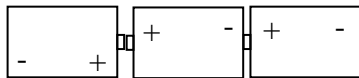


Name: _____

PRE-LAB #11
ELECTRIC CIRCUITS & OHM'S LAW

Before starting the laboratory session, be sure read *Investigation #11: Electric Circuits and Ohm's Law* and then answer the following questions:

1. In this investigation, you will be asked to construct different battery/bulb configurations that behave in different ways. While doing so, you will be asked to sketch configurations that do NOT work as well as those that do. Why do you suppose you are asked to sketch the ways that do not work?
2. What are the two different kinds of circuits that you will construct in **Part II**?
3. **Prediction:** A flashlight bulb connected to a single battery will light with some brightness. Predict the relative brightness of the same bulb if you connect it to three batteries arranged like this:



“The brightness will be _____ compared to the single battery circuit.”

Circle one: ...brighter... ...the same... ...less, but not zero... ... zero...

4. What is the name of the relationship that connects voltage, current, and resistance?
5. Refer to the Standard Resistor Color Code given in Chart 1 and the example that follows to determine the resistance and tolerance of a resistor that has the stripe set: “Red-Red-Black-Gold.”