



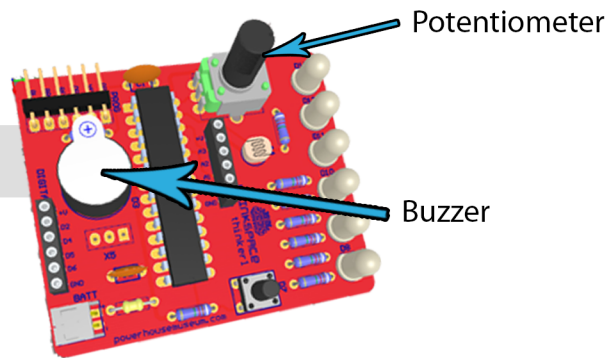
# Thinker1 The Buzzer

Activity Two

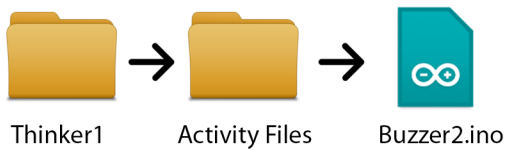
## What are we doing?

We will control the frequency (or pitch) of the buzzer using the potentiometer.

## What parts of the board will you be using?



## What files will we be using?



## Instructions

### Step 1

Open the file:  Buzzer2.ino

### Step 2

Look for the comment `//map the values for PWM` and insert this code underneath;

```
value = map(value, 0, 1023, 100, 354);
```

This will convert our potentiometer values, which have a range of 0~1023 to PWM friendly values. Each buzzer will have a different frequency range for the thinker1 board the range is 100~354.

### Step 3

Look for the comment `//write the value to the buzzer` and insert this code underneath;

```
tone(buzzerPin, value, 20);
```

After uploading your program, you should now be able to change the pitch of the buzzer by turning the potentiometer knob.

### Step 4

Try modifying the frequency range values (100 and 354) to see if you can increase the range and play higher and lower frequencies.

You might also like to try modifying this example to work with the light sensor rather than the potentiometer.

## Program Logic

