# Micro:bits
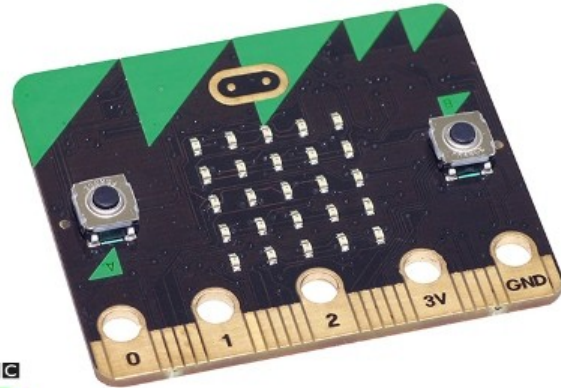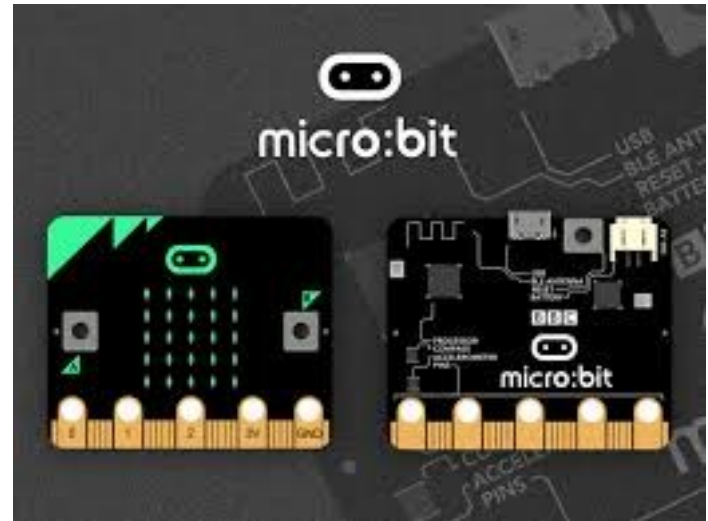
# Background info

- Developed in the UK so all students would have access to a tool to learn about computer science
    - Computer science → the study of **how users can actually use a computer**
    - **Clip** to see how they are used

# Need for Computer Science

- Computers are important to everyone's lives in the current world
- Computer examples



- Can we use them effectively until we know how they communicate with the user?
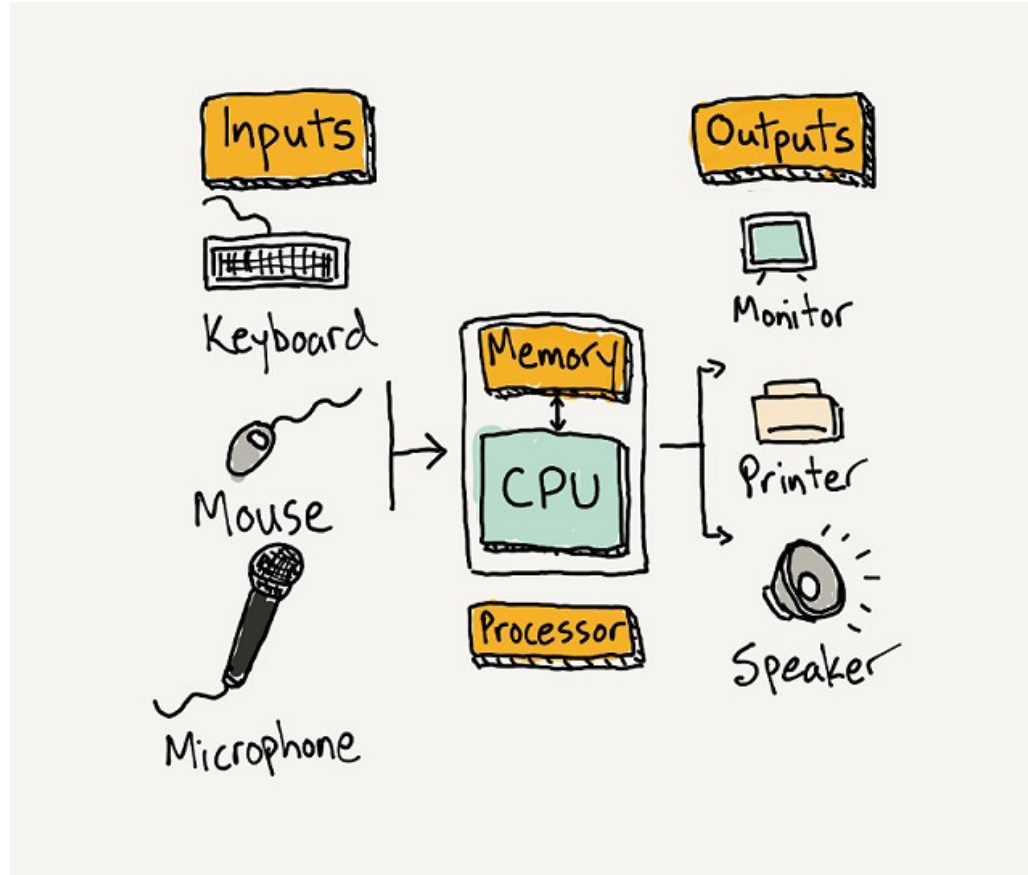
# Computers

All computers have four parts:

- **Input**
- **Processor**
- **Output**
- **Memory**

How do these compare to humans?

- Input - Senses
- Output - Speech / Blushing
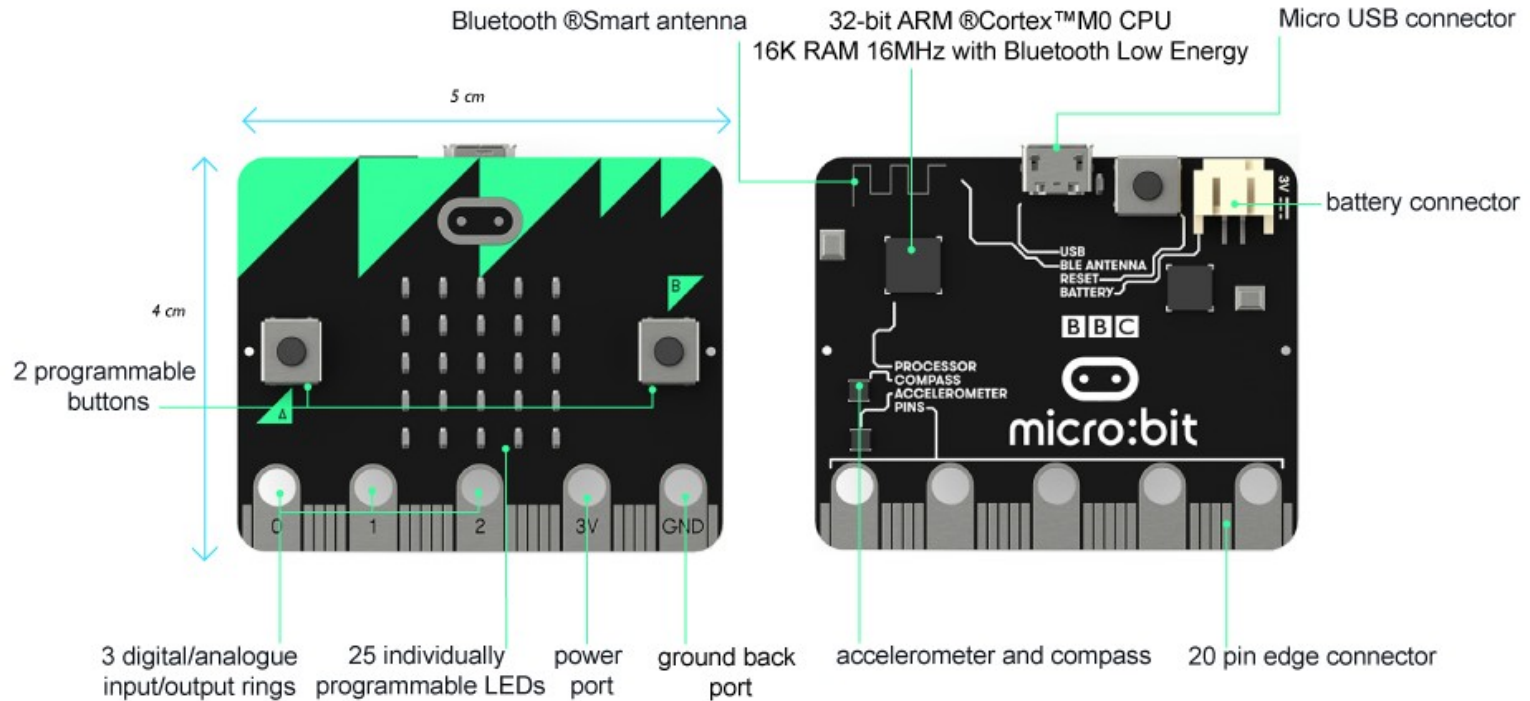- Processor and Memory - Brain

# Micro:bit components

Can you locate these parts on the Micro:bit?

- Processor
- Inputs → buttons, pins, accelerometer, compass, light sensor
- Outputs → LED lights, pins, Bluetooth

(Memory is 16K RAM)

# Micro:bit components



Bluetooth ®Smart antenna

32-bit ARM ®Cortex™M0 CPU
16K RAM 16MHz with Bluetooth Low Energy

Micro USB connector

battery connector

5 cm

4 cm

B

A

2 programmable buttons

USB
BLE ANTENNA
RESET
BATTERY

BBC

PROCESSOR
COMPASS
ACCELEROMETER
PINS

micro:bit

0    1    2    3V    GND

3 digital/analogue input/output rings

25 individually programmable LEDs

power port

ground back port

accelerometer and compass

20 pin edge connector

FRONT

BACK