

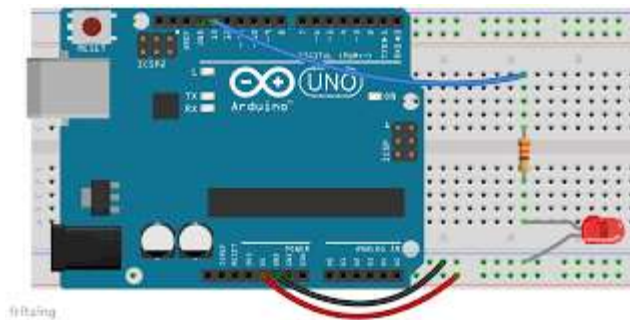
Arduino



I'm Learning about
Making an LED Blink

Card **1** of **3**

- 1** Read the Getting Started and C Programming introductions before starting this exercise.
- 2** First we need to make a simple circuit using the Arduino and a breadboard. The sample Arduino program expects an LED on to be wired on Pin 13.



fitting

Arduino



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Card 2 of 3

3 Now we can take a look at a simple program to make the LED Blink. For the Arduino programs are called Sketches. Open up the Arduino software and use the Open Icon to look at the sketch Blink in the examples folder

A screenshot of the Arduino IDE window titled "Blink | Arduino 1.0". The window has a menu bar with "File", "Edit", "Sketch", "Tools", and "Help". Below the menu bar is a toolbar with icons for opening, saving, and running sketches. The main text area displays the code for the "Blink" sketch. The code includes a multi-line comment explaining the sketch's purpose, a setup function to initialize pin 13 as an output, and a loop function that turns the LED on for one second and off for one second. The status bar at the bottom shows "3" on the left and "Arduino Uno on COM16" on the right.

```
/*
 * Blink
 * Turns on an LED on for one second, then off for one second, repeatedly.
 * This example code is in the public domain.
 */

void setup() {
  // initialize the digital pin as an output.
  // Pin 13 has an LED connected on most Arduino boards:
  pinMode(13, OUTPUT);
}

void loop() {
  digitalWrite(13, HIGH); // set the LED on
  delay(1000);             // wait for a second
  digitalWrite(13, LOW);  // set the LED off
  delay(1000);             // wait for a second
}
```

4 Now click the Upload icon to load the program to the Arduino. You will see the RX and TX lights on the Arduino flicker and a confirmation message. A few seconds later you should see your program in action!

What's next?

Try changing

1. The timing interval
2. The Port number (don't forget to rewire)
3. Add another LED to your board and add code to make that blink
4. Move on to the Dice Game!

For more information and additional lessons try the following useful links:

<http://www.robotshop.com/blog/en/arduino-5-minute-tutorials-lesson-2-basic-code-blink-led-2-3639>