

Lit Sleeve

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Concept

I wanted to do some interactive movement and a wearable device with the Circuit playground.

I know that the circuit playground itself is small to light up on wearables. Therefore, I decided to connect with the LED strip for the help light up more and a long extension.

Yes there was a struggle while I was working on this. There were some issues with the code of the position of the Circuit playground.

MakeCode

The image shows two side-by-side interfaces of the Microsoft MakeCode platform.

Left Side (Scratch-style interface):

- Top Bar:** Includes tabs for "BLOCKS" and "{} JAVASCRIPT", a search bar, and the Microsoft logo.
- Blocks Palette:** On the left, categories include LIGHT, INPUT, MUSIC, NETWORK, LOOPS, LOGIC, VARIABLES, MATH, ADVANCED, PINS, FUNCTIONS, and ARRAYS.
- Script Area:** A script is shown for a microcontroller:
 - An "on start" event triggers a green "set strip" block to "create strip on A1 with 19 pixels".
 - Four "on tilt" events (right, left, up, down) each trigger a pink "set strip" block to "all pixels to" a specific color (green, orange, pink, black).
- Bottom:** A project name "LRR_Final" and a save icon.

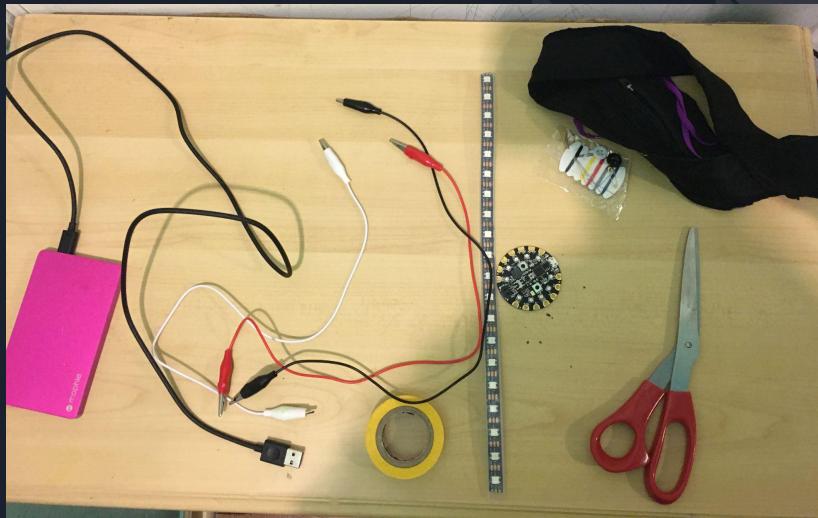
Right Side (JavaScript Editor):

- Top Bar:** Includes tabs for "BLOCKS" and "{} JAVASCRIPT", a search bar, and the Microsoft logo.
- Blocks Palette:** Categories include LIGHT, INPUT, MUSIC, NETWORK, LOOPS, LOGIC, VARIABLES, and MATH.
- JavaScript Code:**

```
1 input.onGesture(Gesture.TiltRight, function () {
2     strip.setAll(0x00ff00)
3 })
4 input.onGesture(Gesture.TiltLeft, function () {
5     strip.setAll(0xff8000)
6 })
7 input.onGesture(Gesture.TiltUp, function () {
8     strip.setAll(0xffff00)
9 })
10 input.onGesture(Gesture.TiltDown, function () {
11     strip.setAll(0x000000)
12 })
13 let strip: light.NeoPixelStrip = null
14 strip = light.createStrip(pins.A1, 19)
```
- Bottom:** Project name "LRR_Final" and a save icon.

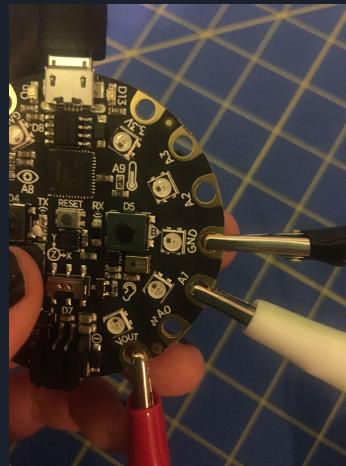
Materials

- MakeCode
- Circuit Playground
- LED Strip
- 3 Alligator Clips (red, black, and White)
- Sewing Kit
- Scissor
- A sleeve
- Tape
- USB connector
- Portable battery Charger



Follow the process

- 01 Connect the alligator clips to the right places on the circuit. Connect Red to Vout, White to A1, and Black to GND.
- 02 Connect the alligator clips to the LED strips to the right places. Connect Red to +5v, White to Di, and Black to negative.





Target audience

03

I slide the LED strip inside the sleeve. Until it got to the end of the strip, I put tape for to help the alligator clips stay connected with the LED strip.



04

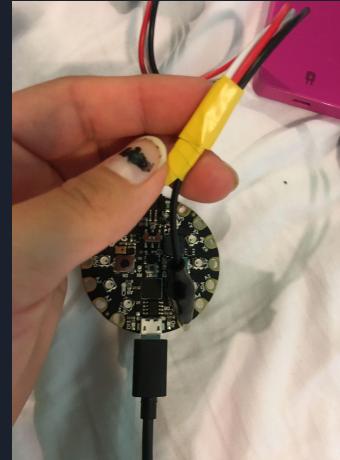
I put more tape around the alligator clips for the help stay in one place and not make a mess in the clip.





05

I add more tape around when it got to near the circuit for to help stay in its place.



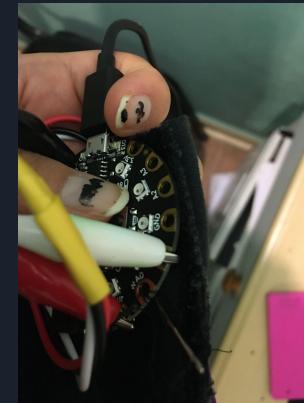
06

I had close the sleeve hole that I had opened for to insert the LED strips.



07

Sew the Playground circuit to the sleeve so it could be attach during the arm movement.





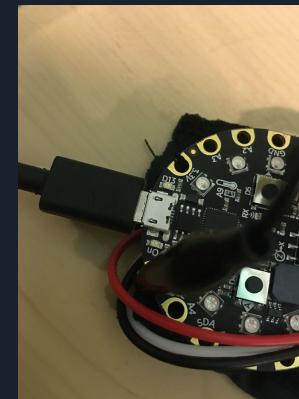
08

Sew the strings on the sleeve, so can be useful for to tie around the arm.



09

Connect the USB plus to the circuit playground and to the portable battery.



Final Product

