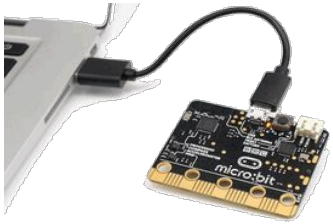
Using Technology to Create Art

Microbit Nightlight

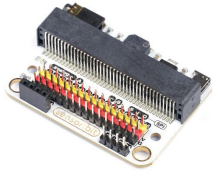
Preliminary

Parts

Microbit Kit



Laptop or Chromebook



sensor:bit for micro:bit

Neopixels

Plastic Bottle

Assembly

Glue cap to base

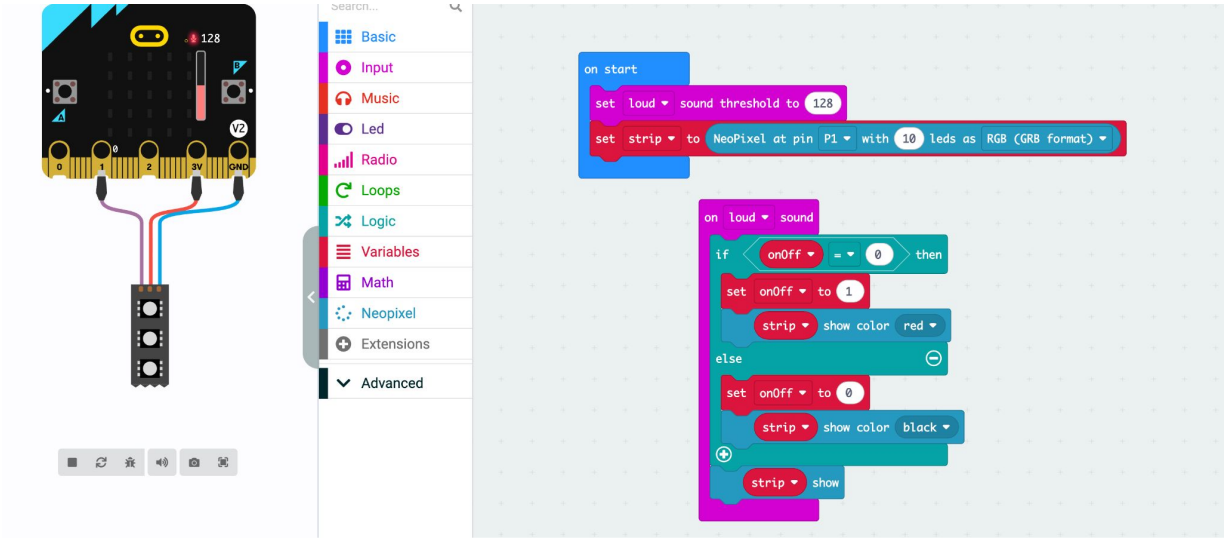
Insert neopixels into bottle

Connect Microbit to neopixels

...

Programming - Clap On / Clap Off

1. Goto https://makecode.microbit.org/ and select New Project
2. ….

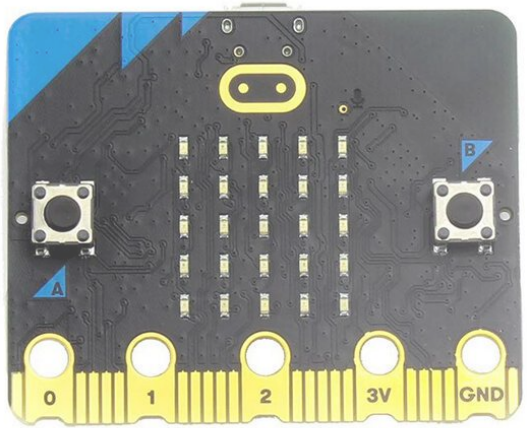


Programming - Nightlight

```
on start
set strip to NeoPixel at pin P1 with 10 leds as RGB (GRB format)

forever
if button A is pressed then
    if lightsOn = 0 then
        pause (ms) 75
        set lightsOn to 1
        strip show color white
        strip show
    else
        set lightsOn to 0
        pause (ms) 75
        strip show color black
        strip show
else if button B is pressed then
    strip show rainbow from 1 to 360 lightsOn
    while not button A is pressed
    do
        strip rotate pixels by 1
        pause (ms) 100
        strip show
```

Button A - White Light/Off
Button B - Rainbow Color Mode



Microbit Resources - Going Further

Lastly, distribute a handout showing participants ways to further their use of the Microbit to increase their knowledge of electronics and programming.

Microbit.org
https://makecode.microbit.org/microbit-org/feature-videos
https://www.hackster.io/microbit/projects
https://education.theiet.org/primary/stem-activities/microbit
Microbit and Electronics
https://mrmorrison.co.uk/microbit/ideas/
https://resources.scratch.mit.edu/www/cards/en/microbit-cards.pdf