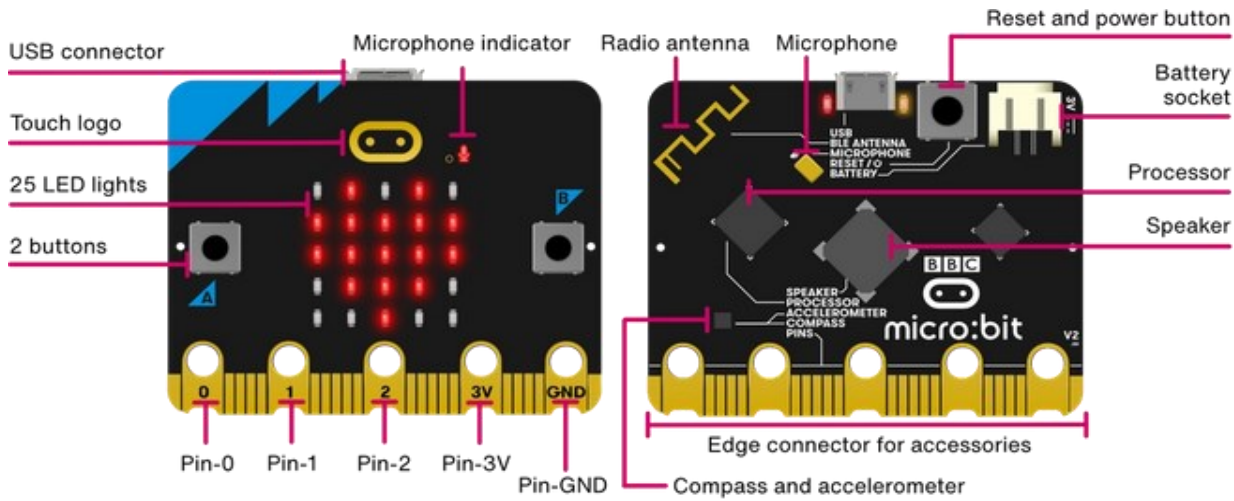


Introducing the Microbit

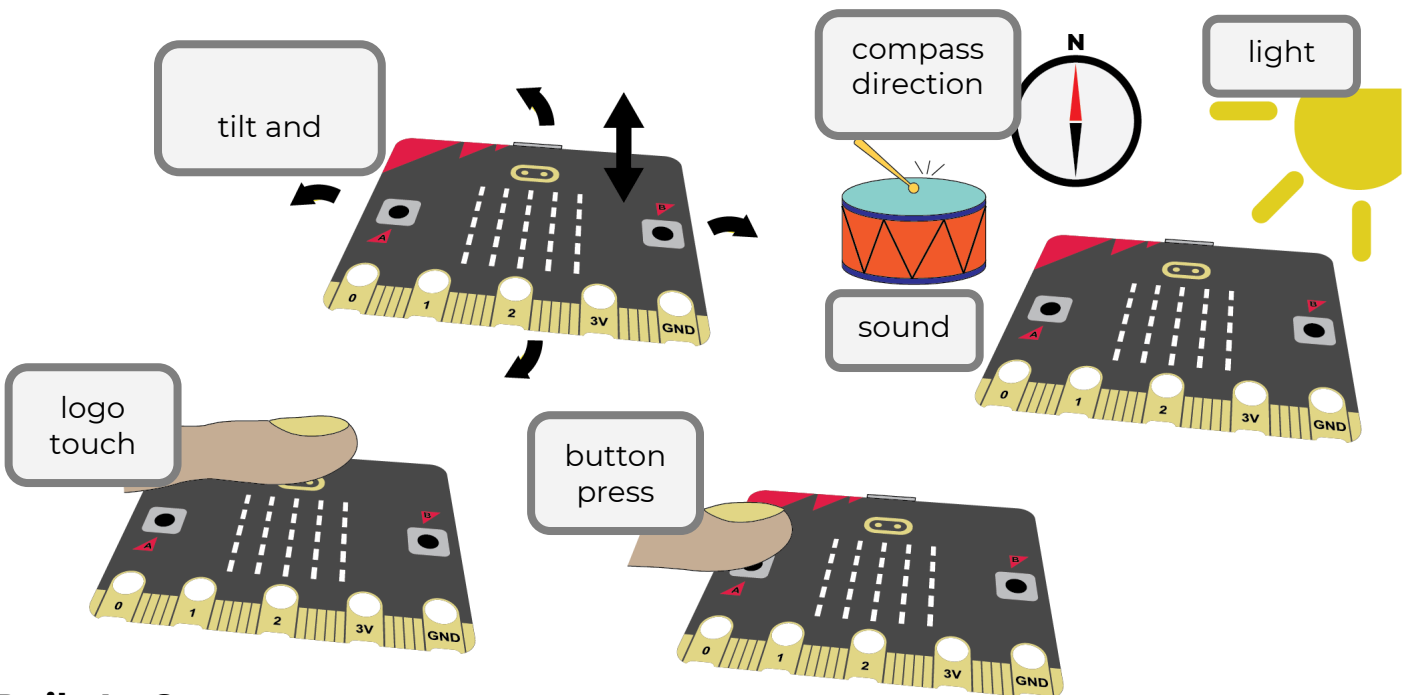
The micro:bit is a small microcontroller that can be programmed in a huge variety of ways to create exciting projects. There are a lot of features packed into this tiny device:



From: <https://microbit.org/get-started/features/overview/>

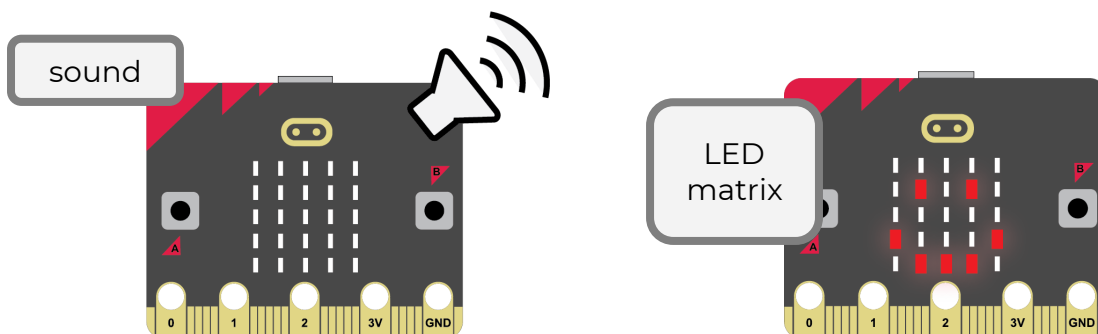
Built-In Sensors

The micro:bit has a variety of built-in sensors that you can use in your projects::



Built-In Outputs

There are also some built-in outputs:

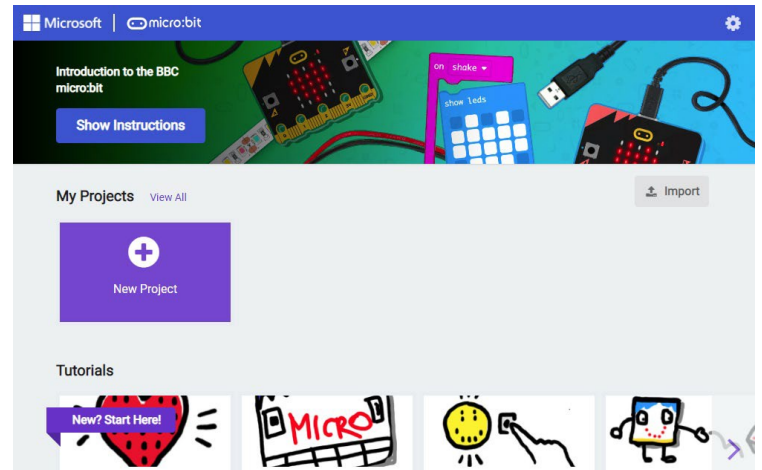


MakeCode

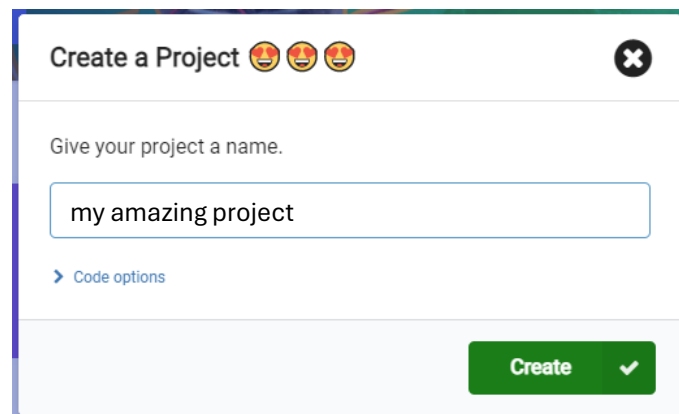
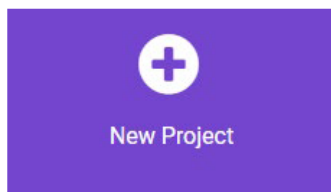
The micro:bit can be programmed using a very simple coding environment called Makecode. Code is created by dragging a dropping code blocks.

To create a Makecode project first visit the MakeCode website:

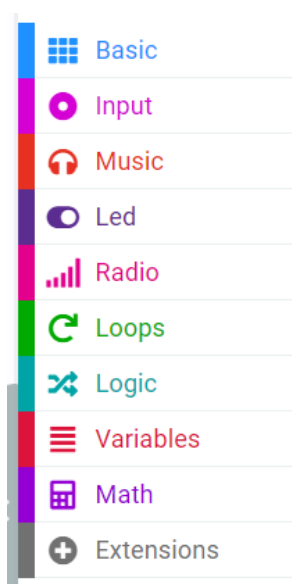
<https://makecode.microbit.org/>



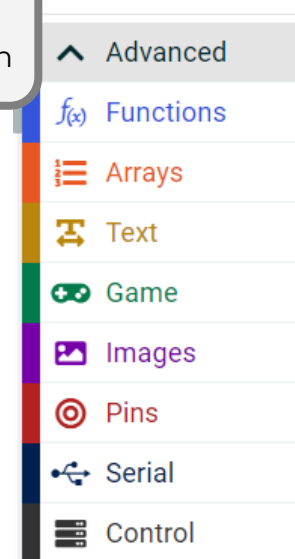
Then click on the New Project button and give the project a name:



You will see lots of categories of code blocks:



There are more blocks in the Advanced section



A First Program

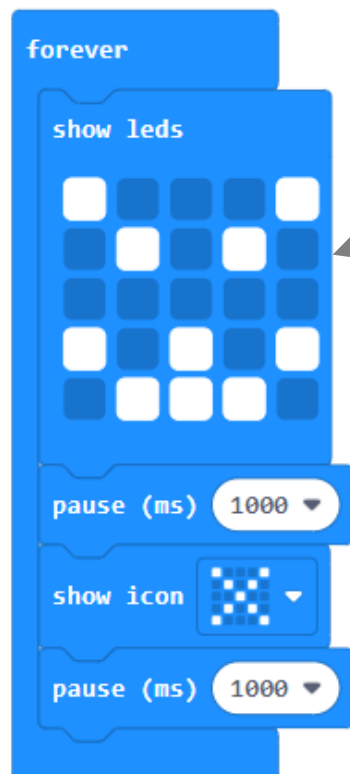
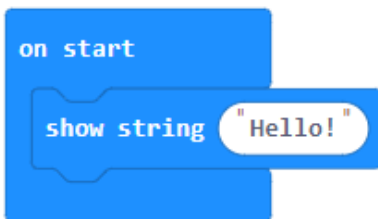
Let's create a quick program on the micro: bit. Create a project in Makecode. You will see the on start and forever blocks:



When the program is run, any code in **on start** will run first

When the code in **on start** completes, the code in **forever** will run, and then continue to run until the power is turned off.


Create the following program by dragging blocks from the left into the **on start** and **forever** blocks:



Draw whatever pattern you want here!

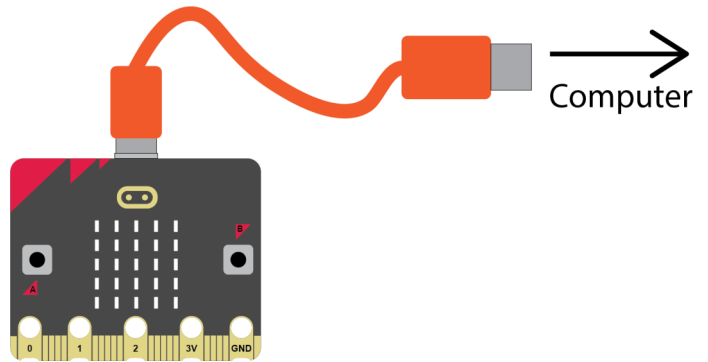
This tells the Microbit to wait for 1000 milliseconds, i.e. 1 second

All of these blocks can be found in the Basic category on the left. All code blocks in MakeCode are coloured to make them easy to find!

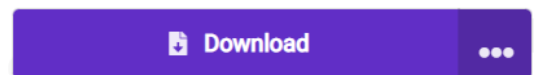
 Basic

Download your Program

Once you have created a program in MakeCode, you need to download it and copy it onto the micro:bit. First, connect the micro:bit to your computer using the USB cable:

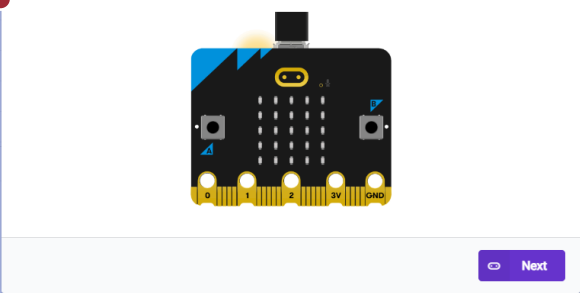
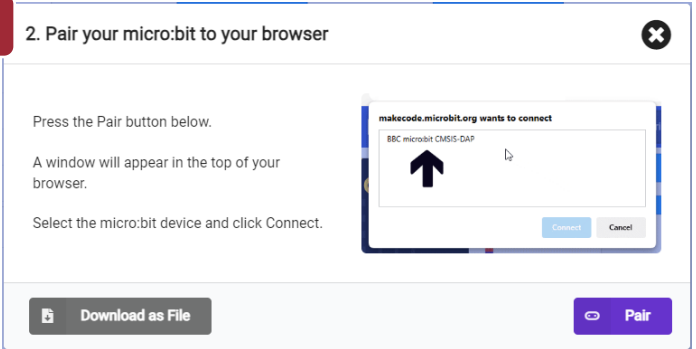
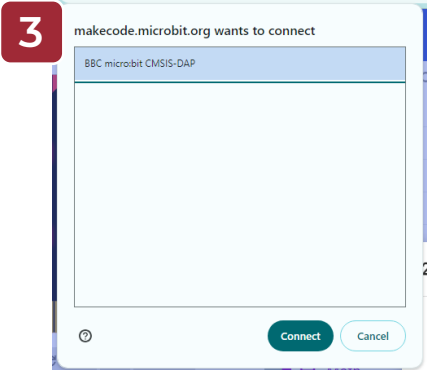
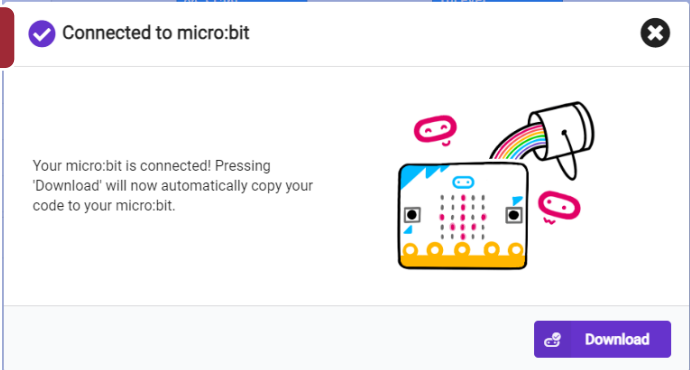


Click the **Download** button to download the code from Makecode.



Pairing with your Computer

Follow the instructions to pair your micro:bit with your computer:

- 1. Connect your micro:bit to your computer**

- 2. Pair your micro:bit to your browser**

- 3. makecode.microbit.org wants to connect**

- 4. Connected to micro:bit**


Now click download and the code will be copied to the micro:bit. You should see your program running on the micro:bit (the LED matrix should show the different things you coded).

Downloading as a File

If for some reason the pairing does not work, you can download the code as a file. The file should appear in your downloads folder. From there you can use File Explorer on Windows or Finder on the Mac to copy the file to your micro:bit, which should appear as a new device on your computer.

