

Electricity



Curriculum Links:

Electricity:

- Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
- Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches
- Use recognised symbols when representing a simple circuit in a diagram.

Key Facts:

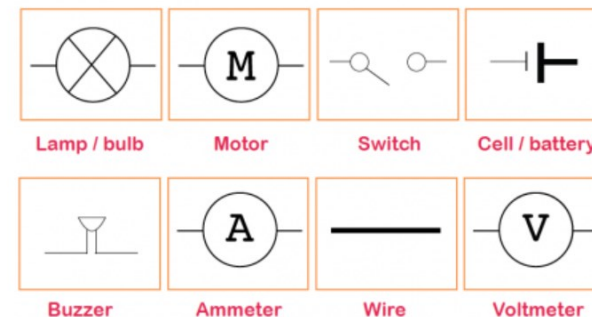
- Electricity is an energy which is used to power electrical items. Electrical energy is caused by electrons moving about to make a current.
- Electricity can be created by: burning fossil fuels, wind power, solar power, hydropower
- A series circuit has one route for a current to take, if more components are added the power has to be shared so they will be less effective. If one part of a series circuit breaks, the flow of current stops.
- More batteries or a higher voltage creates more power to flow through a circuit.
- Shortening the wires means electrons have less resistance to flow through.
- Electrical current is measure in amperes (amps).

Possible experiences:

- Investigate what happens when you change number of components
- Create traffic lights, alarms, motorise vehicles etc
- Visit an EDF power station

We should already know:

- Electricity is a form of energy used for heating, lighting and power
- Which appliances need electricity
- What a circuit is and the basic components
- What electrical conductors and insulators are



Key Vocabulary

Ammeter	Measures the current in a circuit
Circuit	A complete route which an electric current can pass through
Conductor	A substance heat or electricity can pass through
Current	A flow of electricity through a wire or current
Electricity	A form of energy carried by wires to provide power for devices
Insulator	A non-conductor of electricity or heat
Resistance	A force which slows down a moving object
Resistor	Part of the electric circuit that provides resistance to some of the current
Switch	A control for an electrical device which can be used to turn it on and off
Voltage	The force of an electric current measured in volts