Micro:Bit Plant Watering System

Included

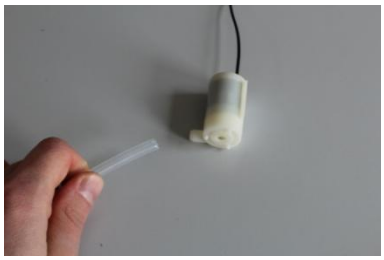
- Soil Moisture Micro:bit Sensor
  - 2 x 100mm Nails
  - 2 x Acrylic Spacers
  - 2 x Crocodile Clips
  - 1 x Green Input Cable
  - 1 x Red/Black 3V Cable
  - 1 x Black GND Cable
- Micro:bit Water Pump
  - 1 x Water Pump
  - 1 x 500mm Flexible Tube

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 connected.
- 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.
- Place the pump into the bowl of water. (The pump is submersible)

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- Example code can be found on our website at the following link https://sciencescope.uk/product/microbit-plant-watering-system/. This code uses the micro:bit soil moisture sensor and the micro:bit water pump to maintain a healthy soil moisture level of a plant. Use the buttons to control the water pump a view the soil moisture level.