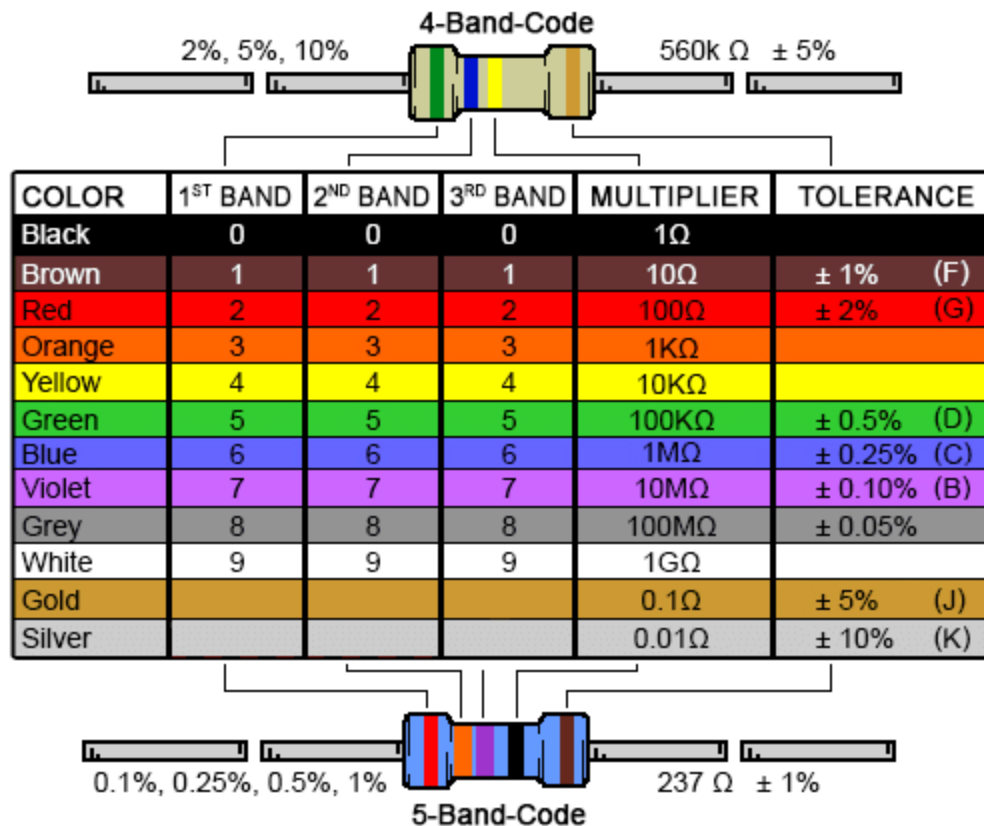


## Materials

- Arduino Uno

## Background & Set-Up:



You will set up the Arduino to communicate with your computer using the Arduino's serial port bus that communicates over the USB connection. Use the Arduino-PC Serial Comms starter code to see how to set up the connection. To send a message to your Arduino from your PC, open the serial port monitor (Tools->Serial Port Monitor). Double-check to make sure the settings match your parameters you set up in your program.

**Goal:**

We want to write a program that will take an input of the color of the resistor's bands and output its resistance value and tolerance. You will send the list of colors to your Arduino from your PC using the Serial Port Monitor. The Arduino will do the calculations based on the colors and return the resistance value and tolerance. You can decide how you want to input the information, but below is an example. Remember, you must orient the resistor in the right direction to find the correct value (most of our tolerance bands are gold/silver so you know those should be positioned on the right).

Input: "green,blue,yellow,gold"

Output: "560 kOhm 5%"