

# Blink

<http://arduino.cc/en/Tutorial/Blink>

## HARDWARE REQUIRED

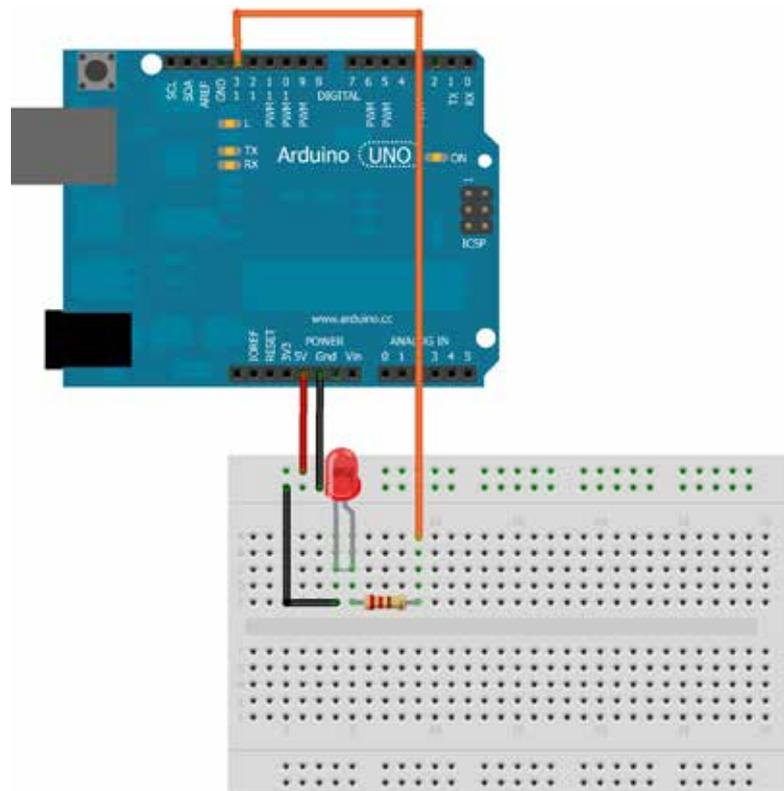
Arduino Board  
1 LED  
1 Resistor 220 ohm  
breadboard  
hook-up wires

## CIRCUIT

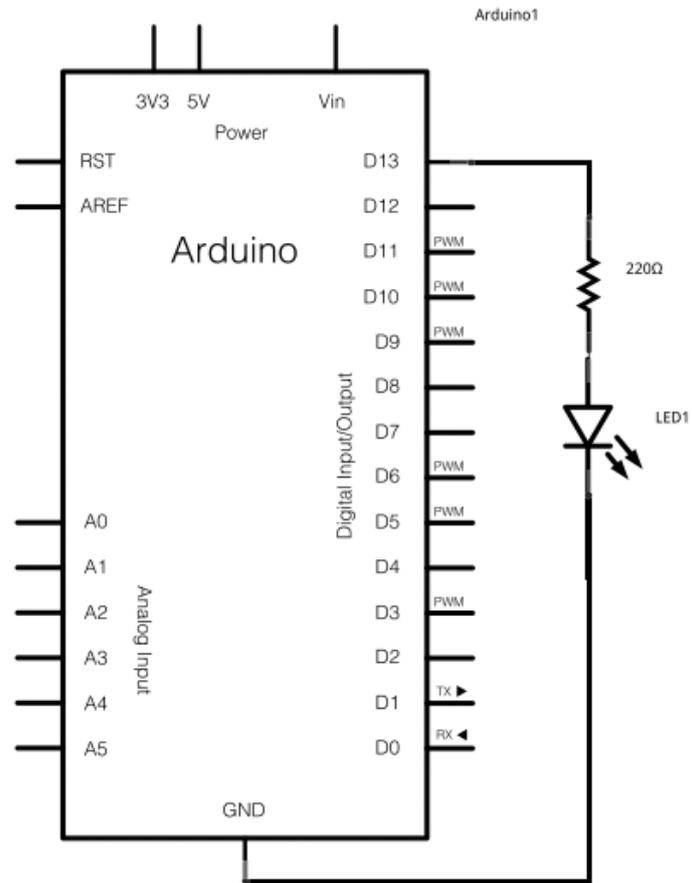
To build the circuit, attach a 220-ohm resistor to pin 13. Then attach the long leg of an LED (the positive leg, called the anode) to the resistor. Attach the short leg (the negative leg, called the cathode) to ground. Then plug your Arduino board into your computer, start the Arduino program, and enter the code below.

Most Arduino boards already have an LED attached to pin 13 on the board itself. If you run this example with no hardware attached, you should see that LED blink.

## IMAGE



## SCHEMATIC



## CODE

```
/*  
  Blink  
  Turns on an LED on for one second, then off for one second, repeatedly.  
  
  This example code is in the public domain.  
  */  
  
// Pin 13 has an LED connected on most Arduino boards.  
// give it a name:  
int led = 13;  
  
// the setup routine runs once when you press reset:  
void setup() {  
  // initialize the digital pin as an output.  
  pinMode(led, OUTPUT);  
}  
  
// the loop routine runs over and over again forever:  
void loop() {  
  
  digitalWrite(led, HIGH); // turn the LED on (HIGH is the voltage level)  
  delay(1000);             // wait for a second  
  
  digitalWrite(led, LOW);  // turn the LED off by making the voltage LOW  
  delay(1000);             // wait for a second  
  
}
```