

Year 4: Electricity Learning Organiser

Vocabulary

electricity

The flow of an electric current or charge through a material e.g. from a power source through wires to an appliance.

mains electricity

Power stations send an electric charge through wires to transformer and pylons. Then, underground wires carry the electricity into our homes via wires in the walls and out through plug sockets.

battery

Store chemicals which produce an electric current. Eventually, even rechargeable batteries will stop producing an electric current.

renewable

A source of electricity that will not run out. These include solar, nuclear, geothermal, hydro and wind.

non-renewable

This is a source of energy that will eventually run out so will no longer be able to be used to make electricity. These include fossil fuels – coal, oil and natural gas.

circuit

An electrical circuit is a completed path through which an electrical current flows.

cells

An electrical cell is a device that is used to generate electricity.

switch

A switch is an electrical component that can 'make' or 'break' an electrical circuit.

socket

Sockets allow electrical equipment to be connected to the alternating current (AC) power supply in buildings.

appliance

A piece of equipment or device designed to perform a particular job such as a washing machine or TV.

There are two types of electrical current that we use to power appliances.



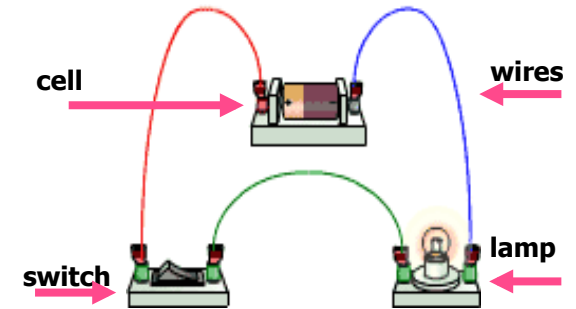
Electricity can occur naturally such as lightning or static electricity.



Important facts to know by the end of this topic:

- Know about common appliances that run on electricity.
- Know how to construct a simple series electrical circuit.
- Identify and name the basic parts of the circuit, including cells, wires, bulbs, switches and buzzers.
- Know that a switch opens and closes a circuit.
- Know about some common conductors and insulators.
- Know that metals are good conductors.

This is a simple electric circuit. It has a cell, a lamp and a switch.



To make the circuit, these components are connected together with metal connecting wires. Electricity can only flow around a complete circuit that has no gaps. There must be wires connected to both the positive and negative end of the supply/battery.

Some materials let electricity pass through them easily. These are known as **conductors**. Many metals are good electrical conductors such as copper, iron and steel.



Some materials do not let electricity pass through them. These materials are known as **insulators**. Plastic, wood, glass and rubber are good electrical insulators.

