**Breadboard Lab #5**

“How a capacitor works”



1. In this lab you will use electrolytic capacitors as shown
2. Breadboard the following schematic diagram. Make sure your wires are flat! Set the Power Supply to 9 volts.



 R1: 1K (Brown, Black, Red, Gold)

 R2: 330 (Orange, Ornage, Brown, Gold)

 C1: 10uf

1. Connect the circuit to the power supply and the light should come on. Disconnect it, what happens to the LED? Now, replace the 10uf capacitor with a 1000uf capacitor, what is the difference when you disconnect the power?
2. Answer the following questions. Use the [PowerPoint presentation](http://teched.gpvanier.ca/electronics/electronics9/Electronic%20components%20presentation2%20-%20Grade%209.pdf) from class to answer to help.
	1. A capacitor stores \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	2. Once you disconnect the power to the circuit, the LED will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for a while because of the stored electrical energy in the capacitor.
	3. The greater the value of the capacitor, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the LED will stay on.
	4. When current flows through the circuit, what is happening to the capacitor?