Yellow Light

Code walkthrough

```
Code Color Guide
Keyword   Function   Built-In Function   Comments
```

Set constants

A variable whose value cannot be changed during runtime.

A constant will never change; therefore, the pins will always be linked to the corresponding constant. If the pin connection is changed we must also update the code.

Set your constants at the top of the page:

```
const int pushButtonPin = 2; // Push button pin
const int ledPin = 13; // LED pin
```

Set Variables

An object that stores a single value that can be changed.

When 'pushButtonState' is false nothing will happen.
When 'pushButtonState' is true the yellow light will turn on.

Set your variables after your constants:

```
const int pushButtonState = 0; // Reads button status
```

Functions

C++ has different types of functions, for this tutorial we will only use the void function.

A **void function** is a function with no return value.

Setup Function

A setup function defines the initial environment properties and loads media.

```
void setup() {
  pinMode(ledPin, OUTPUT); // Sets pin 13 as an output so the LED with light up
  pinMode(buttonPin, INPUT); // Sets pin 2 as an input waiting for a value
}
```

Loop Function

'for' loops loop through a block of code a number of times.

```
void loop() {
  pushButtonState = digitalRead(buttonPin); // Watches for button state to change
  if (pushButtonState = HIGH) {
    digitalWrite(ledPin, HIGH); // LED will turn on
  } else {
    digitalWrite(ledPin, LOW); // LED will turn off
  }
}
```