Name \_\_\_\_



Date \_

# **Electricity**

Complete.

charge	static electricity	electric field	series circuit
ampere	circuit	electricity	conductor
insulator	resistor	parallel circuit	magnet
magnetic field	electromagnet	compass	lodestone
fuse	generator	voltage	short circuit
direct current	alternating current	kilowatt-hour	ground
lightning rod	5		5

#### Matching

Match each definition with a word.

1.	 A machine that produces electricity by changing energy of motion into electrical energy.
2.	 Material through which a current cannot pass or easily flow.
3.	 The force that pushes electricity or a current. In most homes this force is 110 volts.
4.	 An electric circuit that has more than one path for the current.
5.	 The amount of energy used when you consume one kilo-watt of power in one hour.
6.	 A safety device placed in an electric circuit. This contains a metal strip that melts when overheated.
7.	 A magnet created when electric current flows through a coil of wire.
8.	 The area around charged particles where electric forces occur.
9.	 A measure of the amount of electricity in an atom that is determined by the extra positive or negative particles that an atom has.
10.	 An electric current flowing only in one direction.

### **Multiple Choice**

Select the definition that most nearly defines the given word.

11.	 conductor

- A. Material that allows current to easily flow.B. The force that pushes electricity or a current. In most homes this force is 110 volts.

#### 12. \_\_\_\_\_ charge

A. An electric current that reverses its direction of flow at regular intervals. B. A measure of the amount of electricity in an atom that is determined by the extra positive or negative particles that an atom has.

Name	Date
13	electromagnet A. A magnet created when electric current flows through a coil of wire. B. An object with two poles that attracts iron and steel.
14	<b>lodestone</b> A. A hard, black, naturally magnetic rock. B. A unit used to measure current.
15	alternating current A. An electric current that reverses its direction of flow at regular intervals. B. A charge that stays on an object instead of flowing in a current.
16	<b>fuse</b> A. Material that allows current to easily flow. B. A safety device placed in an electric circuit. This contains a metal strip that melts when overheated.
17	<b>parallel circuit</b> A. An electric circuit that has more than one path for the current. B. The space around a magnet where the force of the magnet can be felt.
18	<b>kilowatt-hour</b> A. The amount of energy used when you consume one kilo-watt of power in one hour. B. A hard, black, naturally magnetic rock.
19	electricity A. Energy formed by the motion of protons and electrons. B. A piece of metal that stands at the highest point of a building and is connected to the Earth. The purpose of the piece of metal is to ground the large amount of electrical energy in the event of a lightning strike.
20	<b>static electricity</b> A. A safety device placed in an electric circuit. This contains a metal strip that melts when overheated. B. A charge that stays on an object instead of flowing in a current.
Review	
21	Circuit A has 2 1.5-volt batteries connected in parallel to light a bulb. Circuit B has 2 1. 5-volt batteries connected in series to light a bulb. The bulb from Circuit A will last longer.
	A. True B. False
22	What does a switch use to make or break an electric current?
	<ul> <li>A. Insulators and resistors</li> <li>B. Conductors and insulators</li> <li>C. Conductors and resistors</li> <li>D. Resistors only</li> </ul>
23	The more coils of wires an electromagnet has, the stronger it is.
	A. False B. True

Name	Date
24	Noah, Kaitlyn, and John each designed one simple circuit. Noah designed a series circuit with 2 1.5-volt batteries and 1 bulb. Kaitlyn's was also a series circuit with a 1. 5-volt battery and 2 bulbs. John's was a parallel circuit with a 1.5-volt battery and 2 bulbs. Whose circuit produced the brightest light?NoahKaitlynJohn A. B. C. The brightness is same for all three circuits D.
25	It is possible to create a magnet with more north poles than south poles. A. False B. True
26	A switch controls the flow in an electric circuit. A. True B. False
27	<ul> <li>Andrew built a simple electric circuit in his science class. His electric circuit had 3 light bulbs. When he disconnected a bulb, the other 2 bulbs stayed lit. What type of circuit did Andrew build?</li> <li>A. A series circuit</li> <li>B. A parallel circuit</li> <li>C. A mix of series and parallel circuits</li> <li>D. None of the above</li> </ul>
28	Aaron designs an electric circuit that has 2 batteries connected in series and 1 bulb. If one of the batteries dies, the brightness of the bulb remains the same. A. False B. True
29	Electromagnet A has 50 coils of wire and Electromagnet B has 100. If the same amount of current flows through these 2 electromagnets, which one is stronger? A. Electromagnet B B. Electromagnet A C. Equal D. Not enough information
30	Earth is a giant magnet. A. True B. False

## **Answer Key**

- generator
   insulator
   voltage
   parallel circuit
   kilowatt-hour
- 6. fuse
- 7. electromagnet 8. electric field

- 9. charge 10. direct current
- 11. A
- 12. B
- 13. A
- 14. A
- 15. A
- 16. B
- 17. A
- 18. A
- 19. A
- 20. B
- 21. (A) 22. (B) 23. (B)

- 23. (B) 24. 25. (A) 26. (A) 27. (A) 28. (A) 29. (A) 30. (A)