



What should I already know?

- Electricity is a form of energy that can be carried by wires and is used for heating and lighting and to provide power for devices.
- Sources of light and sound may need electricity to work.

Big Ideas this works towards:

Energy, which cannot be created or destroyed, comes in many different forms and tends to move away from objects that have lots of it.

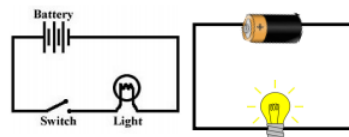
What will I know by the end of the unit?

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| Where does electricity come from? | <ul style="list-style-type: none"> • Electricity is generated using energy from natural sources such as the Sun, oil, water and wind. • These can also be called fuel sources. |
| Which appliances run on electricity? | <ul style="list-style-type: none"> • Some appliances use batteries and some use mains electricity. • Batteries come in different sizes depending on how much and for how long the appliance is used. • Recognize common appliances that use electricity. |
| How does a circuit work? | <ul style="list-style-type: none"> • A complete circuit is a loop that allows electrical current to flow through wires. • A circuit contains a battery (cell), wires and an appliance that requires electricity to work (such as a bulb, motor or buzzer). • The electrical circuit flows through the wires from the battery (cell) to the bulb, motor or buzzer. • A switch can break or reconnect a circuit. • A switch controls the flow of the electrical current around the circuit. When the switch is off, the current cannot flow. This is not the same as an incomplete circuit. |
| What are electrical conductors and insulators? | <ul style="list-style-type: none"> • When objects are placed in the circuits, they may or may not allow electricity to pass through. • Objects that are made from materials that allow electricity to pass through a create a complete circuit are called electrical conductors. • Objects that are made from materials that do not allow electricity to pass through and do not complete a circuit are called electrical insulators |

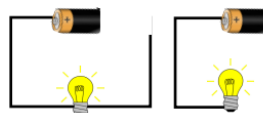
Vocabulary

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| appliances | a device or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical . |
| battery | small devices that provide the power for electrical items such as torches |
| bulb | the glass part of an electric lamp, which gives out light when electricity passes through it |
| buzzer | an electrical device that is used to make a buzzing sound |
| cell | a synonym for battery |
| circuit | a complete route which an electric current can flow around |
| component | the parts that something is made of |
| conductor | a substance that heat or electricity can pass through or along |
| current | a flow of electricity through a wire or circuit |
| device | an object that has been invented for a particular purpose |
| electricity | a form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices. |
| energy | the power from sources such as electricity that makes machines work or provides heat |
| fuel | a substance such as coal, oil, or petrol that is burned to provide heat or power |
| generate | cause it to begin and develop |
| insulator | a non- conductor of electricity or heat |
| mains | where the supply of water, electricity or gas enters the building. |
| motor | a device that uses electricity or fuel to produce movement |
| Power | Power is energy , especially electricity , that is obtained in large quantities from a fuel source and used to operate lights, heating and machinery. |
| source | where something comes from |
| switch | a small control for an electrical device which you can use to turn the device on or off. |
| wires | a long thin piece of metal that is used to fasten things or to carry electric current |

Diagrams



These are **complete** circuits, they have a battery, cell and a component (bulb).



This circuit will not work as it is **incomplete**.