Name _____

# Electrical Circuits

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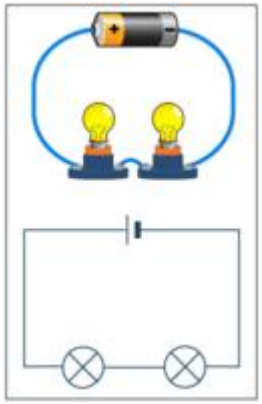

You have already learned about electricity. You know that electricity is a stream of electrons moving from atom to atom. Electrons have a negative charge. They move toward atoms with a positive charge. When electrons move, electricity is made.

Electrons cannot jump across a distance. There must be a path for electrons to follow. The path must be a series of atoms that can accept an electron. We call this path a circuit. People have learned how to build and manipulate circuits to move electricity. We use circuits to bring electricity into our homes. We use circuits to move electricity through our computers, telephones, toys, and even our cars.

Every time you flip a light switch in your house, you are using a circuit. The light bulb glows when electrons are flowing through it. The light bulb only glows when the switch is on. This is because the circuit is complete when the switch is on. Wiring in your house forms a path for electricity to flow. The wires are attached to the light bulb. The wires are also connected to the switch on the wall. When the switch is turned off, there is a break in the circuit. When the circuit is broken, electricity cannot flow through the light bulb. When the switch is turned on, the switch forms a bridge that completes the circuit. Electrons can flow through the wires, through the switch, and through the light bulb. The light bulb glows and lights your room. Circuits help people control when and where electricity flows.



## Questions

_____ 1. Electricity is _____.

A. negatively charged
B. a stream of electrons
C. made when electrons move from atom to atom
D. all of the above

2. Electrons flow on a path called _____.

_____

_____

_____

_____ 3. People use electrical circuits to _____.

A. control where electricity flows and when it is flowing
B. control how much electricity is made
C. make electrons jump to positively charged atoms
D. all of the above

4. When a switch in an electrical circuit is turned off, _____.

_____

_____

_____

_____ 5. What is used to make the circuits, or paths that electricity can flow through, in our homes?

A. electrons
B. wires
C. switches
D. light bulbs

Name _____

**Explain what a switch does in an electrical circuit. How does the circuit change when the switch is turned from on to off?**

**We know that batteries make electricity for our flashlights and other devices. If you look closely at a battery, you will see that one end has a + on it and the other end has a - on it. Use what you have learned to draw a picture of how you would build a simple electrical circuit using a battery, wire, and a light bulb. Label the + and - ends on the battery and use arrows to show which way the electrons will flow. Remember, the circuit must be complete. Your circuit should follow a circular path.**