

Make a 'human connection'

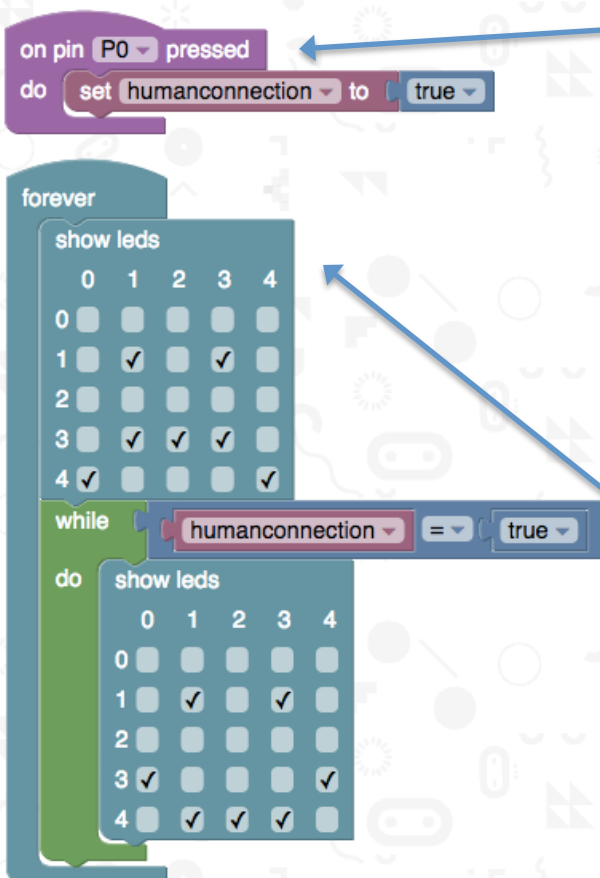
Try out this fun science experiment with a friend using the BBC micro:bit. Hold GND on the micro:bit in between your fingers and hold hands with a friend. Get that friend to hold Pin0, and watch your micro:bit's LEDs change in front of your eyes.

Step 1: Import the code

Click on the hex file link on the Live Lessons website to view the code on the BBC micro:bit website (www.microbit.co.uk).

The script for your 'human connection' experiment should now appear in your code window.

Step 2: Understanding the code



```

on pin P0 pressed
do
  set humanconnection to true

forever
  show leds
  0 1 2 3 4
  0
  1 ✓
  2
  3 ✓ ✓ ✓
  4 ✓

while humanconnection = true
do
  show leds
  0 1 2 3 4
  0
  1 ✓
  2
  3 ✓
  4 ✓ ✓ ✓
  
```

What happens when you hold hands?

When you're holding GND and linking hands with a friend, you and your friend are forming a connection with the BBC micro:bit, acting like a long human wire.

When your friend then touches Pin0, the micro:bit registers Pin0 as having been pressed.

In this bit of code, we've programmed the micro:bit to set a **variable humanconnection** to true when that happens.

What happens on the micro:bit's LEDs?

In a **loop** that goes on **forever**, we've programmed the micro:bit to display a sad face on the LEDs.

We've then introduced another loop within this, which says that when the **variable humanconnection** is true, the micro:bit displays a happy face on the LEDs.

Test and play

Connect your BBC micro:bit to your computer using a micro USB cable. Drag the hex file from your computer onto the BBC micro:bit.

Disconnect your BBC micro:bit from the computer and plug in the battery pack.

Now hold GND in between your fingers, hold hands with your friend and get your friend to hold Pin0. Watch as the micro:bit's sad face turns into a happy face.