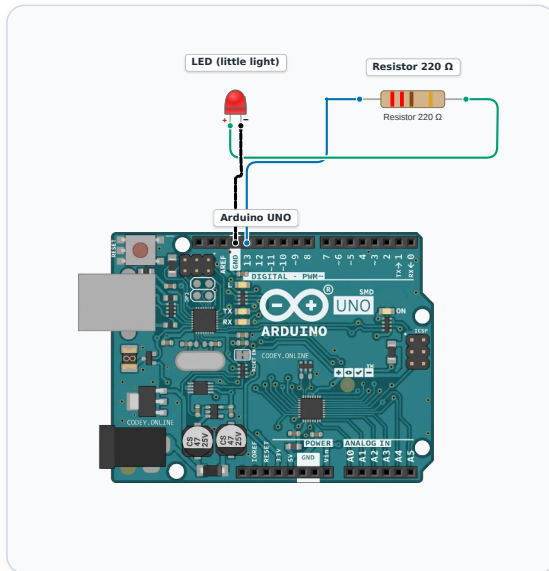


★ Beginner ⌚ 10 minutes

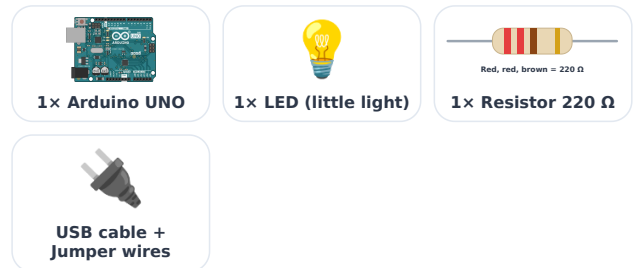
Blinking Light

Your first project! An LED turns on and off again and again, just like a blinking light. This is how you learn how the Arduino turns an output on and off.

Wiring diagram



What do you need?



This is how you build it

1. Put the LED in the breadboard, with the legs in two different rows.
2. Put a 220 Ω resistor from the row with the long leg to another row.
3. Connect that other row with a wire to pin 13 of your Arduino.
4. Connect the short leg with a wire to GND.

The code

```
// Blinking light
// An LED turns on and off again and again, just like a blinking light.

const int LED_PIN = 13;    // The LED is on pin 13 (through the 220 ohm resistor)
const int WAIT_TIME = 500; // How long the LED stays on or off (in milliseconds)

void setup() {
  // setup() runs once when the Arduino starts
  pinMode(LED_PIN, OUTPUT); // Pin 13 is an output: it gives power
}

void loop() {
  // loop() runs again and again, forever
  digitalWrite(LED_PIN, HIGH); // LED on
  delay(WAIT_TIME);           // Wait a moment
  digitalWrite(LED_PIN, LOW);  // LED off
  delay(WAIT_TIME);           // Wait a moment
}
```

What does the code do?

- In `setup()` we say that pin 13 is an output.
- In `loop()` we turn the LED on, wait a moment, turn it off, and wait again.
- After that, `loop()` just starts over. So the LED keeps blinking.

Try this...

- Make the LED blink twice as fast
- Make it an SOS signal: short-short-short, long-long-long, short-short-short
- Make the LED slowly get bright and dim, as if it is breathing

🚀 Build this project with Codey: open codey.online/starter-kits/uno/projects/blink and click MAKE THIS. Then the code and the wiring diagram are ready right away.