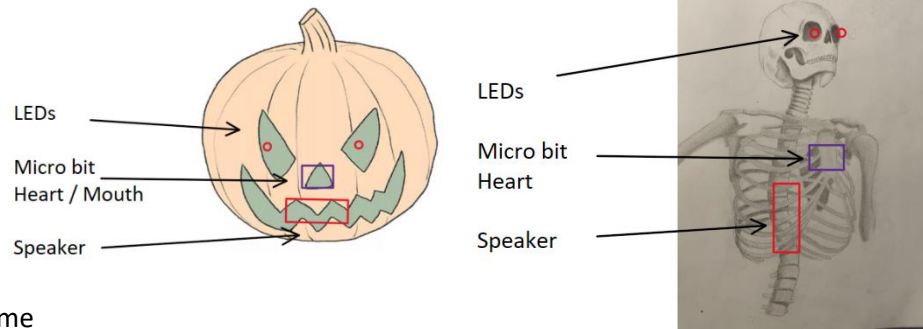


Halloween project

Overview

Create / Draw a skeleton or pumpkin
Use LED Light for the eyes
Micro bit for heart or mouth
Connect to external speaker for extra volume



{Step 1} – Create the flashing eyes

Click on the **Pins** and Digital write Pin to 0 from **Advanced** Category in the Toolbox add to into the **forever** block.

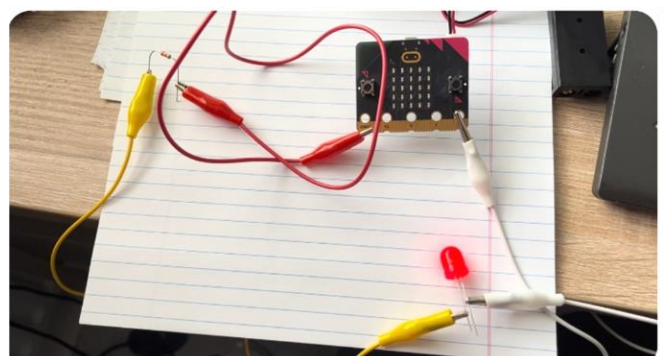
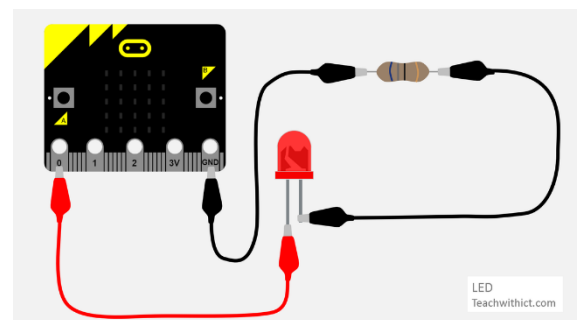
Add Pause from **Basic**. Set to 1000 (ms)



Create and Test the LED circuit

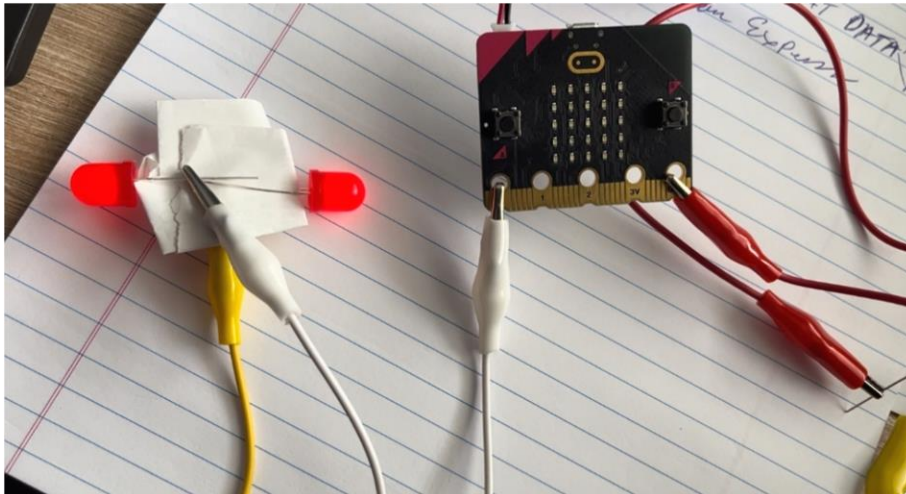
The resistor is required to stop the LED from blowing or burning out.

Make sure you connect the short leg of led to negative or ground



{Step 2} Connect 2 LED to make the Eyes

Note I used a paper to stop the led legs from touching,
The brightness will drop when you add second Led.



{Step 3} Coding the Scary Pumkin / Skeleton

```
on start
  call Pet_become_calm
  set volume 50
```

Your Variables

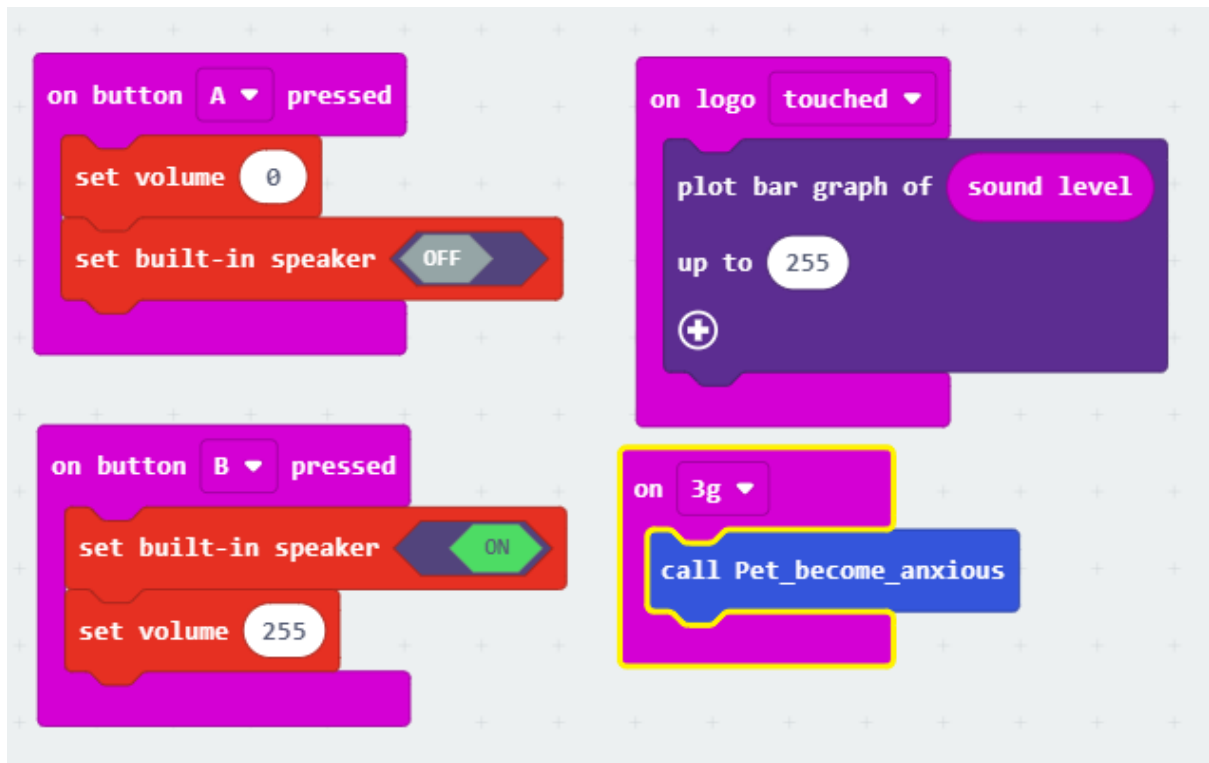
- Heartbeat ▾
- Mouth ▾

```
function Pet_become_calm
  set volume 50
  create image
  set Mouth ▾ to
  set Heartbeat ▾ to 60
  digital write pin P1 ▾ to 0
  pause (ms) 1000
  digital write pin P1 ▾ to 1
  pause (ms) 1000
```

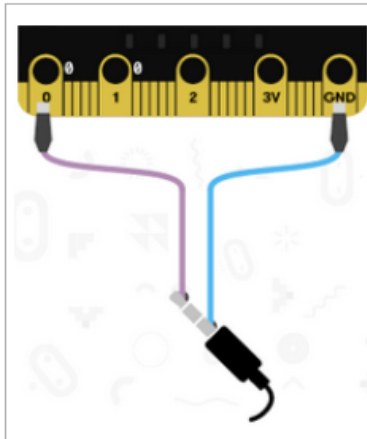
```
function Vital_signs
  show image Mouth ▾ at offset 0
  play tone Middle C for 1/4 ▾ beat until done
  pause (ms) 60000 / ▾ Heartbeat ▾
  digital write pin P1 ▾ to 0
  pause (ms) 1000
  digital write pin P1 ▾ to 1
  pause (ms) 1000
```

```
function Pet_become_anxious
  set volume 255
  create image
  set Mouth ▾ to
  set Heartbeat ▾ to 120
  repeat 10 times
  do
    digital write pin P1 ▾ to 0
    pause (ms) 200
    digital write pin P1 ▾ to 1
    pause (ms) 200
  play melody jump down ▾ until done
```

```
forever
  call Vital_signs
  if sound level ≥ 50 then
    call Pet_become_anxious
  else
    call Pet_become_calm
```

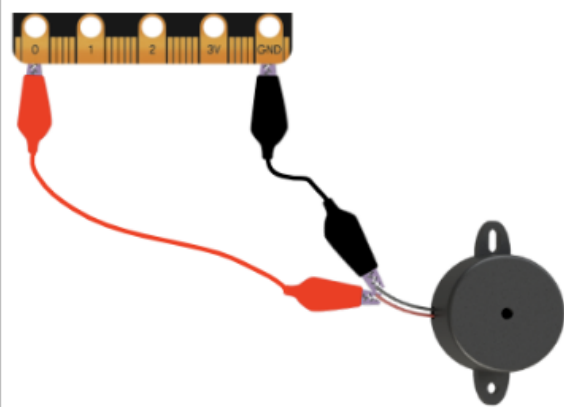


Connection



Headphones/Audio jack

Connect **Pin0** to the **tip** and **GND** to the **sleeve** of the jack. If you have four rings on the headphones, choose the top and bottom rings.



Piezo speaker

Connect **Pin0** to the **red lead** and **GND** to the **black lead** of the speaker.

{Step 4} Coding the Scary Pumkin / Skeleton

```
function Jason_theme
  set volume 255
  show leds
  repeat 5 times
  do
    play tone High C# for 1/2 beat
    play tone Middle F# for 1/2 beat
    play tone Middle F# for 1/2 beat
    play tone High C# for 1/2 beat
    play tone Middle F# for 1/2 beat
    play tone High D for 1/2 beat
    play tone Middle F# for 1/2 beat
  repeat 2 times
  do
    play tone High C for 1/2 beat
    play tone Middle F for 1/2 beat
    play tone Middle F for 1/2 beat
    play tone High C for 1/2 beat
    play tone Middle F for 1/2 beat
    play tone High C for 1/2 beat
    play tone Middle F for 1/2 beat
```

```
repeat 2 times
do
  play tone High C# for 1/2 beat
  play tone Middle F# for 1/2 beat
  play tone Middle F# for 1/2 beat
  play tone High C# for 1/2 beat
  play tone Middle F# for 1/2 beat
  play tone High D for 1/2 beat
  play tone Middle F# for 1/2 beat
repeat 2 times
do
  play tone High C for 1/2 beat
  play tone Middle F for 1/2 beat
  play tone Middle F for 1/2 beat
  play tone High C for 1/2 beat
  play tone Middle F for 1/2 beat
  play tone High C for 1/2 beat
  play tone Middle F for 1/2 beat
repeat 2 times
do
  play tone High C# for 1/2 beat
  play tone Middle F# for 1/2 beat
  play tone Middle F# for 1/2 beat
  play tone High C# for 1/2 beat
  play tone Middle F# for 1/2 beat
  play tone High D for 1/2 beat
  play tone Middle F# for 1/2 beat
```

Update the last part to call Jason theme

```
function Pet_become_anxious
  set volume 255
  set Mouth to create image
  show image Mouth at offset 0
  set Heartbeat to 120
  repeat 10 times
  do
    digital write pin P1 to 0
    pause (ms) 200
    digital write pin P1 to 1
    pause (ms) 200
  call Jason_theme
```

Download working project.

QR Code



<https://makecode.microbit.org/S19182-85784-09452-68165>

