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