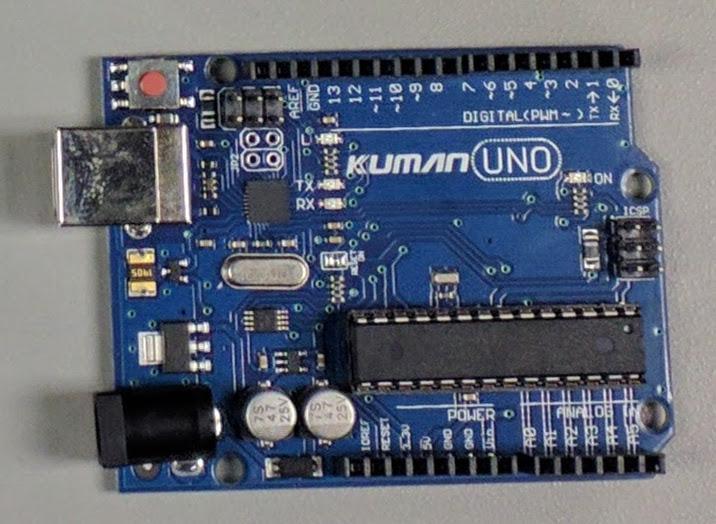
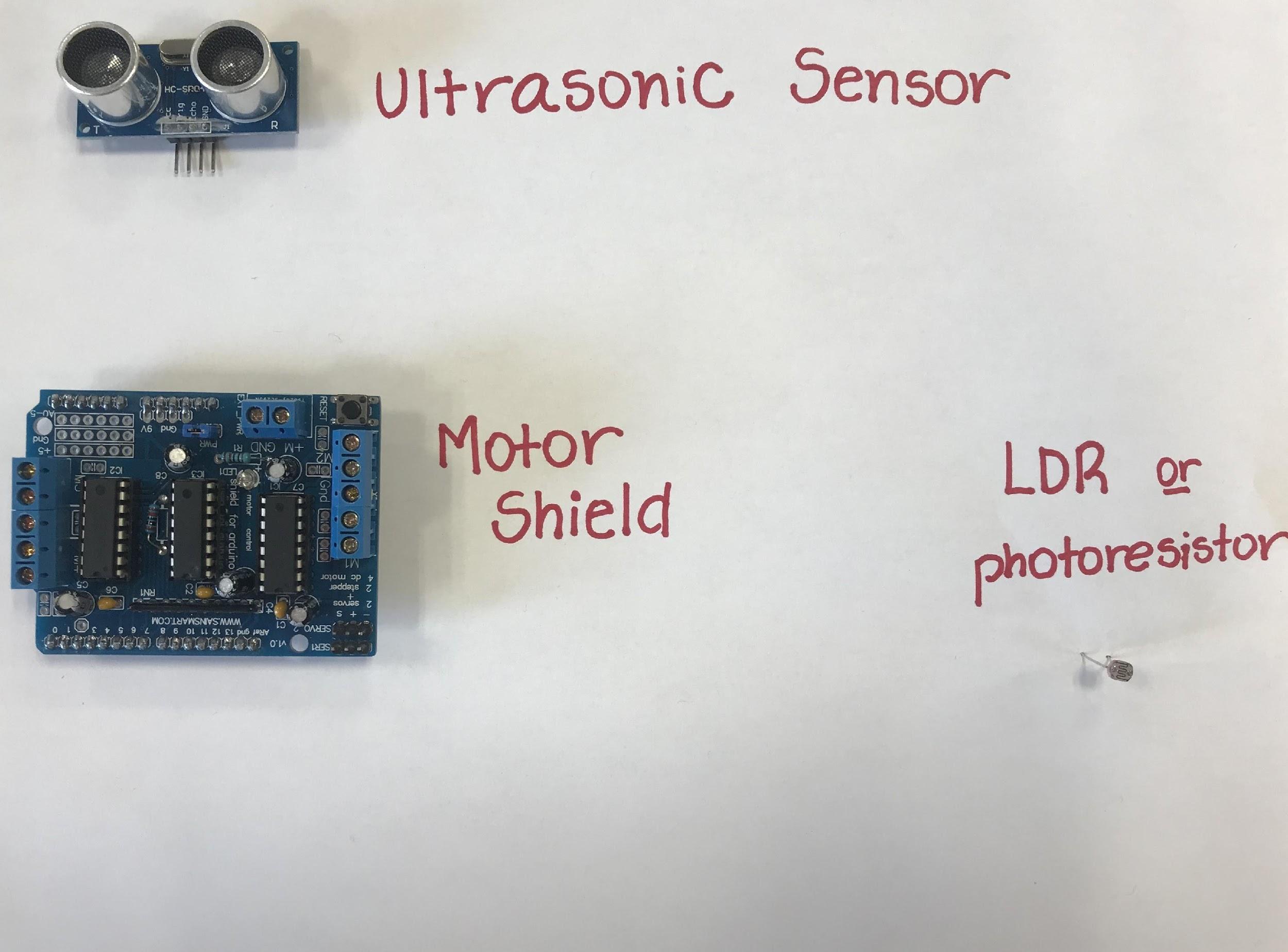
**iCREAT I: Module 5 - Homework:**

**Arduino Ultrasonic Sensor**

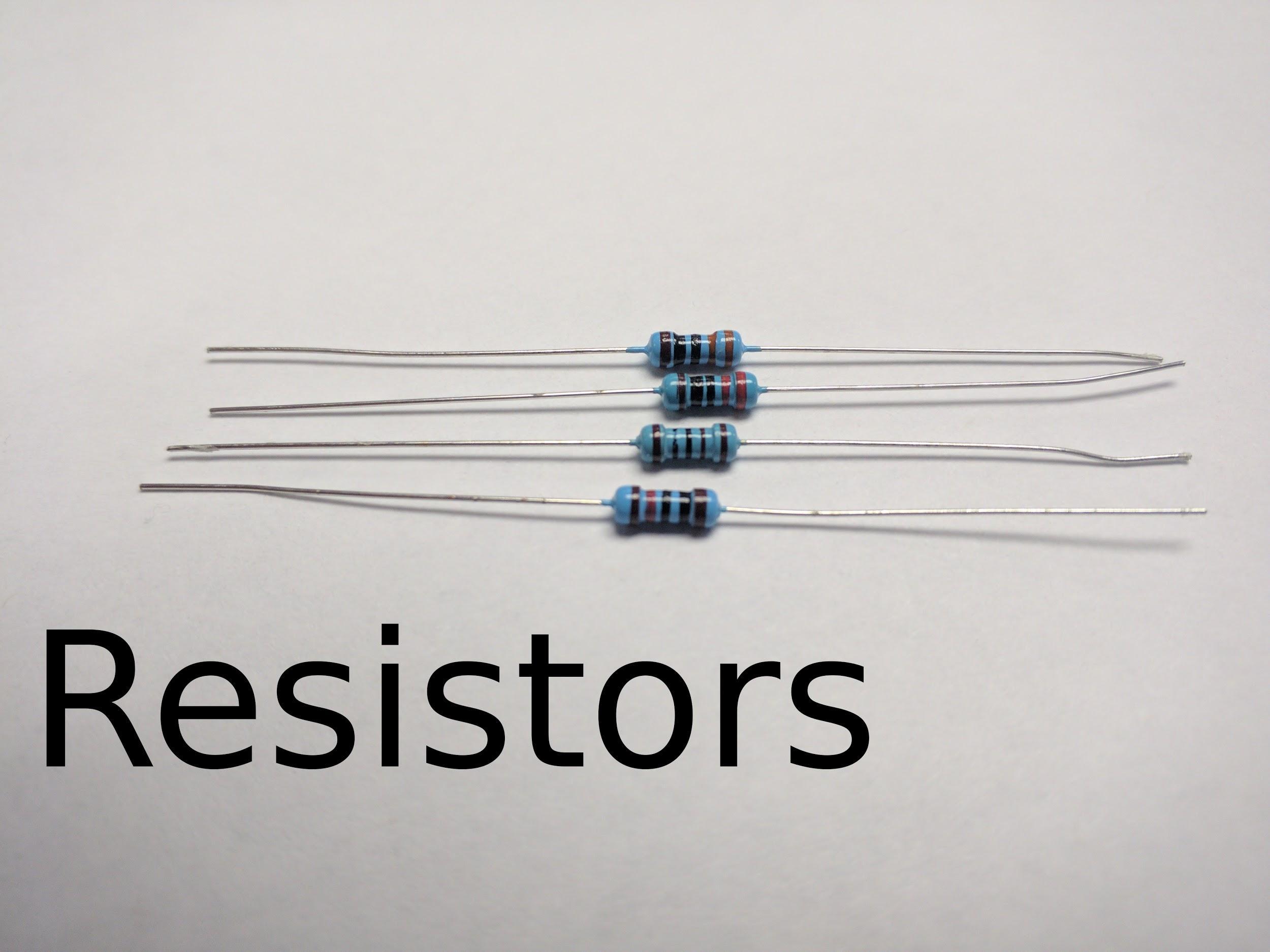
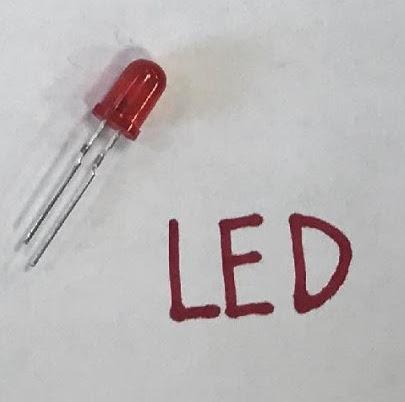
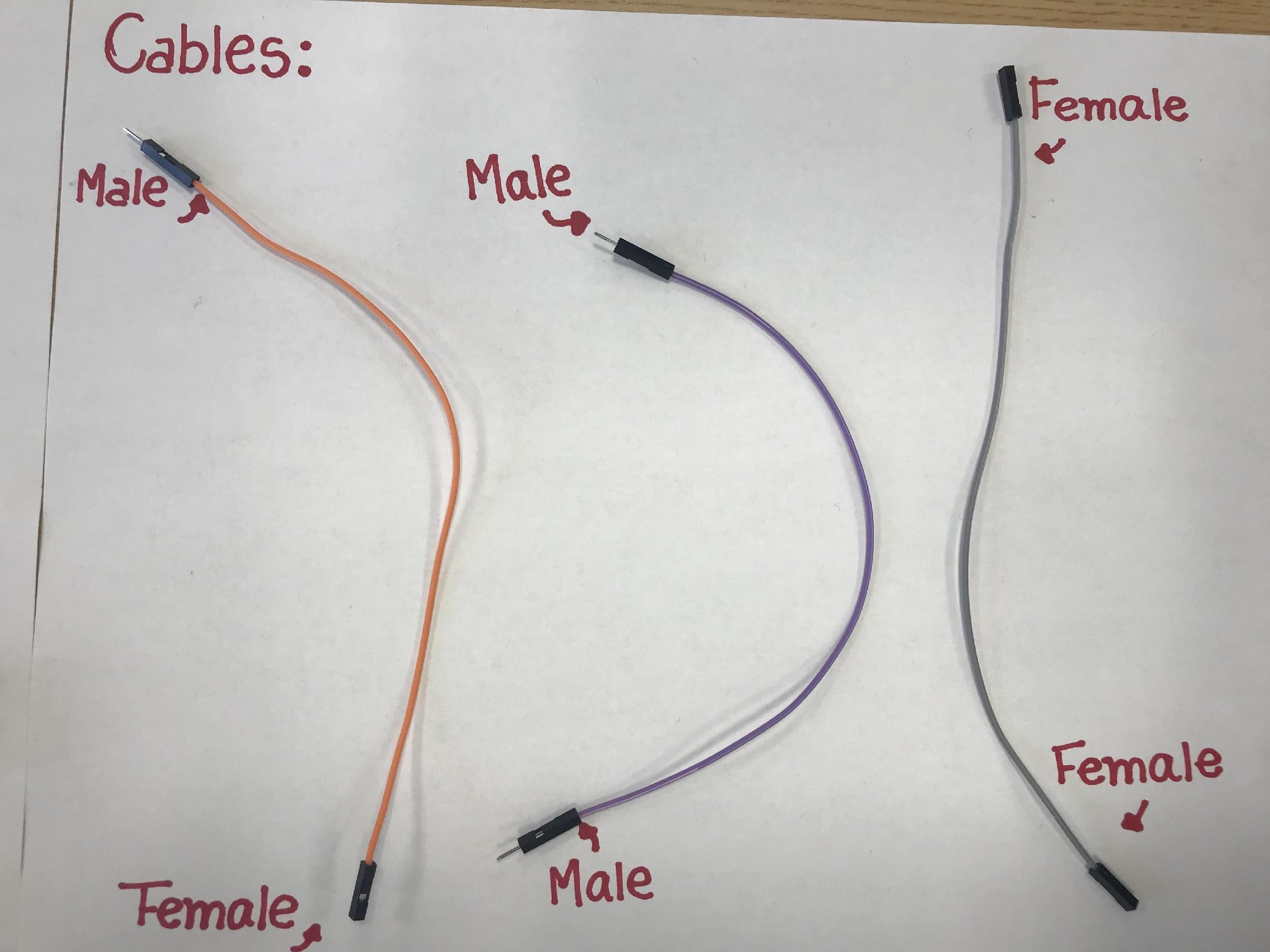


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# Objectives

* Solve problems using the Arduino and its components
* Draw diagrams to represent circuits and simulate them before creating them
* Create circuits and program them using the Arduino sketch
* Combine all the components to create interesting circuits

# Required Resources:

* Access to the Arduino IDE and Tinkercad
* An Arduino UNO connected to a computer
* LEDs, resistors (330Ω, 100Ω, 10KΩ), a piezo buzzer, jumper cables, a breadboard, and an ultrasonic sensor.
* Enough time to have fun!

**Part 1. Use the ultrasonic sensor to control the buzzer and LEDs**

Create a circuit that will play nice tones and control the blinking speed of LEDs based on the distance sensed by the ultrasonic sensor. Be creative. Use variables.

1. **Simulate it and implement it.** Make sure to use variables.
2. **Provide a link to your simulation, a picture** of your circuit and your \*.ino sketch.

Tutorials, Examples and help at:

<https://www.arduino.cc/en/Tutorial/BuiltInExamples>

**Part 2. Submit your exercises**