1 - Games

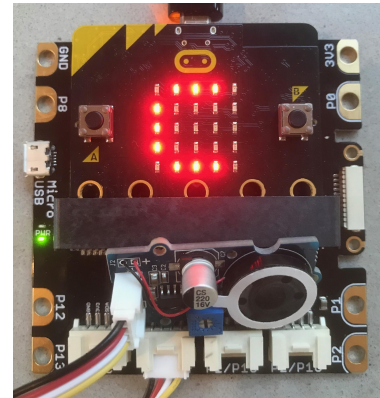Added libraries: Libraries ⊕ ▮ **Tone** ▮ **NeoPixel**

This game lets you create and play short tunes. Select piano keys as letters with button A (where _ is a rest). Store them using button B, then press A+B to play the list of notes as a tune. Shake to reset.
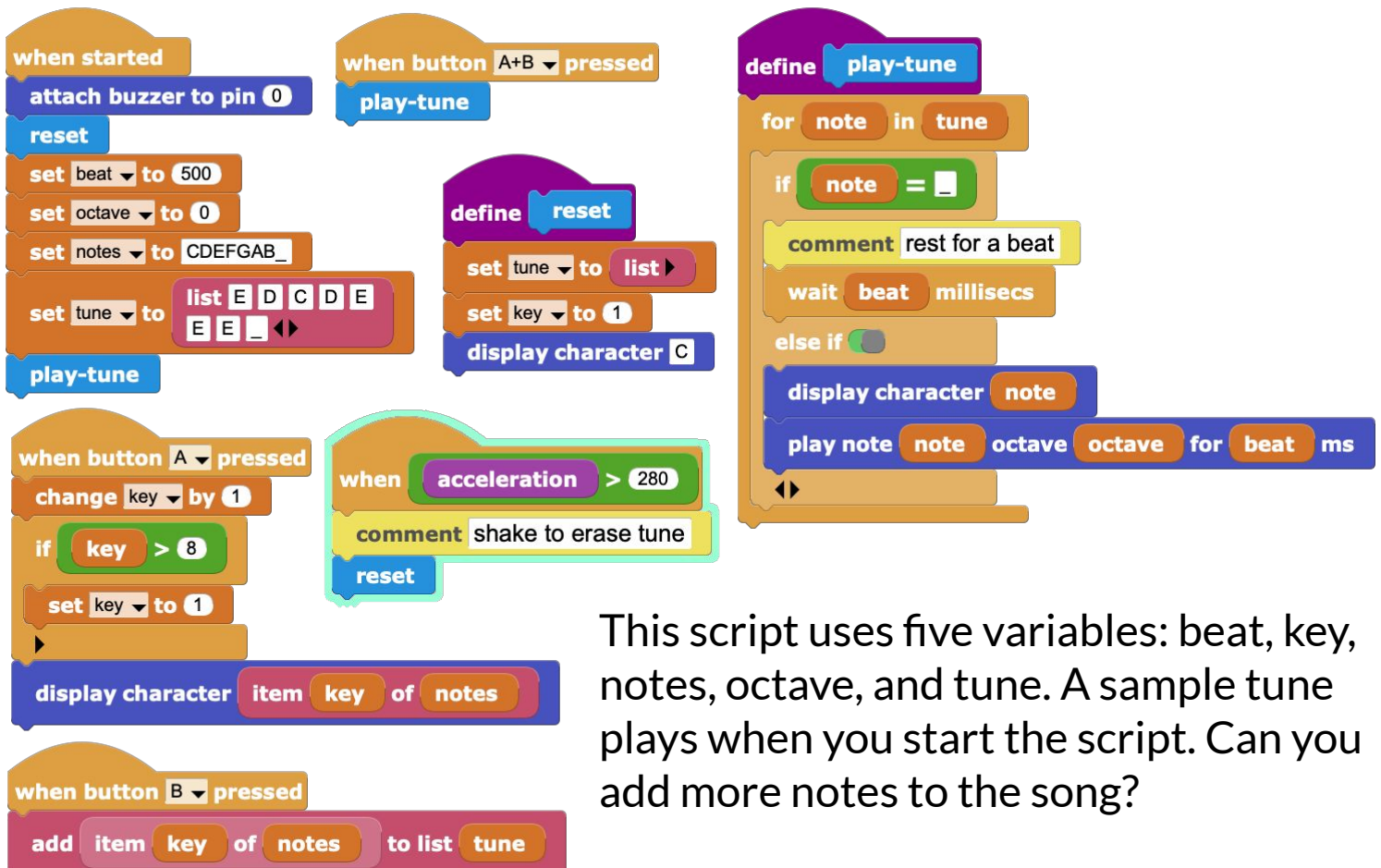

C D E F G A B

Attach any piezo or speaker.

→ Select note   Store note ←

```
when started
  attach buzzer to pin 0
  reset
  set beat ▾ to 500
  set octave ▾ to 0
  set notes ▾ to CDEFGAB_
  set tune ▾ to  list E D C D E
                      E E _ ◀▶
  play-tune
```

```
when button A+B ▾ pressed
  play-tune
```

```
define reset
  set tune ▾ to list▶
  set key ▾ to 1
  display character C
```

```
define play-tune
  for note in tune
    if note = _
      comment rest for a beat
      wait beat millisecs
    else if ⬤
      display character note
      play note note octave octave for beat ms
    ◀▶
```

```
when button A ▾ pressed
  change key ▾ by 1
  if key > 8
    set key ▾ to 1
  ▸
  display character item key of notes
```

```
when acceleration > 280
  comment shake to erase tune
  reset
```

```
when button B ▾ pressed
  add item key of notes to list tune
```

This script uses five variables: beat, key, notes, octave, and tune. A sample tune plays when you start the script. Can you add more notes to the song?

http://microblocks.fun

2 - Simon

From File => Open, in the Games folder, load "Simon (Circuit Playground Express)".

Rock-paper-scissors - snake.ubp
Simon (Circuit Playground Express).ubp
Simon (ED1).ubp
Simon (microbit).ubp

Add "attach buzzer" and update "attach NeoPixel" (optional) to use the correct pins. Then start the script and get ready to play!

when started
attach buzzer to pin 0
attach 10 LED NeoPixel strip to pin 15 ▶
broadcast go!

To customize it further, edit the "play note at" function. Because it is hidden by default, right-click and select "show block definition…". Put display blocks into each "if" branch (another clue). Also, see if you can add a happy face on the LED Display to show when you win!
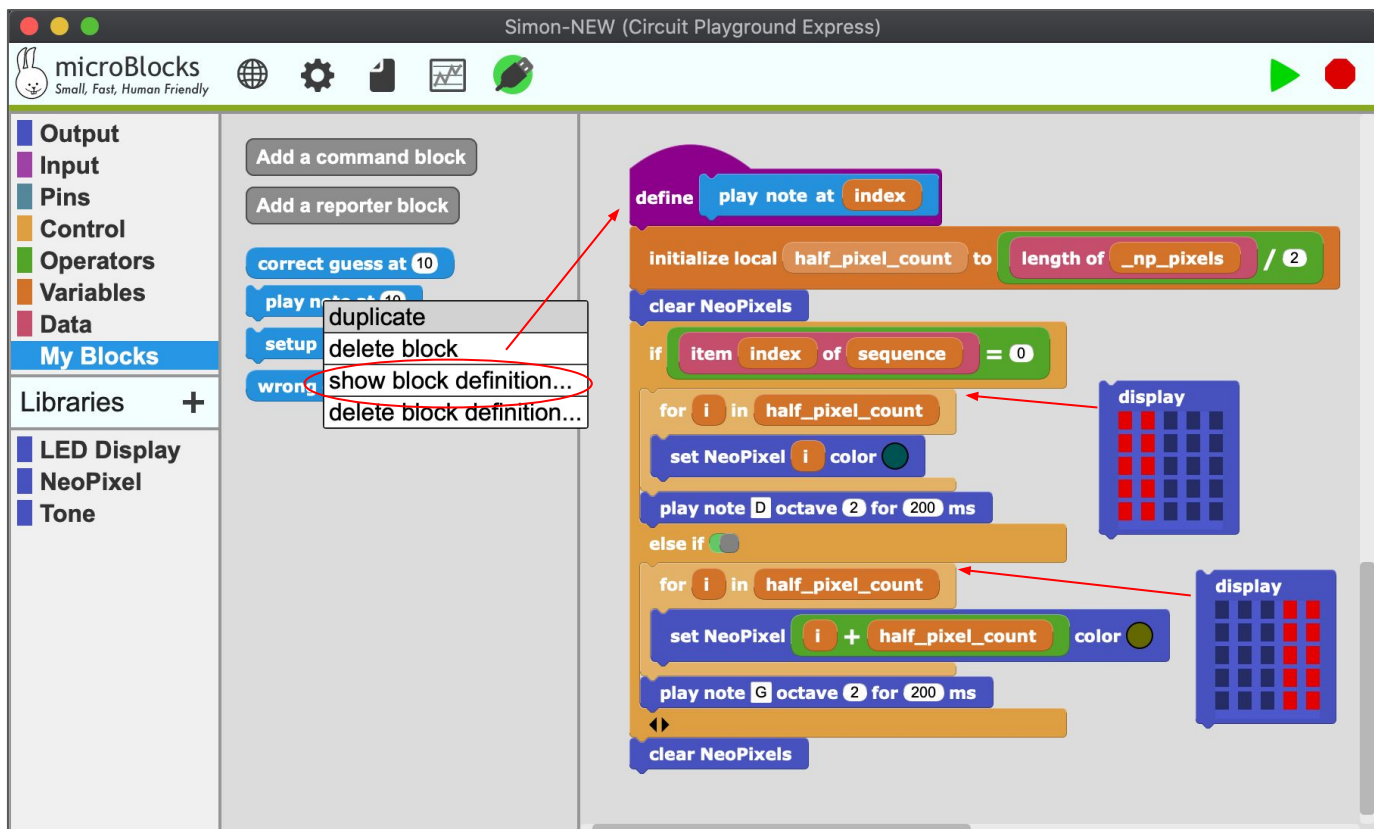
Challenge: Try modifying other example games to add music and colorful LEDs to the fun.

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