

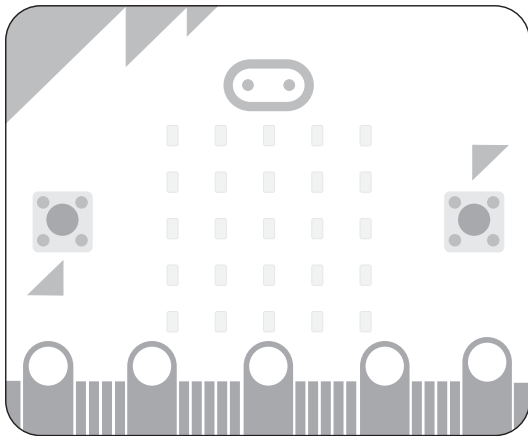
Micro:bit - Create Your Own Input

Georgia Tech
Digital World Image Group
An NSF AISL Funded Project

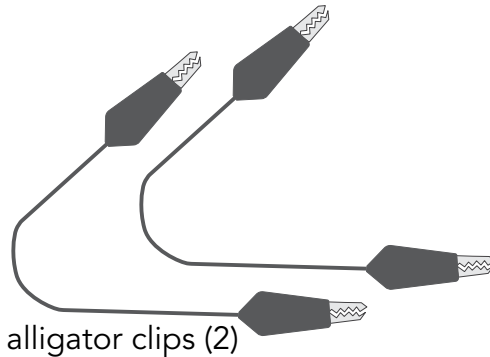
<http://dwig.lmc.gatech.edu/projects/prototypingpuppets/>

This document will teach you how to connect one of our popsicle switches as an input to a micro:bit. This input is the same paper switch you use to control your rod puppet.

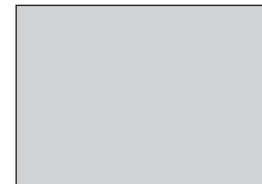
Materials:



micro:bit



alligator clips (2)



construction paper



copper tape

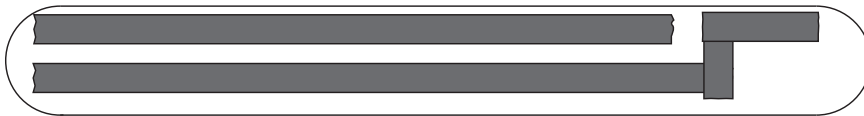


large craft stick



clear tape

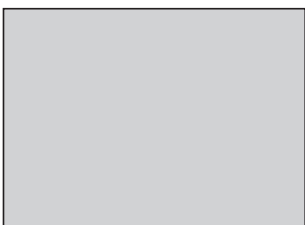
Instructions:



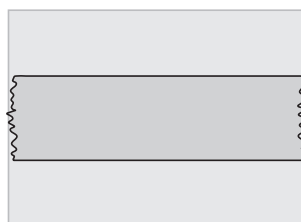
Step 1: *Attach* copper tape to craft stick as shown in picture.

Note: In order to lay corners, use separate overlapping pieces of copper tape.

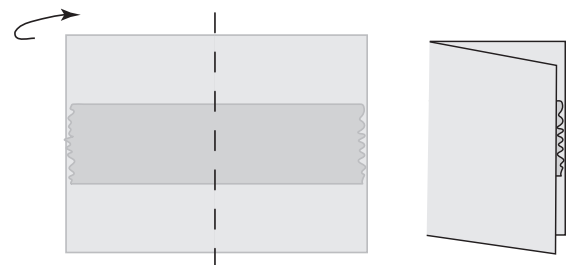
Step 2: *Cut* out piece of construction paper to act as your switch.
Actual size



Step 3: *Attach* copper tape on to construction paper.



Step 4: *Fold* construction paper in half, vertically.



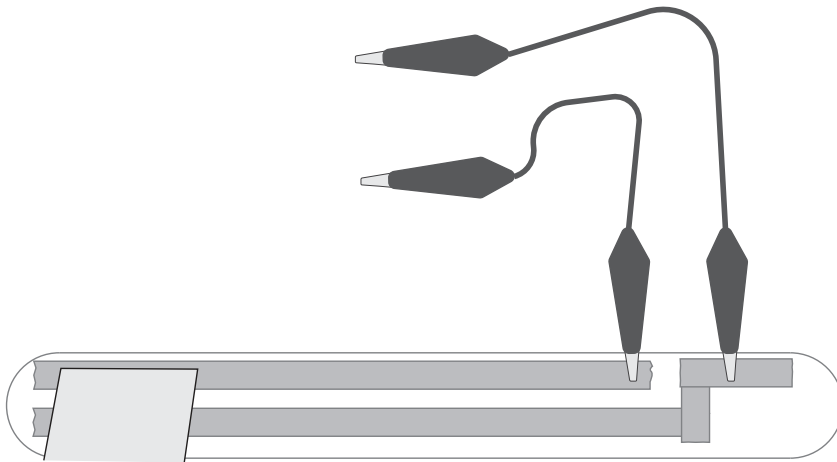


Step 5: *Attach* folded paper from step 4 to copper tape on craft stick.

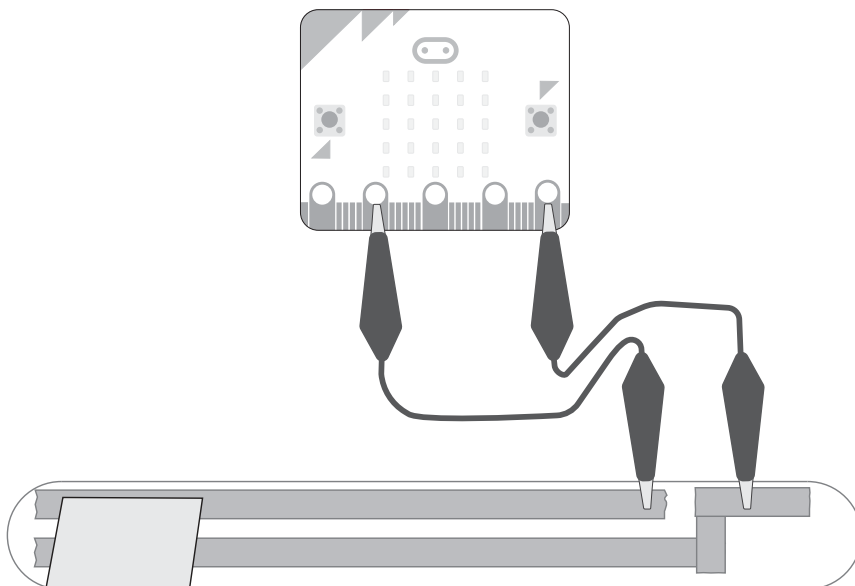
Note: Make sure that **copper tape on craft stick** *makes contact* with the **copper tape on the construction paper**.



Step 6: *Flip* craft stick over to other side. *Place* clear tape over **construction paper** to secure switch to **craft stick**.



Step 7: *Attach* alligator clips to copper tape.



Step 8: *Attach* other end of each alligator clip to micro:bit.

Now you have created your own input for your micro:bit!

Note: The pins will depend on how you program your micro:bit. To follow the example code on the next page, connect the clips to **pin1** and **GND**.

Here is a sample **code** that works with the pin configuration shown on the previous page.

When downloaded onto your **micro:bit**, this **code** will light up a happy face on the micro:bit when you close the switch. When it is open, the happy face will go away.

```
basic.forever(function () {  
  while (pins.digitalReadPin(DigitalPin.P1) == 1) {  
    images.iconImage(IconNames.Happy).showImage(0)  
  }  
  while (pins.digitalReadPin(DigitalPin.P1) == 0) {  
    images.createImage(`  
      . . . . .  
      . . . . .  
      . . . . .  
      . . . . .  
      . . . . .  
      `).showImage(0)  
  }  
})
```

program at:
<https://makecode.microbit.org/#editor>