Name _____ Date _____ Class _____

Lesson Outline

LESSON 3

Describing Circuits

A. Parts of an Electric Circuit

1. An electric circuit transforms _____ energy to other forms of energy.

2. An electric circuit contains a(n) _____ source.

a. A(n) _____ is often used as an energy source.

b. As chemicals react within a battery, the battery's _____ terminal loses electrons and its _____ terminal gains electrons.

c. When the terminals are connected in a closed circuit, electrons flow from the _____ terminal of a battery to the _____ terminal.

3. An electric circuit contains at least one electric _____ that transforms energy.

a. Within a battery, _____ energy transforms into _____ energy of moving electrons.

b. When the electrons flowing in a conductor _____ with the atoms that make up the conductor, the electrons transfer some of their _____ energy to the atoms.

4. An electric circuit contains _____ that connect its components.

a. Wires that connect components of a circuit have _____ electric resistance.

b. Only a small amount of electric energy is transformed into _____ energy by wires, which means that more energy is available for useful devices in the circuit.

B. Series and Parallel Circuits

1. A(n) _____ circuit is an electric circuit that has only one closed path for an electric current to follow.

a. Because there is only one path, when a series circuit is _____, all _____ turn off.

Lesson Outline continued

b. Adding devices to a series circuit adds _____ to the circuit and _____ the current in the circuit.

2. A(n) _____ circuit is an electric circuit that has more than one closed path for an electric current to follow.

a. Most circuits in homes are _____ circuits.

b. In a parallel circuit, each _____ has its own path, or _____, that connects it to the source.

c. If you _____ one branch of a parallel circuit, current continues through other branches.

d. Adding devices and branches to a parallel circuit _____ the total electric current through the _____.

C. Electric Circuits in the Home

1. Electric energy is generated at large _____.

2. Before entering your house through a main _____, the main wire passes through a(n) _____, which measures the _____ used in your home.

3. _____ and circuit _____ are safety devices that keep the _____ in a circuit from becoming too high.

4. A(n) _____ is a safety device in an electric outlet that opens a circuit to stop current flow, which can help protect you from electric _____.

D. Electric Safety

1. An electric shock occurs when a(n) _____ passes through the _____.

2. Ways to protect yourself from electric shock include staying away from _____ while using electric devices, avoiding using _____ cords, and not contacting electric power _____.