



Electricity and Circuits

Name: _____

Date: _____

Grade: Grade 4

Part A: Fill in the Blank

Write the missing word or number on each line.

1. Connecting two batteries end to end in a series increases the total _____ available to the circuit.
2. A longer wire has more _____ than a shorter wire of the same thickness.
3. The symbol for a battery in a circuit diagram shows a long line for positive and a _____ line for negative.
4. A dimmer switch works by changing the amount of _____ flowing to a light bulb.
5. Silver is the best conductor of electricity, but _____ is used more often because it costs less.
6. A rechargeable battery can reverse its _____ reaction to store energy again.
7. In a circuit diagram, a straight line represents a _____.
8. Electrical _____ is the ability of a material to oppose the flow of current.
9. A _____ is a safety device that contains a thin strip of metal that melts if too much current flows.

Part B: Matching

Match each item on the left to the correct answer on the right.

1. Match each item to its correct answer.

voltage	→ _____	drawing that uses symbols to show a circuit
current	→ _____	the flow of electrons through a conductor
resistance	→ _____	the push that moves electricity through a circuit
circuit diagram	→ _____	a force that opposes the flow of current

Answer Key · Electricity and Circuits · Grade: Grade 4

Part A: Fill in the Blank

Write the missing word or number on each line.

1. Connecting two batteries end to end in a series increases the total voltage available to the circuit.
2. A longer wire has more resistance than a shorter wire of the same thickness.
3. The symbol for a battery in a circuit diagram shows a long line for positive and a short line for negative.
4. A dimmer switch works by changing the amount of current flowing to a light bulb.
5. Silver is the best conductor of electricity, but copper is used more often because it costs less.
6. A rechargeable battery can reverse its chemical reaction to store energy again.
7. In a circuit diagram, a straight line represents a wire.
8. Electrical resistance is the ability of a material to oppose the flow of current.
9. A fuse is a safety device that contains a thin strip of metal that melts if too much current flows.

Part B: Matching

Match each item on the left to the correct answer on the right.

1. Match each item to its correct answer.

voltage	→ <u>the push that moves electricity through a circuit</u>	drawing that uses symbols to show a circuit
current	→ <u>the flow of electrons through a conductor</u>	the flow of electrons through a conductor
resistance	→ <u>a force that opposes the flow of current</u>	the push that moves electricity through a circuit
circuit diagram	→ <u>drawing that uses symbols to show a circuit</u>	a force that opposes the flow of current