Name:
Date:

Circuit #10 Soft Potentiometer

1.

The soft potentiometer is touchy, sometimes you will notice incorrect readings due to how you touch the sensor. The RGB will even change a little just before you touch the sensor! Explain how this alters the ways in which you can use this sensor. Explain at least one possible fix or work around.

Got your soft potentiometer and RGB LED working? Great. Without looking at the code too much, mark on the soft potentiometer diagram below which areas cause which colors to be displayed.

Soft Potentiometer

2.

This will let you see the values (slowed down a little with the delay line, to see real time output remove delay(100); as the soft potentiometer outputs them. What happens to the values after you stop touching the sensor? Explain why you think this happens. You may have to look up how this sensor works to figure this out.

3.

Explain in your own words how you think you could use the soft potentiometer to turn the RGB LED on/off as well as controlling the color.

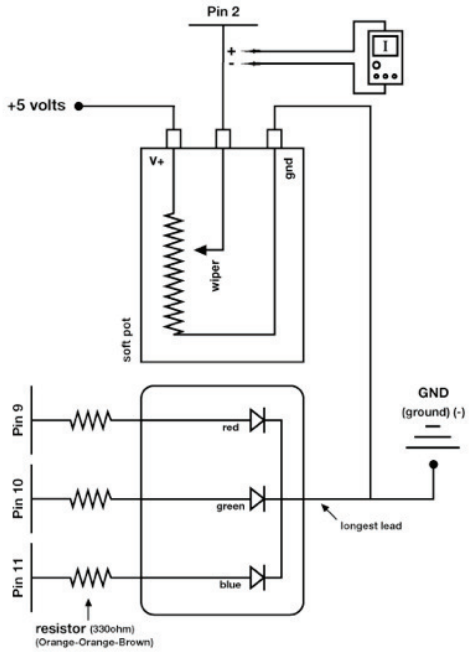
4.

Add the following code to your Arduino code.
In Setup: *Serial.begin(9600);*
In Loop after all other code:
Serial.
println(sensorValue);
delay(100);

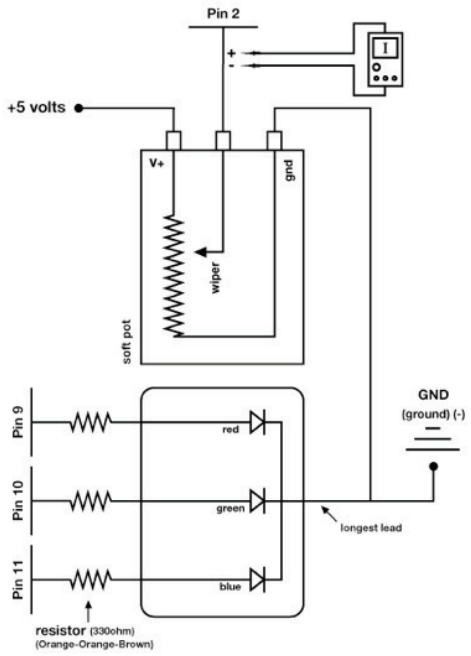
5.

Now open the Serial Communication window.

Circuit:



Circuit:



6.

Draw a logic flow chart of the circuit here:

7.

Calculate resistance of the potentiometer when it is blue, then green, then red. You will need to measure Voltage and Current, then calculate resistence because you can't see the RGB value while measuring resistance.

V = _____v I = _____mA R = _____Ω

8.

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