

# The Arduino Board

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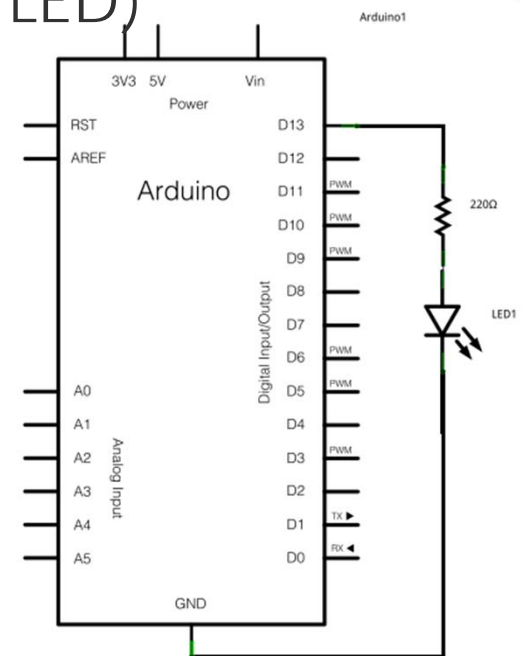


# What is Arduino: Background

- Arduino is an open-source electronics prototyping platform based on flexible.
- Easy-to-use hardware and software
- Intended for artists, designers, & hobbyists
- Senses the environment by receiving input from sensors
- Controls lights, motors & other actuators
- Microcontroller programmed using Arduino programming language

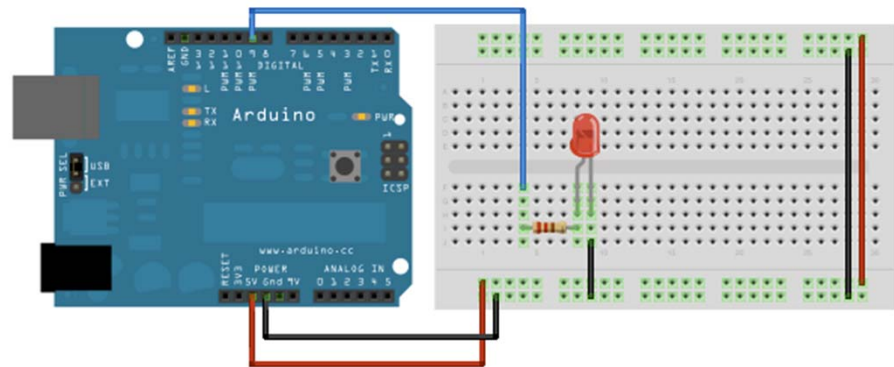
# Project 1: Blinking LED

- Shows the simplest thing to do with the Arduino
- Shows physical output (Blinks an LED)
- Materials used:
  - Arduino Board
  - LED



## Project 2: Fading LED

- Demonstrates use of `analogWrite()` function in fading LED off and on
- Uses PWM (pulse width modulation)
- Materials used:
  - Arduino board
  - Breadboard
  - LED
  - 220 ohm resistor





## Project 3: "Knight Rider"

- Flashy LED effects like that of tv show car KITT from "Knight Rider"
- Scanned back and forth across a line
- 12 LEDs attached to the Arduino
- Materials
  - Arduino Board
  - 12 220ohm resistors
  - 12 LEDs
  - Wires
  - breadboard



That's all folks!