

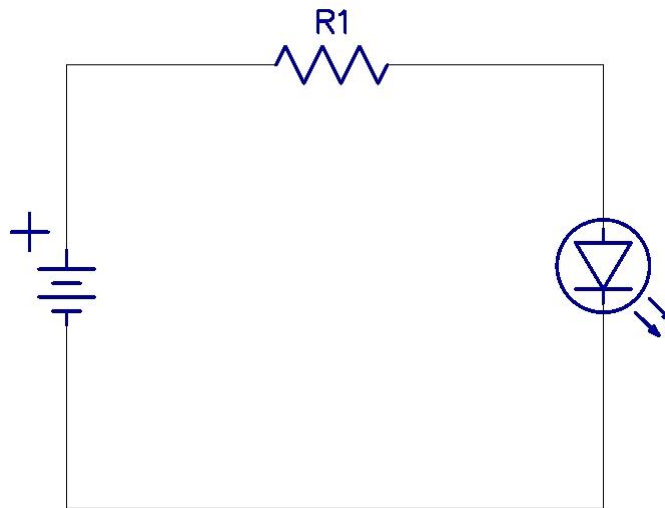
# Breadboard Lab #1

## *“How a resistor works”*

1. A resistor is used to control the amount of electricity flowing through a circuit. An LED is a component that gives off light and requires the resistor to control the current through it otherwise it will burn out.



2. Breadboard the following schematic diagram, start with a 330 ohm (orange, orange, brown, gold) resistor (R1). Make sure your wires are flat! Set the Power Supply to 9 volts.



3. Replace the resistor (R1) one at a time with a; 10K ohm (grey, red, red, gold)  
60K ohm (blue, black, orange, gold)
4. Answer the following questions in the Student Answer booklet, **ONCE** you have gone through ALL the resistors. Use the [Intro to Electricity PowerPoint presentation](#) from class to answer to help.
  - a) The dimmer the LED, the \_\_\_\_\_ the value of the resistor.
  - b) The brighter the LED, the \_\_\_\_\_ the value of the resistor.
  - c) The lower the voltage, the \_\_\_\_\_ the LED.
  - d) The brighter the LED, the \_\_\_\_\_ the current flow.