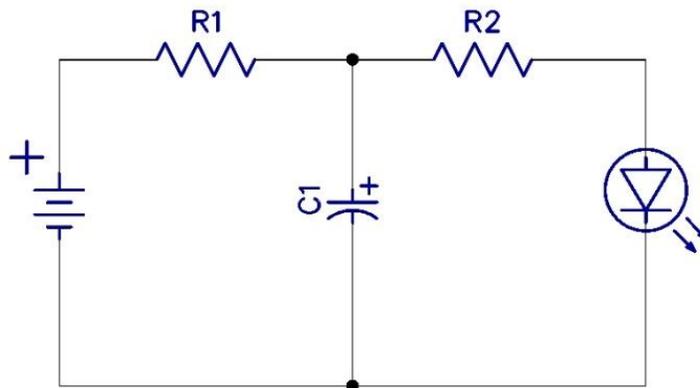


Breadboard Lab #5

“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, Orange, Brown, Gold)
C1: 10uf

3. 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?
4. Answer the following questions. Use the [Electronic Components PowerPoint presentation](#) from class to answer to help.
 - a) A capacitor stores _____.
 - b) Once you disconnect the power to the circuit, the LED will _____ for a while because of the stored electrical energy in the capacitor.
 - c) The greater the value of the capacitor, the _____ the LED will stay on.
 - d) When current flows through the circuit, what is happening to the capacitor?