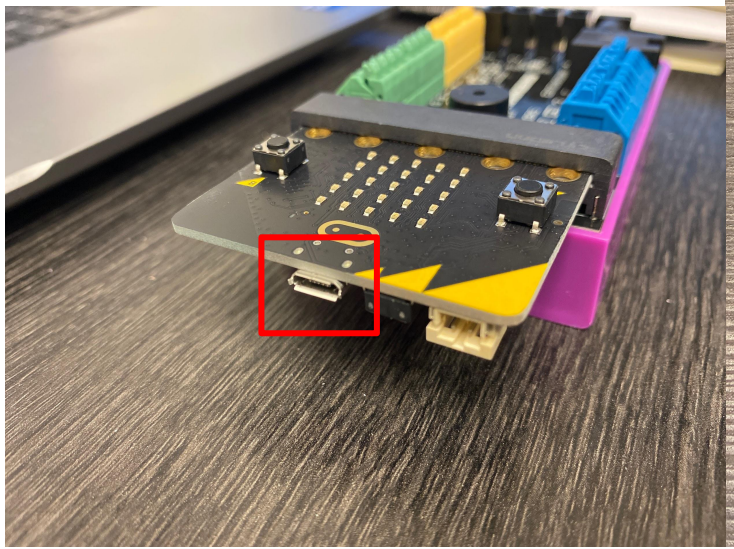
Sensor Connectors

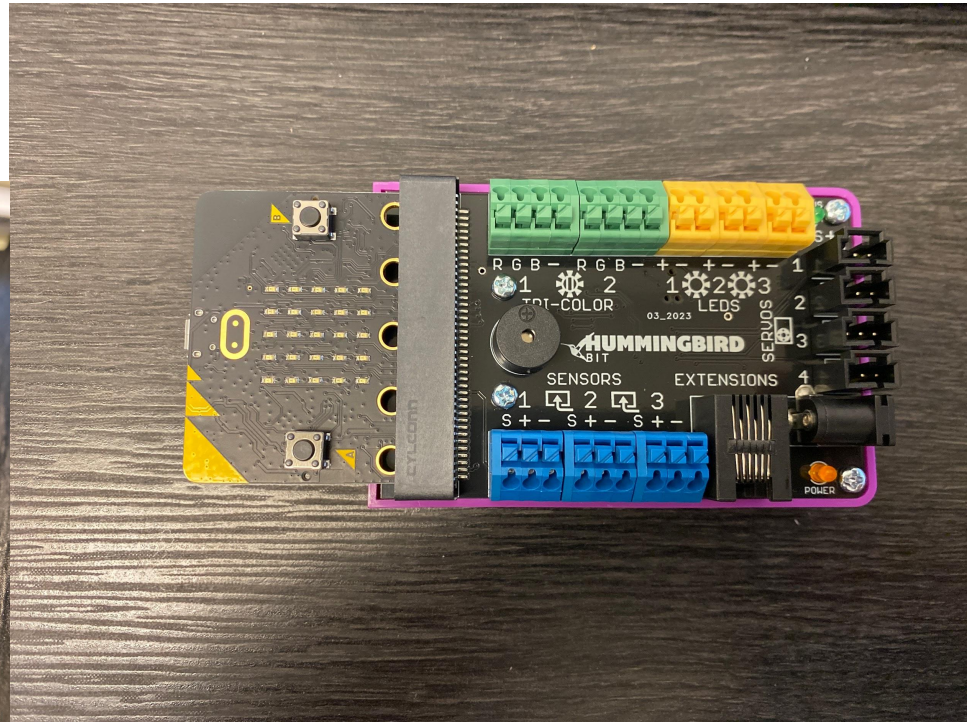


Microbit Slot



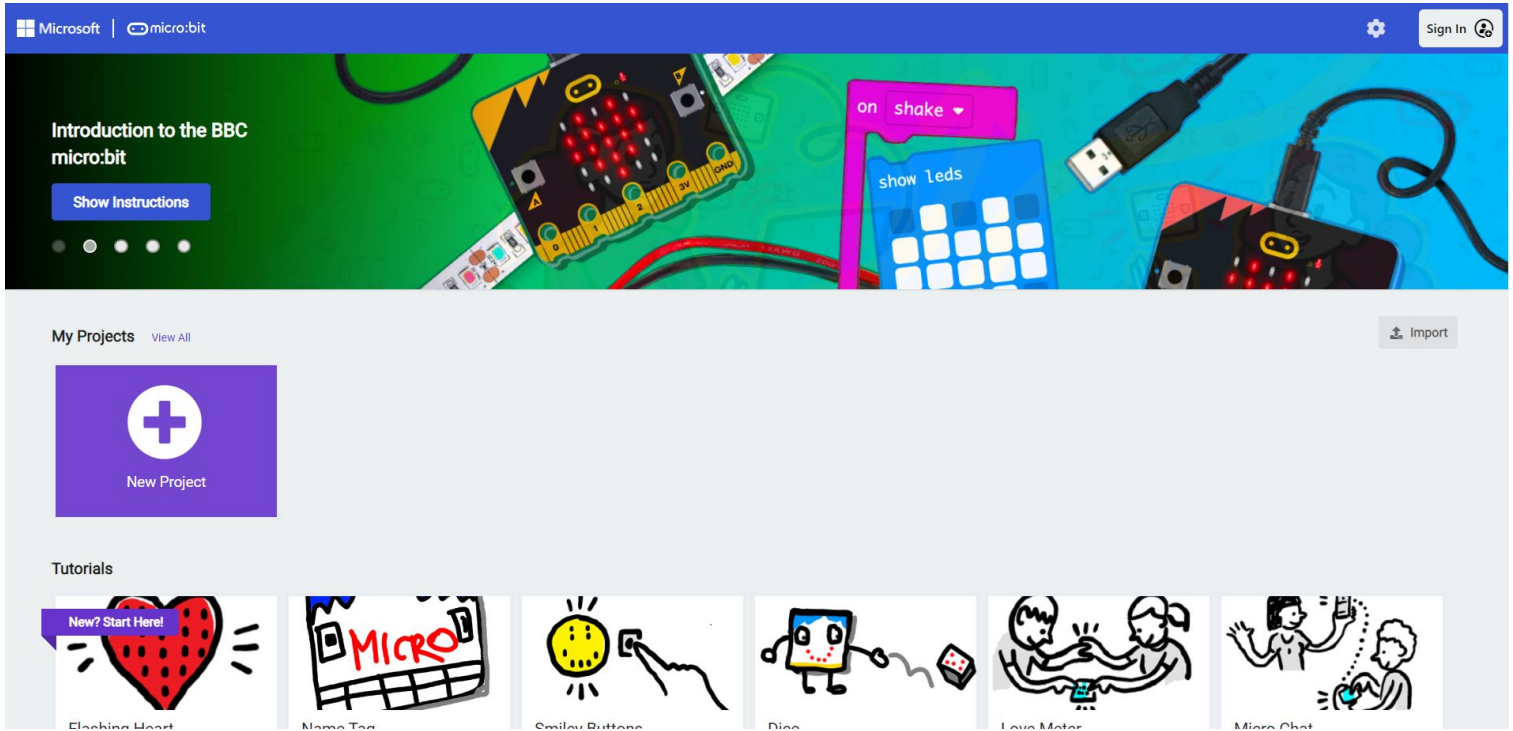
USB Connector



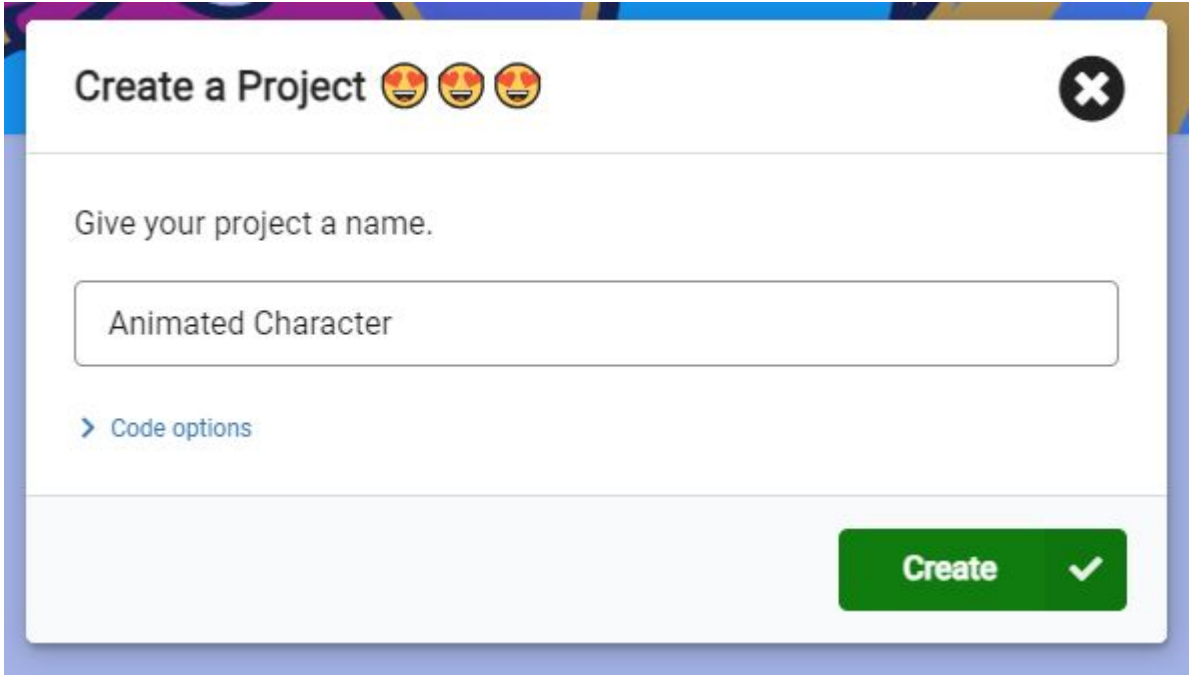


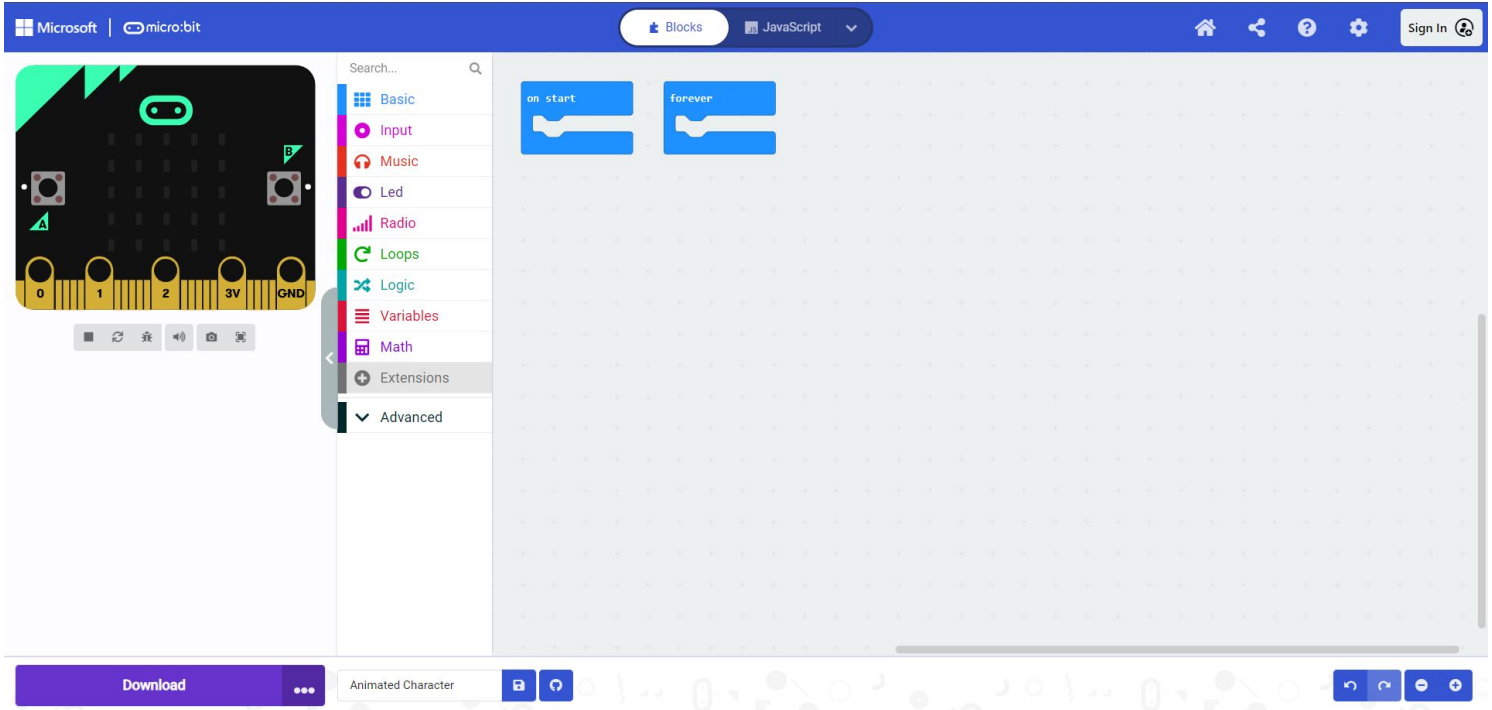
Time to Explore

https://makecode.microbit.org/

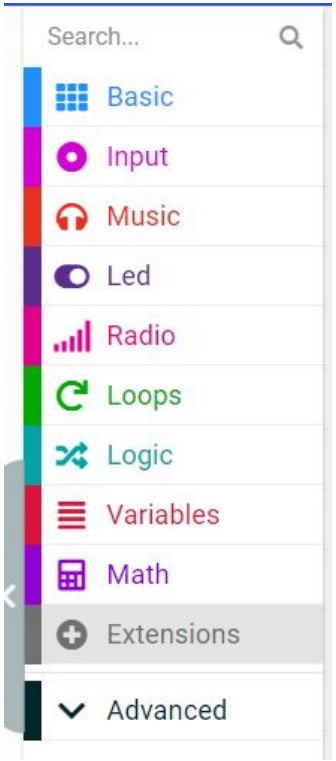


Name Your Project



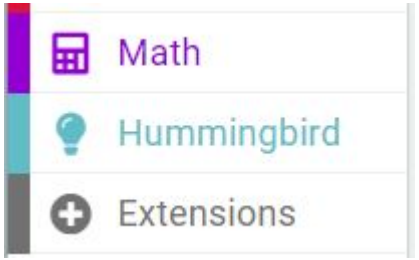

Microsoft
micro:bit
Blocks
JavaScript
Sign In
Search...
Basic
Input
Music
Led
Radio
Loops
Logic
Variables
Math
Extensions
Advanced
on start
forever
0
1
2
3V
GND
Download
Animated Character

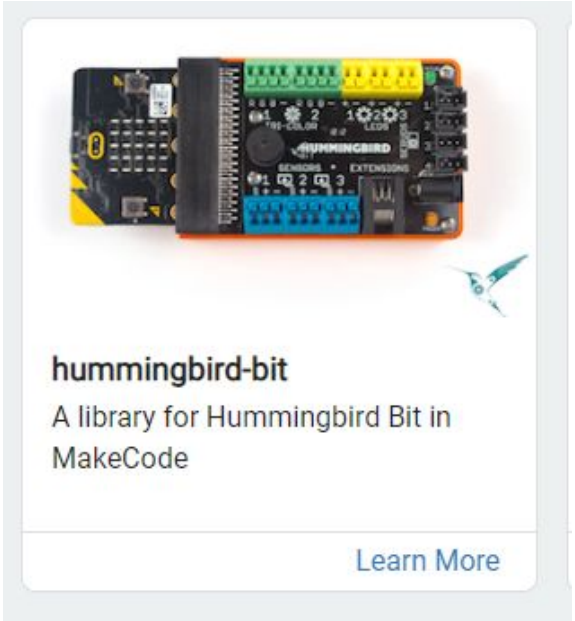
Add the Hummingbird Kit



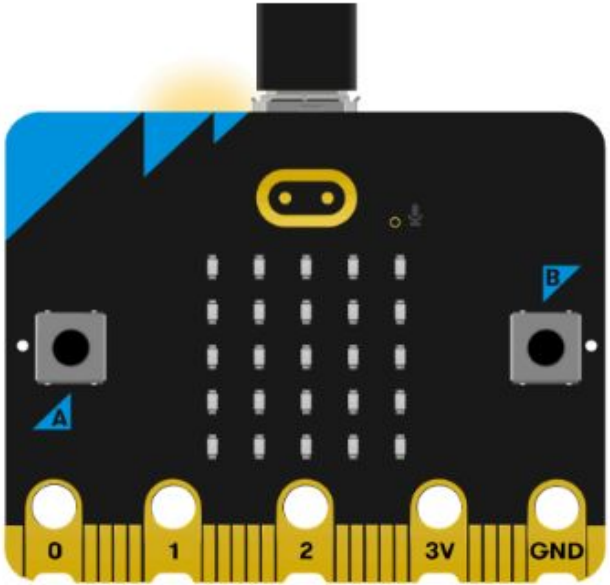
Search bird

Click on the hummingbird-bit





1. Connect your micro:bit to your computer



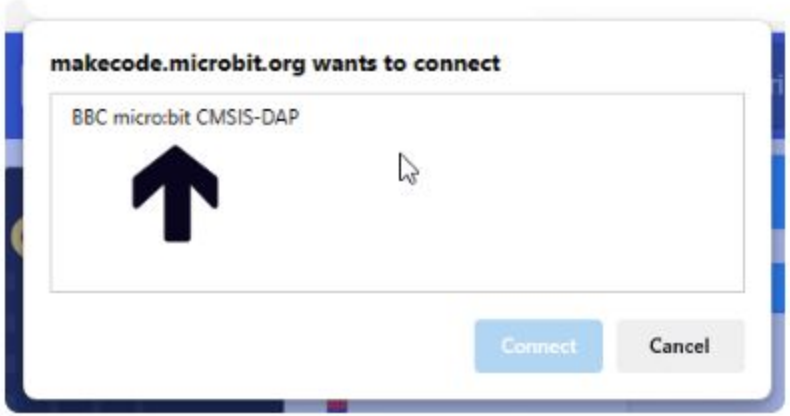
Next

2. Pair your micro:bit to your browser

Press the Pair button below.

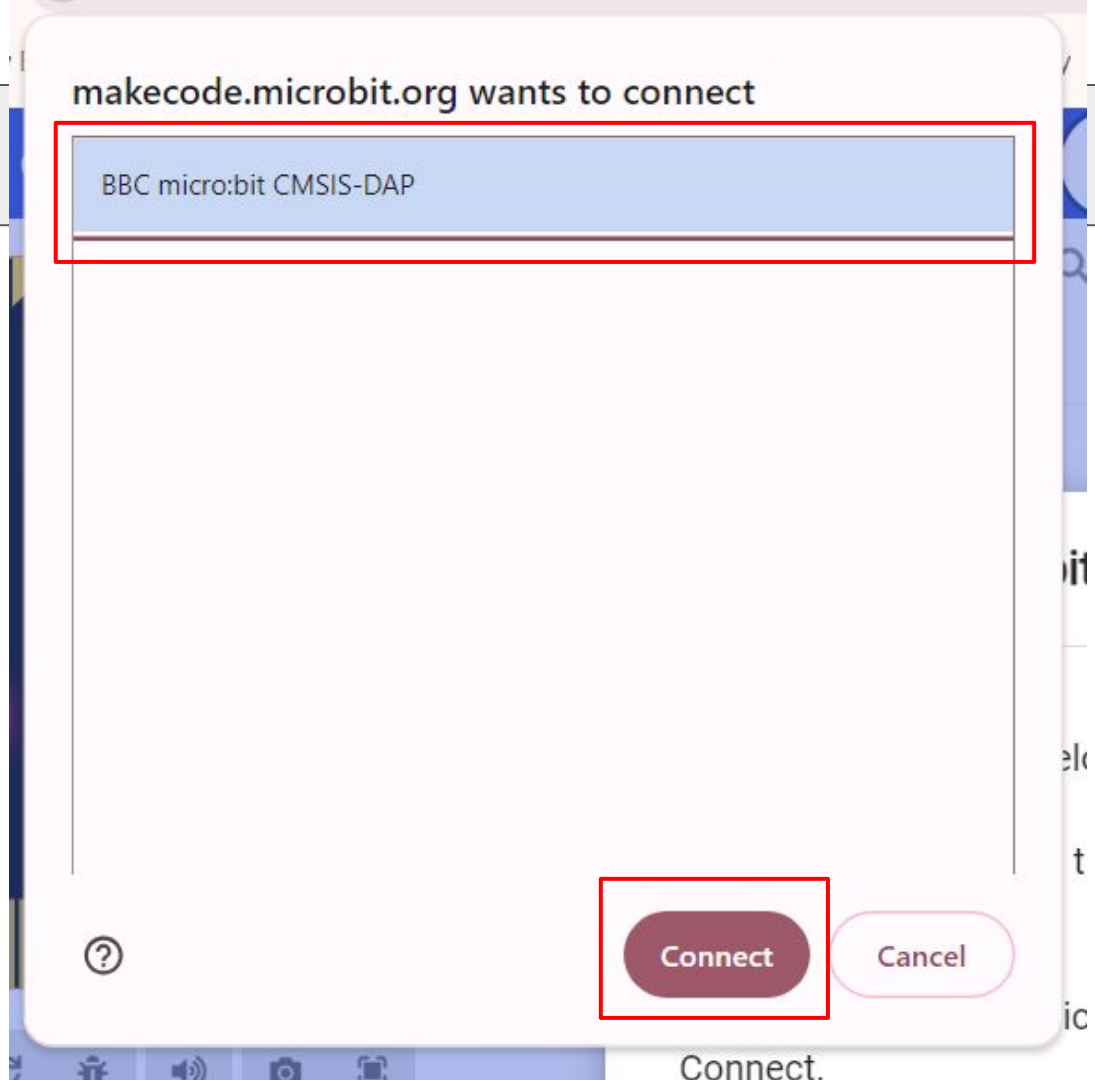
A window will appear in the top of your browser.

Select the micro:bit device and click Connect.



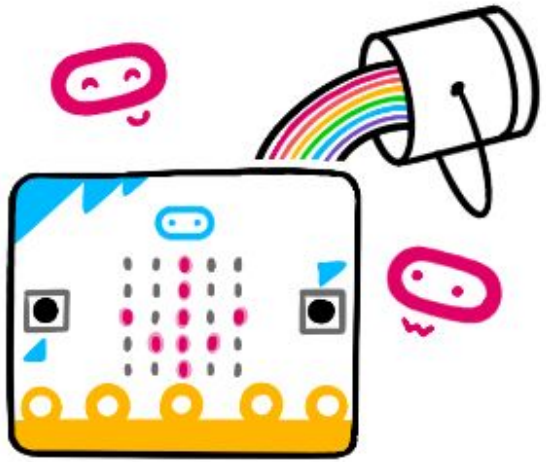
Download as File

Pair


makecode.microbit.org wants to connect
BBC micro:bit CMSIS-DAP
Connect
Cancel
Connect.

Connected to micro:bit

Your micro:bit is connected! Pressing 'Download' will now automatically copy your code to your micro:bit.



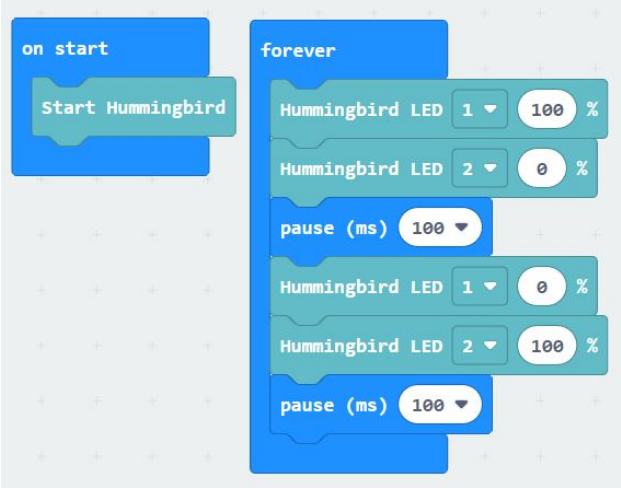
Download

Advanced

Sample Code


on start
Start Hummingbird
forever
Hummingbird LED 1 100 %


on start
Start Hummingbird
forever
Hummingbird LED 1 100 %
pause (ms) 100
Hummingbird LED 1 0 %
pause (ms) 100


on start
Start Hummingbird
forever
Hummingbird LED 1 100 %
Hummingbird LED 2 0 %
pause (ms) 100
Hummingbird LED 1 0 %
Hummingbird LED 2 100 %
pause (ms) 100

Clean Up