Hello World   01
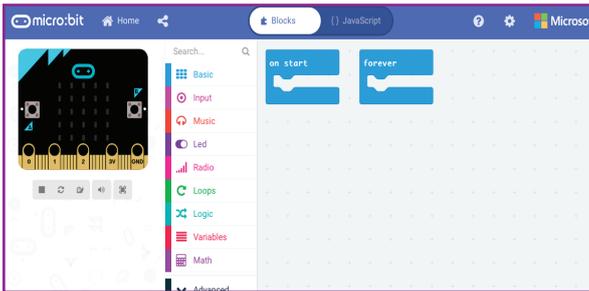
Blocks

- Create your first program for the micro:bit
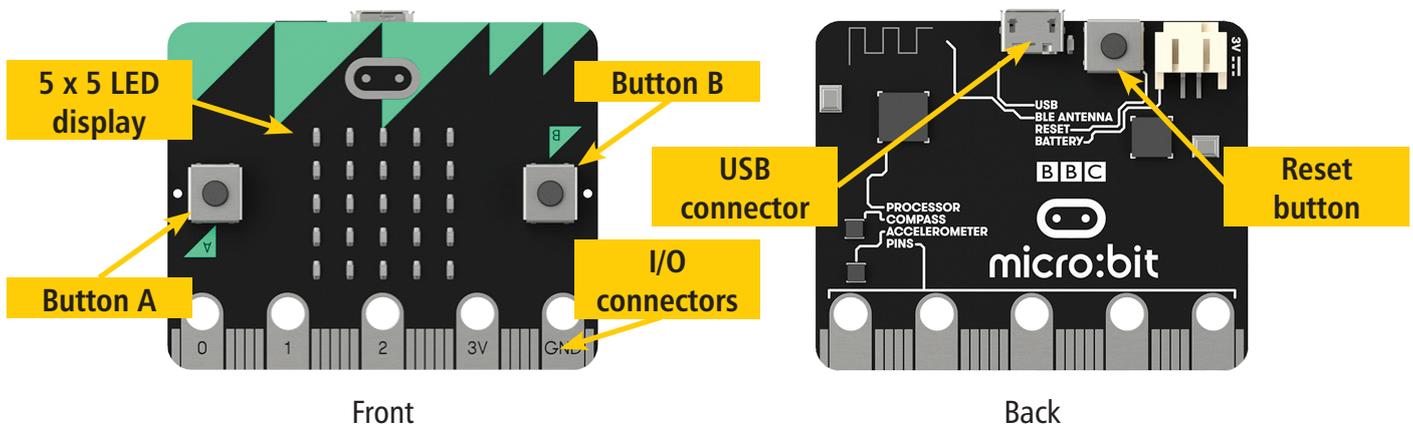- Show an LED scrolling message

10 mins

1. Visit the micro:bit website

Go to `www.makecode.microbit.org`

Click **New Project**. The code editor will appear. It looks a lot like Scratch! Instead of the stage, there is a virtual Micro:bit. You can test your programs here before downloading them to your Micro:bit device.
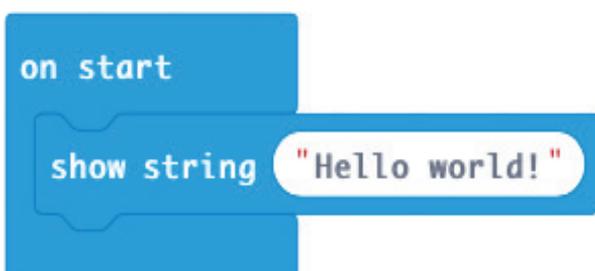
2. Explore the device

Take a look at the Micro:bit device. Despite its small size, its still a computer and can do quite a lot of things. Also, it may get quite warm when being used but don't worry, it won't get hot enough to burn you.

5 x 5 LED display

Button B

Button A

USB connector

I/O connectors

Front

USB
BLE ANTENNA
RESET
BATTERY

PROCESSOR
COMPASS
ACCELEROMETER
PINS

Reset button

Back

The Micro:bit also includes an accelerometer for detecting movement and a Bluetooth transmitter / receiver for connecting to other Bluetooth devices.

3. Write the code


```
on start
    show string "Hello world!"
```

It's a programming tradition that the first program you write in a new language is "Hello world!". So lets do it.

Drag the blocks into the order shown to the left. A `string` is a sequence of characters. You will learn about other data types as you progress through the worksheets.

Change the message to "Hello world!"

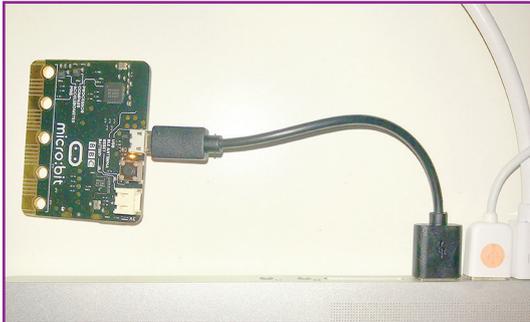You will see your code working on the browser's virtual Micro:bit.

4. Download the code

To see what the code does, we need to copy it to our micro:bit.

Press the *Download* button. A file called **microbit.hex** will be downloaded to your computer.
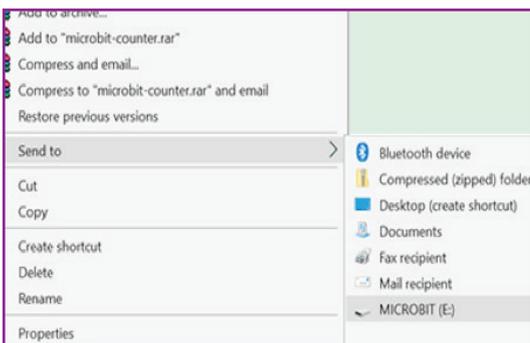
5. Connect your micro:bit

Connect your micro:bit to a spare USB port on your computer.

Your micro:bit may already have a program on it, so don't be suprised if the LEDs light up and show text or images.

It may take a little while for your computer to recognise and install the software it needs to communicate with the micro:bit

6a. Install your code (Windows users only)

Navigate to your computer's *Downloads* folder and find microbit.hex

Click on it once, using the **right** mouse button. From the menu, select `send to...`, then `MICROBIT (E):` (note: your device may have a different letter)

The file will take a short while to copy to the micro:bit. During this time, the yellow LED on its reverse will flash.

When copying has completed, your program will run.

6b. Install your code (Mac users only)

Navigate to your computer's *Downloads* folder and find microbit.hex

An icon for the micro:bit will have appeared in the Finder's sidebar (under devices). It may also have appeared on the Desktop.

Drag microbit.hex onto the micro:bit device icon.

The file will take a short while to copy to the micro:bit. During this time, the yellow LED on its reverse will flash.

When copying has completed, your program will run.

7. Modify your code

Now it's your turn to change the code! Here are some suggestions:

- Add another `show string` block to print your name after "Hello world".
- Experiment with the `show icon` block to add images to your display

Every time you make a change to your program, you will need to download it and copy it to the micro:bit.