**Name:**
**Date:**

**Circuit #5 Push Buttons**

# 1.

**How is this circuit, or a circuit like it, used in everyday life? Provide at least three examples.**

_____

_____

_____

_____

_____

**Can you turn your LED on and off using both buttons?**
Great. Pay attention to this circuit, buttons are one of the most basic forms of user interface.

Give values for Voltage, Current and Resistance for each question. Find Current either by breaking the circuit and/or using your multimeter.

# 2.

**Button on pin 2 pushed:**

V = _____v I = _____mA R = _____Ω

# 3.

**Button on pin 3 pushed:**

V = _____v I = _____mA R = _____Ω

# 4.

**Think about the question above. What makes the LED turn on and off?**

# 5.

**If the resistor's value is 10000Ω, what is the resistance of the button? _____Ω**

# 6.

**Replace the LED component (in the space below the schematic to the right) with an element or component from one of the previous circuits. Extra credit if you decide to replace it with a motor.**

# 7.

**Draw arrows indicating current direction on dotted line.**

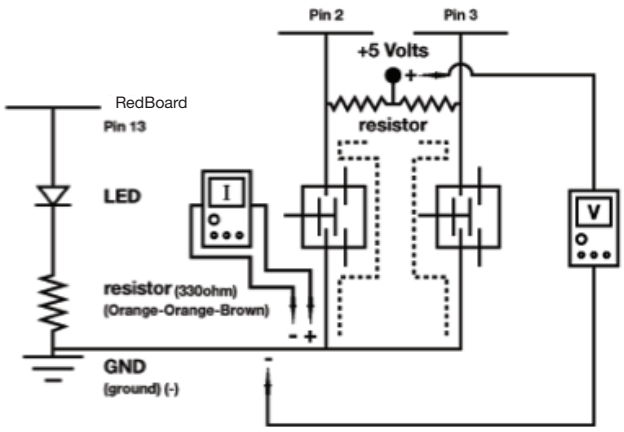
# 8.

**Add another Piezo Element to the schematic so you can write harmonies. Be sure to show which Arduino pin you will attach it to.**

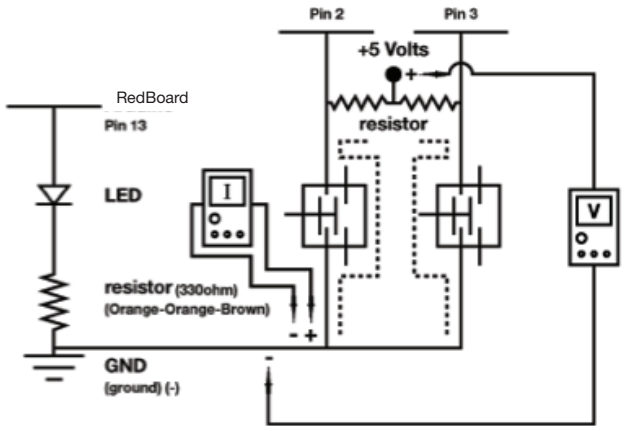
# 9.

**Add an on/off switch to this schematic.**

**Circuit:**



**Circuit:**




## 11.

**Buttons are everywhere. List at least two different kinds of buttons that you might not think of as being buttons. Now list at least two items that are not technically buttons, but could be used as buttons. Example: snaps on a shirt.**

## 10.

**Draw a logic flow chart of the circuit here:**

## 12.

**Draw one example of how this circuit could be used in everyday life. Label all components and give it a title.**