



BUILDING BLOCKS OF PHYSICAL SCIENCE

Electricity

What is electricity and how do we use it? Follow your cartoon guide in Electricity as he travels through circuits, generators, and even the human body to find out!

What did you learn?

QUESTIONS

1. Electricity powers which of the following?
 - a. Lights
 - b. Machines
 - c. Parts of the human body
 - d. All of the above
2. Which material is a good insulator?
 - a. Water
 - b. Metal
 - c. Rubber
 - d. Paper
3. People learned to capture electricity and use it to do work in what years?
 - a. 1500's
 - b. 1700's
 - c. 1800's
 - d. 2000's
4. The build-up of electrons on the surface of an object is called ...
 - a. Static electricity
 - b. Electric current
 - c. Electric motor
 - d. Insulator
5. What is an electric current?
6. Can you describe why the blades of a turbine spin?

TRUE OR FALSE?

- | | |
|---|--|
| _____ 1. Electricity is a form of energy. | _____ 4. Your home is connected to the electrical grid by copper wires wrapped in plastic. |
| _____ 2. All matter is made of tiny particles called atoms. | _____ 5. Burning fossil fuels harms our planet. |
| _____ 3. Insulators allow electrons to flow more easily. | _____ 6. The demand for electric power continues to decrease. |

ANSWERS

- 1. d. All of the above.** According to page 5, we know that, "I power lights ... Electronics ... And many kinds of machines. I even power you!" So, the correct answer is D.
- 2. c. Rubber.** According to page 17, we know that, "Wood, plastic, and rubber are good insulators." So, the correct answer is C.
- 3. c. 1800's.** According to page 24, we know that, "In the 1800's, people learned to capture electricity and use it to do work." So, the correct answer is C.
- 4. a. Static electricity.** According to page 30, we know that, "static electricity: the build-up of electrons on the surface of an object." So, the correct answer is A.
- 5.** According to page 12, we know that, "An electric current is a steady flow of electrons from atom to atom."
- 6.** According to page 21, we know that, "The pressure of steam or falling water spins the blades of the turbine."

TRUE OR FALSE? ANSWERS

- 1. True.** According to page 4, we know that, "I'm electricity! I'm a form of energy." So, the correct answer is True.
- 2. True.** According to page 8, we know that, "All matter is made of tiny particles called atoms." So, the correct answer is True.
- 3. False.** According to page 16, we know that, "Some materials allow electrons to flow more easily. They're called conductors." So, the correct answer is False.
- 4. True.** According to page 22, we know that, "Your home is connected to the grid by copper wires wrapped in plastic." So, the correct answer is True.
- 5. True.** According to page 26, we know that, "... burning these fossil fuels harms our planet." So, the correct answer is True.
- 6. False.** According to page 28, we know that, "And because there are more and more objects that need electricity to do work ... the demand for electric power continues to grow." So, the correct answer is False.