Year 6 - Science

NC Unit: Electricity



Physics

How can we vary the effects of electricity?

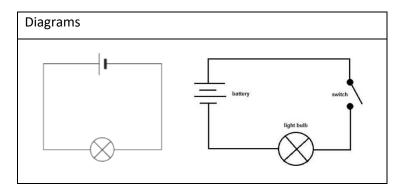
What should I already know?

- 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.
- Where electricity cones from
- Which appliances need electricity
- What a circuit is, the components of a circuit and how it works.
- What electrical conductors and insulators are.
- What happens when a **switch** is added to a circuit.
- What forces and resistance are.

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.

| Circuit Symbols | |
|------------------|------------------------|
| Symbol | Component |
| —(A)— | ammeter |
| — <u> </u> | battery |
| $-\otimes$ | bulb |
| $\sum_{i=1}^{n}$ | buzzer |
| | cell |
| — M— | motor |
| | resistor |
| | switch (open) |
| | switch (closed) |



| Vocabulary | |
|-------------|---|
| ammeter | measures the current in a circuit |
| 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 in 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 a 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. |
| resistance | a force which slows down a moving object or vehicle |
| resistor | a part of an electric circuit that provides resistance to some of the current |
| source | where something comes from |
| switch | a small control for an electrical device which you use to turn the device on or off |
| voltage | the force of an electric current as measured in volts |
| wires | a long thin piece of metal that is used to fasten things or to carry electric current |