

## Experiments to Explore Electricity

### Pre/Post Test

Directions: Circle the correct answer.

1. Why is it so dangerous to touch a power line?  
a) you might set off alarms  
b) the voltage is strong enough to injure or kill you  
c) you will stop the electrical flow  
d) the power line will blow up
2. A complete circuit is  
a) a straight path for electricity  
b) two parallel paths for electricity  
c) when the flow of electricity is stopped  
d) like a circle where the electricity travels along a path that takes it back to where it started
3. Why should you never experiment with the electricity that comes from a wall outlet?  
a) you might damage a nearby power plant  
b) you might break the outlet  
c) you might be seriously injured or killed  
d) the current is too weak
4. Two examples of good conductors are  
a) metal and water  
b) plastic and rubber  
c) water and glass  
d) air and plastic
5. An insulator is  
a) something that electricity can easily move through  
b) something that does not allow electricity to easily pass through  
c) a special type of metal  
d) warm water
6. Why is a short circuit dangerous?  
a) more electricity flows through it  
b) the electricity moves faster  
c) the wires are too short  
d) it could cause a fire
7. True or false? Fuses and circuit breakers protect our home electrical systems by turning off the power when a circuit gets too hot.  
a) True  
b) False
8. Which of the following is an example of a dangerous electrical situation in a home?  
a) electric cords with bare wire showing  
b) overloaded outlets  
c) electrical cords running under furniture  
d) all of the above
9. An electromagnet is  
a) a giant magnet  
b) a very strong electrical particle  
c) a strong electron  
d) when electricity travels through a piece of metal, and it becomes magnetized
10. Why is it important to be careful around electricity?  
a) our bodies conduct electricity  
b) you might get shocked or electrocuted  
c) you could be seriously injured or killed  
d) a, b, and c

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## Pre/Post Test Answer Key

Information that relates to each question can be found on the pages listed below.

1. b) the voltage is strong enough to injure or kill you. Page 5
2. d) like a circle where the electricity travels along a path that takes it back to where it started. Page 6
3. c) you might be seriously injured or killed. Page 7
4. a) metal and water. Page 8
5. b) something that does not allow electricity to easily pass through. Page 8
6. d) it could cause a fire. Page 10
7. a) True. Fuses and circuit breakers protect our home electrical systems by turning off the power when a circuit gets too hot. Page 14
8. d) all of the above. Page 16
9. d) when electricity travels through a piece of metal, and it becomes magnetized. Page 13
10. d) a, b, and c. Page 5, 7 and 8