

Helter Skelter Lights

For this project you will need some battery operated* fairy lights that you don't mind experimenting with!

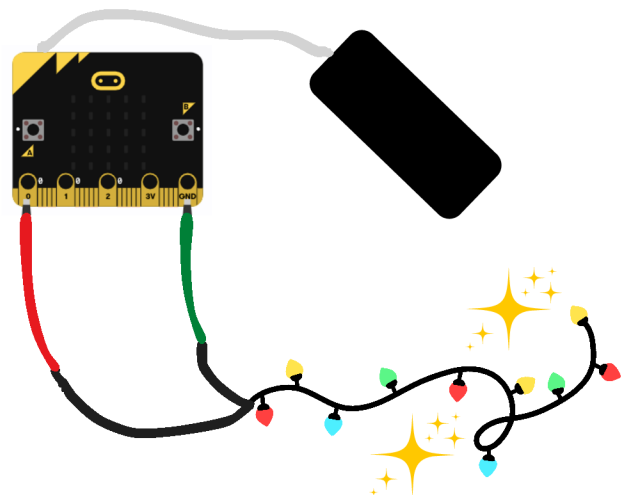
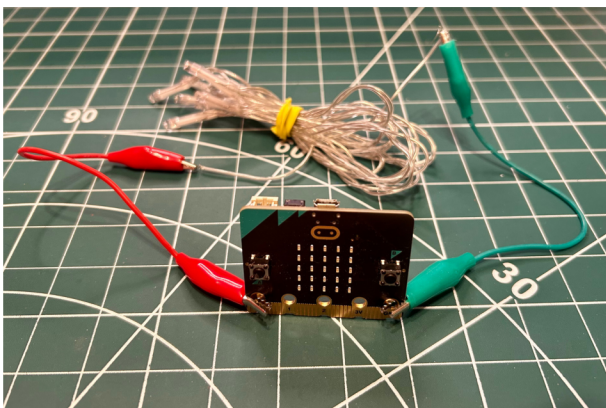
*They must be battery operated - NOT MAINS ELECTRICITY!

Choose fairy lights that only use 2 AA, 2 AAA or a button cell battery (Maximum 3V).

To connect to your micro:bit:



1. Cut the battery case off with sharp scissors.
2. Strip some of the insulating plastic from the end of the wires.
3. Connect each wire to a crocodile clip lead.
4. Connect one crocodile clip to pin 0 and the other to GND.
5. Code the micro:bit (see page 2)
6. Press the A button. If the fairy lights don't flash, switch the crocodile clips.



Fairy lights contain a string of LEDs (Light Emitting Diodes). LEDs only let electricity flow in one direction, so the string will only light up if the electricity is flowing the correct way through the circuit.

When you connect the lights to the micro:bit, the positive wire needs to go to Pin 0 and the negative wire to GND. If they're the wrong way around, the LEDs won't turn on because the current can't pass through them.

If the lights don't come on when you press button A, try swapping the crocodile clips on Pin 0 and GND. This reverses the direction of the current so the LEDs can light up properly. If they still don't turn on, check the code and the power supply.



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Log into MakeCode and let's get coding!

<https://makecode.microbit.org/>



```
on button A pressed
while true
do
  digital write pin P0 to 1
  pause (ms) 500
  digital write pin P0 to 0
  pause (ms) 500
```

When the A button is pressed, it sends a signal to pin 0.



```
on button B pressed
while not button A is pressed
do
  digital write pin P0 to 0
  clear screen
```

When the B button is pressed, it pauses the signal until the A button is pressed.

Make an animation using your micro:bit's LEDs.

