



# Thinker1 LEDs

Activity One

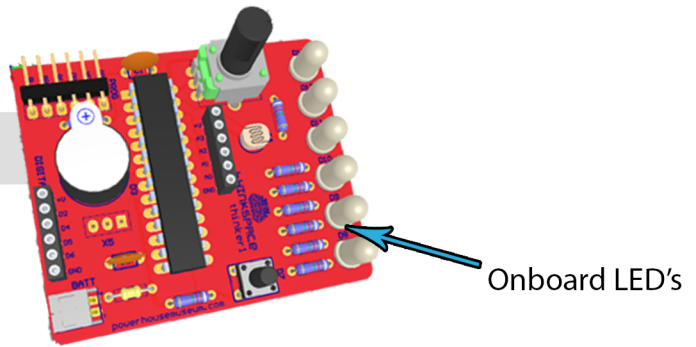


## What are we doing?

We will setup and use the onboard LEDs (Light Emitting Diodes).

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

## What files will we be using?



## Instructions

### Step 1

Open the file:  LED1.ino

### Step 2

Look for the comment //Setup LED variables and insert this code underneath:

```
int led1Pin = 13;
```

This creates a variable that we can use to refer to our first LED pin (pin 13).

### Step 3

Look for the comment // Set LED pins as digital outputs and insert this code underneath;

```
pinMode(led1Pin, OUTPUT);
```

The LED on pin 13 is now ready for use.

### Step 4

Look for the comment //Turn the LED on and off and insert this code underneath;

```
digitalWrite(led1Pin, HIGH); //LED on
```

```
delay(1000);
```

```
digitalWrite(led1Pin, LOW); //LED off
```

```
delay(1000);
```

Upload the program to your Thinker1 and you should see the LED flash.

The code above will make the LED flash on and off at a one second interval (the value given to 'delay' is in milliseconds).

Try changing this number to make the LED flash at a different speed. You can also use more lines of code and varying delay values to create more complex patterns.

## Program Logic

