

```
#include <Adafruit_CircuitPlayground.h>

#define NOTE_C4 262
#define NOTE_D4 294
#define NOTE_E4 330
#define NOTE_F4 349
#define NOTE_G4 392
#define NOTE_A4 440
#define NOTE_B4 494
#define NOTE_C5 523
#define NOTE_B3 247

char song[] = "cccce cccce eefgcccceB cccce cccce eefgcccceed";
int beats[] = {1,1,1,1,2,1,
1,1,1,1,2,1,
1,1,1,1,1,1,1,1,2,2,6,
1,1,1,1,2,1,
1,1,1,1,2,1,
1,1,1,1,1,1,1,1,2,2};
int tempo = 150;
char names[] = {'c', 'd', 'e', 'f', 'g', 'a', 'b', 'C', 'B'};
int tones[] = {NOTE_C4, NOTE_D4, NOTE_E4, NOTE_F4, NOTE_G4, NOTE_A4,
NOTE_B4, NOTE_C5, NOTE_B3};

int lightValue;

void setup() {
  CircuitPlayground.begin();
  Serial.begin(9600);
}

void loop() {
  playSong();
}
```

```
}
```

```
void playSong()
{
    for (int noteIndex = 0; noteIndex < sizeof(song); noteIndex++)
    {
        if (song[noteIndex] == ' ')
        {
            // rest
            delay( beats[noteIndex] * tempo/5);
        }
        else
        {
            playNoteByName(song[noteIndex], beats[noteIndex] * tempo);
        }
        delay(tempo);
    }
}
```

```
void playNoteByName(char noteName, int duration)
{
    // loop through the names
    for (int i = 0; i < sizeof(names); i++)
    {
        // if we found the right name
        if (names[i] == noteName)
        {
            // play the tone at the same index
            playNote( tones[i], duration);
            // don't bother looking through the rest of the names
            break;
        }
    }
}
```

```
}
```

```
void playNote(int frequency, int duration) {  
  if (!CircuitPlayground.slideSwitch()) {  
    return;  
  }  
  else {  
    lightValue = CircuitPlayground.lightSensor();  
    Serial.print("Light Sensor: ");  
    Serial.println(lightValue);  
  
    if (lightValue > 60){  
      Serial.print("if");  
      CircuitPlayground.playTone(frequency, duration, false);  
      delay(duration + duration/16);  
    }  
    else {  
    }  
  }  
}
```