NOTE:

You do not need a micro:bit to complete this tutorial. You can use the built in Simulator.

Getting Started with The BBC micro:bit

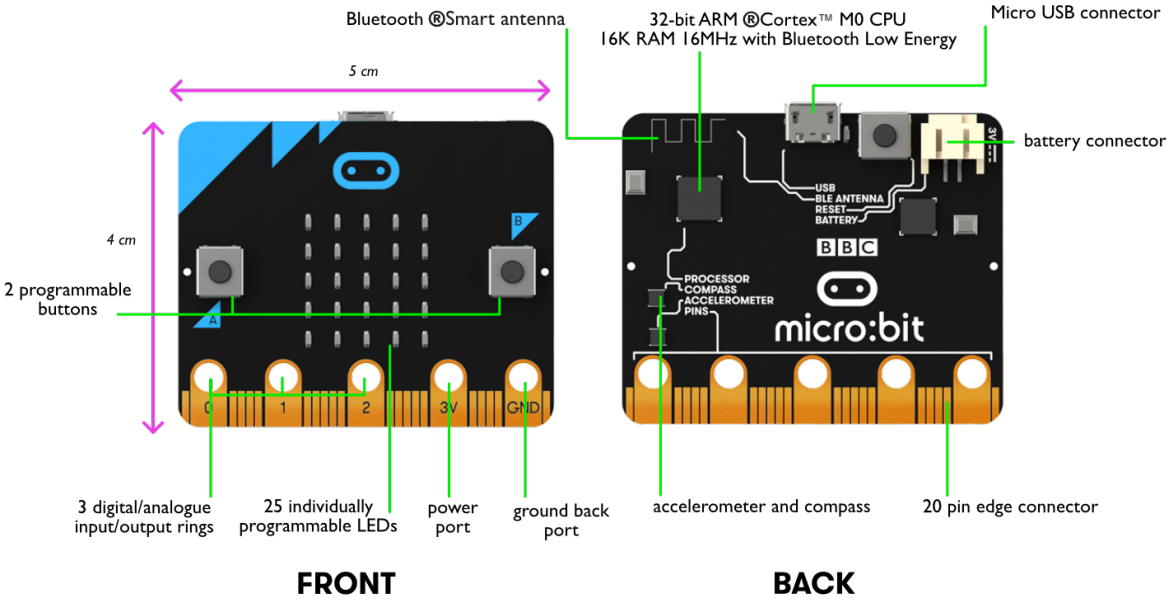
What is a micro:bit?

The BBC micro:bit is a computer that fits in your pocket and introduces you to how software (computer program/app) and hardware (the computer) work together.

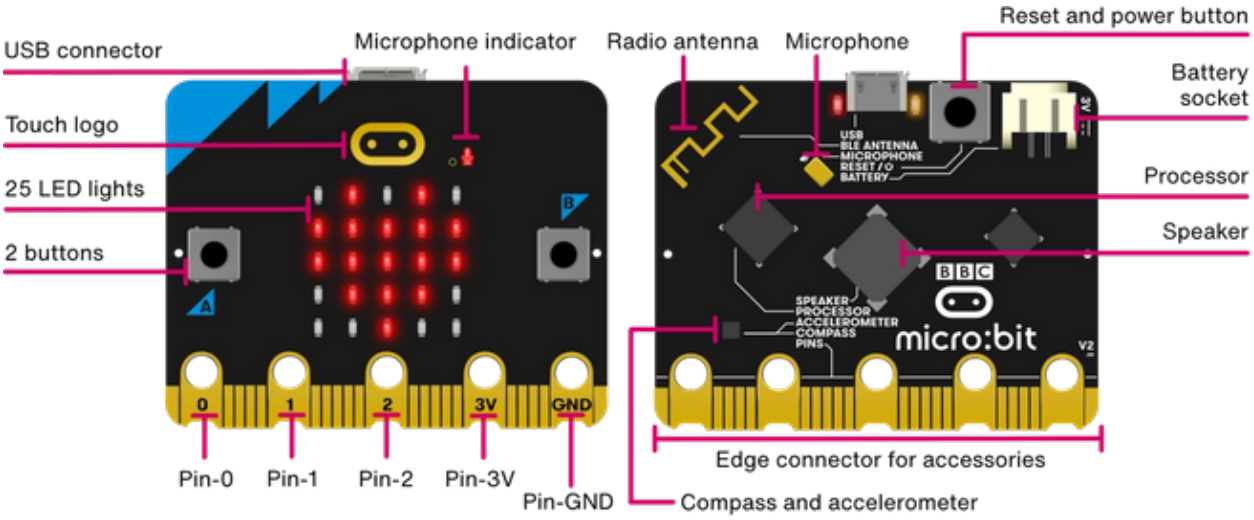
Features

A micro:bit has an LED display, buttons, sensors and input/output features that you can program to interact with you and the outside world.

V1 micro:bit



V2 micro:bit



Programming

The micro bit can be programmed using different programming languages including:

- Scratch
- MakeCode
- EduBlocks
- Micro Python

To get started we will focus on the MakeCode editor

What you need

- A micro:bit
- Battery pack with 2 x AAA batteries
- A computer, phone or tablet with internet access to load the coding editor
- A micro-USB cable if you are using a computer

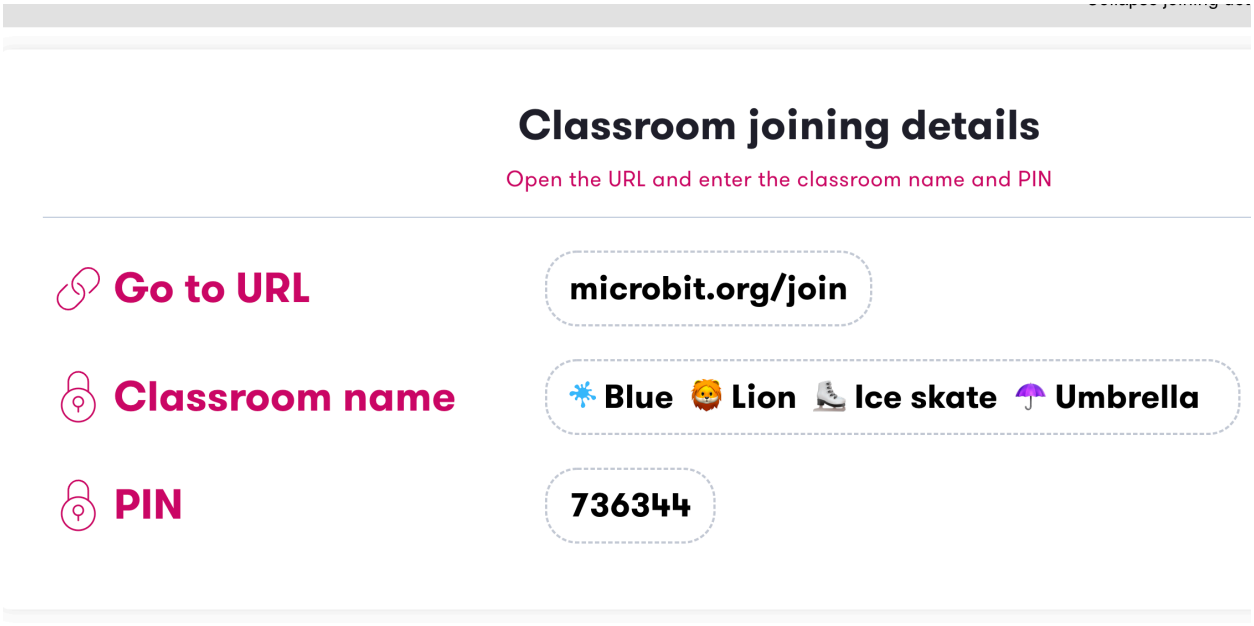
micro:bit Classroom

micro:bit classroom allows you to manage a whole class coding lesson without the need for student or teacher logins.

Setting it up

1. Open a web browser and type www.classroom.microbit.org
2. Fill in the activity details and click launch classroom
3. Set up the students code
4. Click share code with students
5. Click on dashboard

This will bring up a screen with the login details for the students to access the classroom session.



Once the students are logged in you will be able to see the them under the student tab at the top. Within this tab you can then click on individual students to check their code and see where they are having problems.

You can also save the classroom session to come back to at a later date by clicking the save classroom tab.

Hello World

Let's create our first computer program. When learning a new programming language, we tend to start with a hello world program, so here is no different.

1. Open the make code editor by typing www.makecode.microbit.org into your web browser. We recommend Google Chrome and press Enter.
2. Click on New Project. Give it the name Hello World and press Enter.
3. Click on Basic. Click and drag a show string block to the code area and attach it within the on start block.
4. Click where it says “Hello” and type Hello World!.

Your code should look like this:

This will display “Hello World!” once as the micro:bit starts up.

5. Click on show string “Hello World!” and drag it to the forever block and drop it.

Your code will now look like this:

Your code will now loop forever displaying “Hello World!” on the micro:bit display rather than just the once on start up.

Downloading The Code

1. Take the micro USB cable and connect the micro:bit to the computer.
2. Click on the three dots next to Download.
3. Click on Connect device. Click Next and click Next again. Click on your micro:bit and click connect. Now click done.
4. Click Download. You will now see Hello world! Scroll across your micro:bit display.

Challenge

Remix the code to say Hello followed by your name and download it to the micro:bit.

Conclusion

Through this session you have learned:

- What a micro:bit is
- What features a micro:bit has
- What programming languages you can use to program the micro:bit
- How to program a micro:bit using the MakeCode editor
- How to remix the Hello world code to say hello followed by your name