

# 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:

# 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.