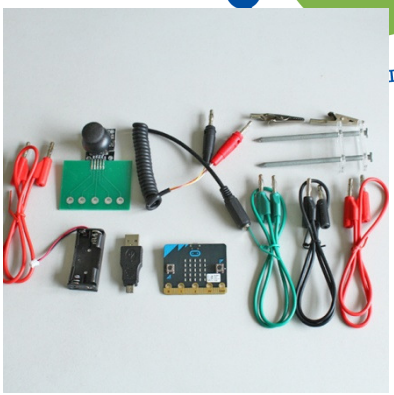
Instruction Sheet: Micro:bit Primary Starter Set

Included

- 5 x Micro:bit with Battery Pack and USB
- 2 x Sound Cable
- 1 x Joystick
- 1 x Red 4mm Banana Cable
- 1 x Black 4mm Banana Cable
- 3 x Green 4mm Banana Cable
- 1 x Soil Moisture Sensor Kit
- 1 x Water Pump



Sound Cable User Instructions

Included:

- 1 x Sound Cable.

Required

- Speakers or headset.

- Open the code editor of your choice and use the Play Note function to start coding music.
- Compile your code and transfer to the micro:bit.
- Insert the Black 4mm plug into the GND input of the BBC micro:bit and the RED 4mm plug into the P0 input.
- Insert the speakers or headphones into the jack connection.
- You are now ready to play your music!

There is sample code in the form of a piece of music (Three Blind Mice) on our website at the following link. https://sciencescope.uk/product/microbit-sound-cable/. Download the code which can be found in the product description.

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Joystick User Instructions

Included

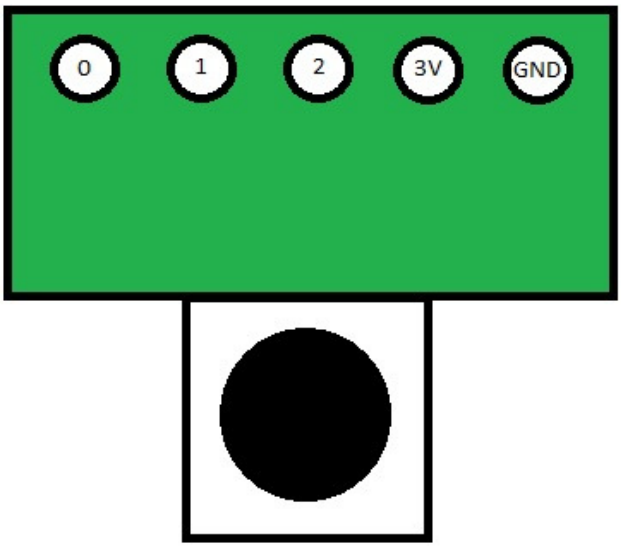
- 1 x Joystick

Assembly

- Use one of the 4mm cables to attach the left most output from the joystick to channel 0 on the BBC Micro:bit.
- Use another 4mm cable to connect the second from the left output of the joystick to channel 1 on the BBC micro:bit.
- Repeat this across all of the remaining outputs of the joystick.
- See the diagram below representing the connections.
- You are now ready to code.
- For starter code go to our website at the following location https://sciencescope.uk/product/microbit-joystick/. This code uses the joystick to control an LED on the micro:bit LED matrix.

Channels for Joystick Direction

- 0 = Push
- 1 = Horizontal
- 2 = Vertical



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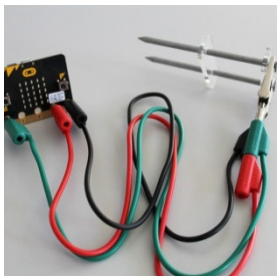
Micro:Bit Soil Moisture Sensor

Included

- 2 x 100mm Nails
- 2 x Acrylic Spacers
- 2 x Crocodile Clips
- 1 x Green Input Cable
- 1 x Red/Black 3V Cable
- 1 x Black GND Cable



Needed

- Micro:Bit
- Plant or Soil

Assembly

- Insert the two nails into the acrylic spacer with the markings Input, 3V and GND until the spacer is around 5mm from the nail heads.
- Insert the red/black 3V cable into the back of the green input cable.
- Attach a crocodile clip to the green input cable and the black GND cable. (Crocodile clip should be attached to the green input cable on the end with the red/black 3V cable attached).
- Insert the 4mm cables into the micro:bit as described below.
    - Green to P0
    - Red/black to 3V
    - Black to GND
- Slide the second acrylic spacer onto the nails.
- Insert the nails about 50mm into the soil that you wish to use.
- Attach the cables via the crocodile clips onto the heads of the nails as described below.
    - Green and red/black to Input 3V
    - Black to GND
- Your soil moisture sensor is now ready for programming.
- For example code go to our website at the following link and download the code which can be found the product description. https://sciencescope.uk/product/microbit-soil-moisture-sensor/. This code uses the micro:bit Soil Moisture Sensor to display the moisture level of the soil as a percentage on the BBC micro:bit LED matrix.

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Micro:Bit Water Pump

Included

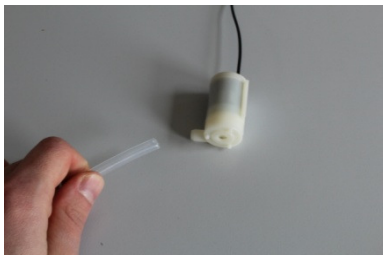
- 1 x Water Pump
- 1 x 500mm Tube

Needed

- Micro:bit
- Bowl of Water

Assembly

- Attach the cables to the following micro:bit connections.
  - Green to P1
  - Red to 3V
  - Black to GND
- Connect the flexible tube to the output of the pump. See image below.



- Place the pump into the bowl of water. (The pump is submersible)
- Get coding.
- For example code go to our website at the following location and download the code which can found in the product description. https://sciencescope.uk/product/microbit-water-pump/. This code allows you to control the water pump using the A button on the BBC micro:bit. Once the button is pressed the water will be pumped for 10 seconds.

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