

Name\_

## Simple Circuits Worksheet

### **Series Circuit Observations**

One Lightbulb:

Two Lightbulbs:

Three Lightbulbs:

Open Circuit:

## Parallel Circuit Observations

Two Lightbulbs:

Three Lightbulbs:

Open Circuit:

Two Lightbulbs and One Short Circuit:

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# Simple Circuits Worksheet Cont'd.

#### **Post-Lab Questions**

1. Which circuit design produced the brightest lightbulbs? Relate this to the amount of current flowing through each lightbulb.

- 2. What happened when all three lightbulbs were connected in series? Why did this occur?
- 3. Is there more resistance in the series circuit or the parallel circuit? How can you tell?
- 4. What is one advantage of a series circuit? What is one disadvantage?
- 5. What is one advantage of a parallel circuit? What is one disadvantage?
- 6. What happened with the two parallel-connected lightbulbs and the short circuit?
- 7. Is it better to have a string of lights, such as Christmas-tree lights, connected in series, or parallel? Explain.