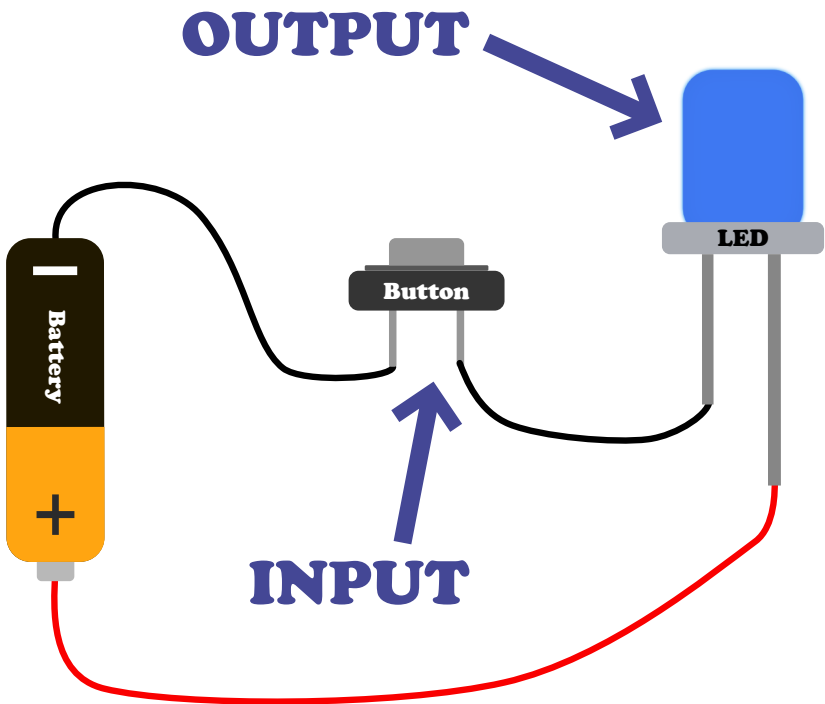


INPUT:
what you do

OUTPUT:
what happens



**When you push the
button, the LED lights up**

LED Light

INPUT / OUTPUT

Button

INPUT / OUTPUT

Speaker

INPUT / OUTPUT

Microphone

INPUT / OUTPUT

Motor

INPUT / OUTPUT

Light Sensor

INPUT / OUTPUT

Screen

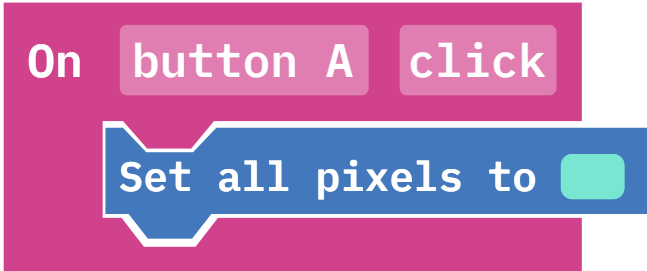
INPUT / OUTPUT

Switch

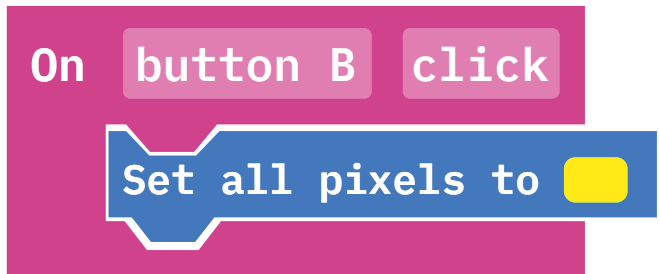
INPUT / OUTPUT

Try each of the **inputs** on the **Circuit Playground** For example...

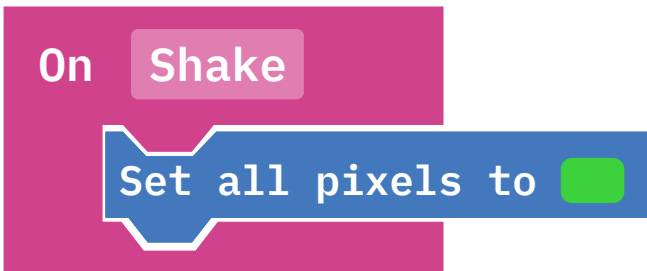
**When button A is clicked
make all of the LEDs blue**



**When button B is clicked
make all of the LEDs yellow**

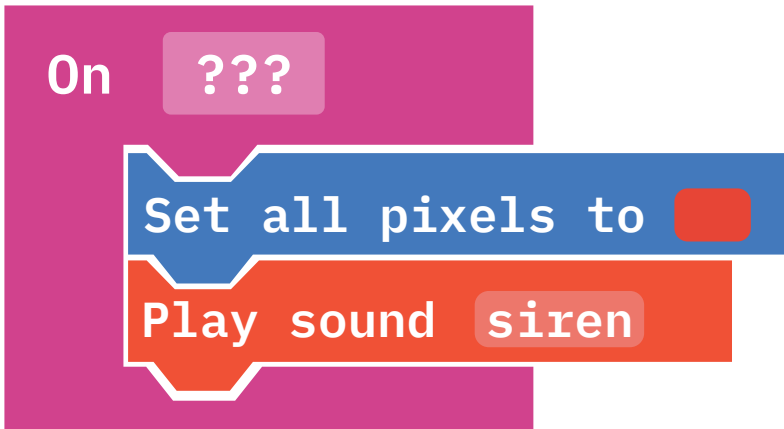


**When you shake the device
make all of the LEDs green**



Challenge:

Sound an alarm and turn all of the LEDs red when someone **moves** your Circuit Playground



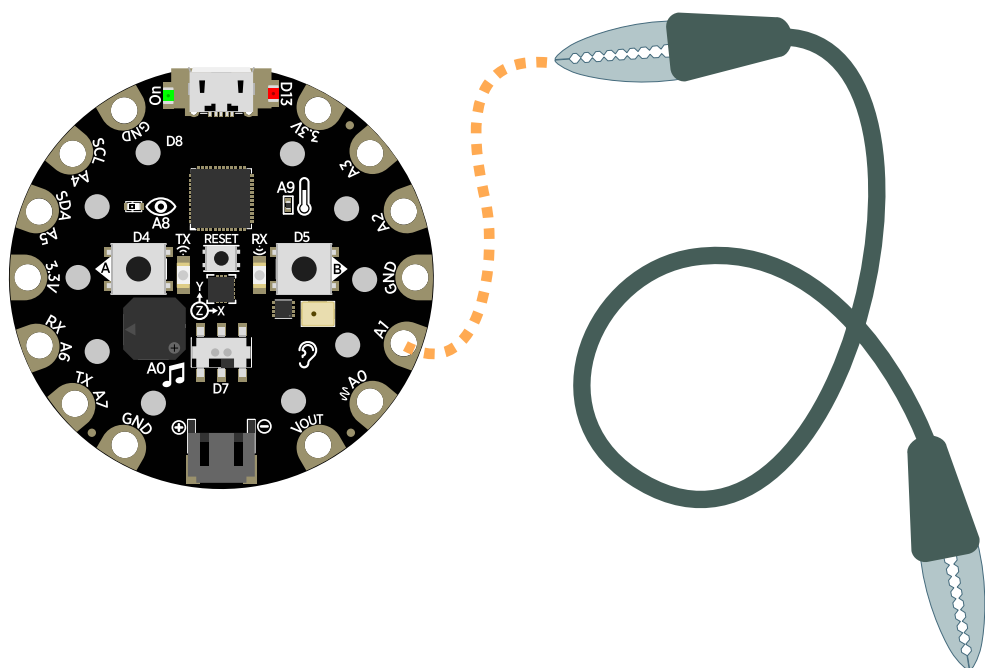
...Can you make the LEDs **blink** on and off instead?

...What **other inputs** could you use to detect when someone moves the Circuit Playground?

...Program a button to **reset** your alarm

The Circuit Playground works with **external inputs** too

Connect an alligator clip to pin **A1**



...Then connect the other end of the alligator clip to something **conductive**

Anything that is metal should work

Try using conductive tape or conductive paint to make your own totally unique button

Programming your capacitive touch button

Start with something simple

On touch A1 click

Set all pixels to 

...Then try something more complex

On touch A1 down

Set all pixels to 

Ring tone at middle C

On touch A1 up

Set all pixels to 

Stop all sounds

You can also connect external outputs to your Circuit Playground

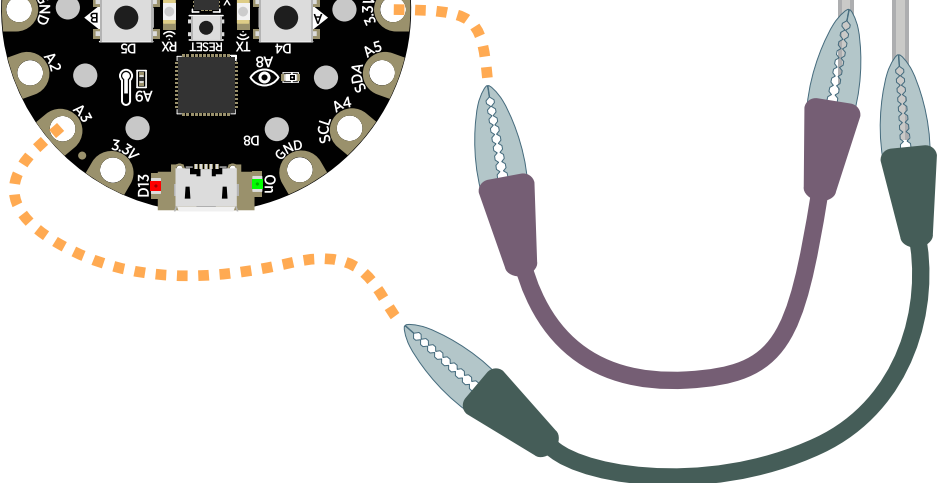
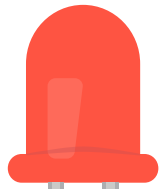
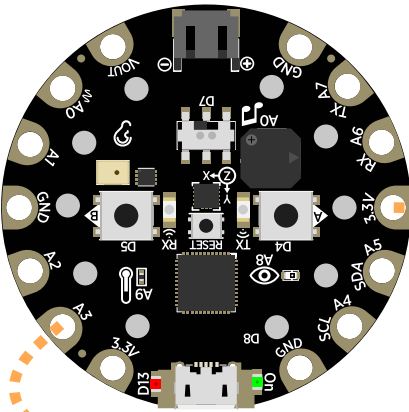
Lets start with an LED

On touch A1 down

Digital write pin A3 to low

On touch A1 up

Digital write pin A3 to high



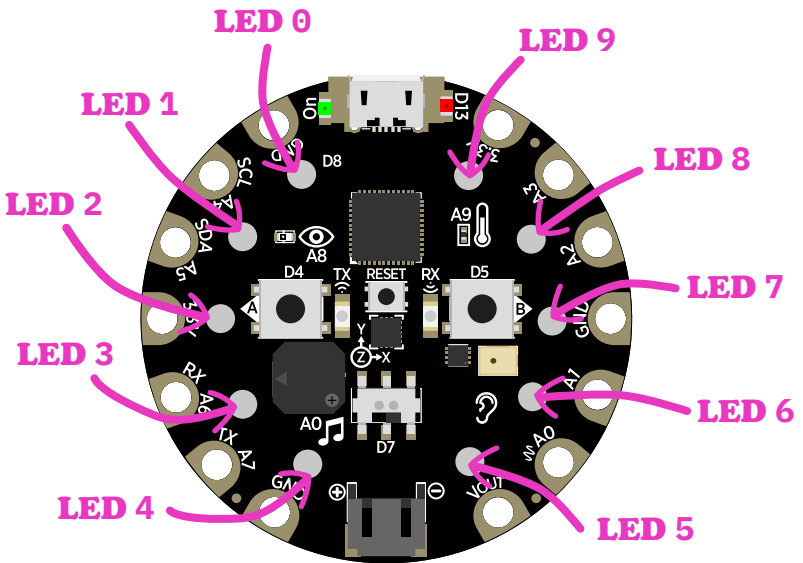
...huh, we have almost made a telegraph



**Miscellaneous
projects**

Use the Circuit Playground to answer math equations

```
Set count to 0
Repeat 5 + 2 times
  Set pixel color at count to yellow
  Change count by 1
```



...How could you **change the code** so that it can display answers larger than ten?