

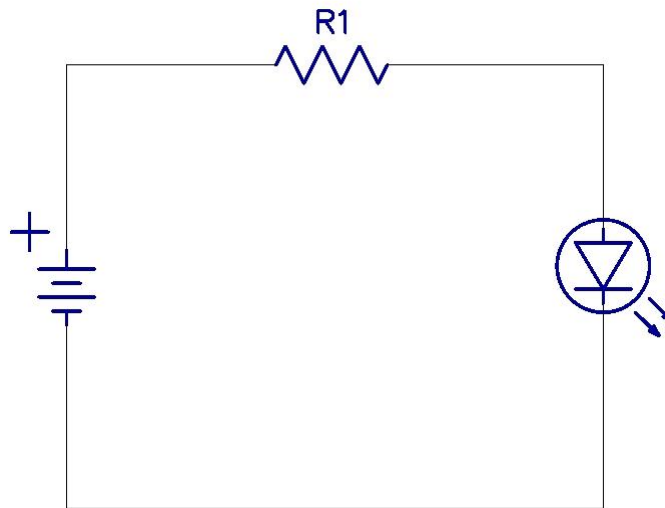
Breadboard Lab #1

“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 (brown, black, red, gold)
100K ohm (brown, black, yellow, 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.