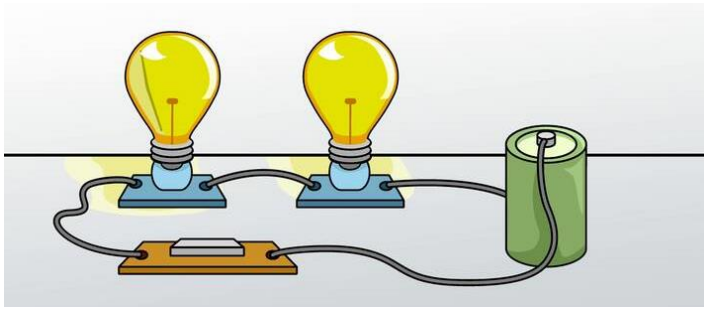


Year 4: Physics: Electricity:

How does electricity flow?



Types of electricity

Mains power is produced mainly in a gas, coal or nuclear power station. Wind turbines, solar panels and hydroelectric dams are also used to produce mains power, but are not used as often. Smaller **appliances** are often battery powered. Battery powered appliances are portable which means you can use it anywhere without it having to be plugged into a plug socket.

Conductors

Materials that let electricity pass through them. We call these materials electrical conductors.

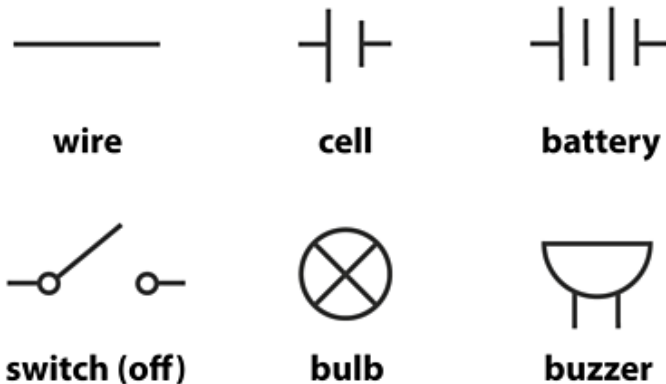
Insulators

Materials that do not let electricity pass through them. We call these materials electrical insulators.

Circuits

An electric **circuit** is usually made by connecting parts or components together with pieces of wire. Wire (a conductor) allows electricity to pass through it easily, but there has to be something that pushes the electrons along. This is what a battery does (a power source). If there is a break anywhere in the circuit, the current will not be able to flow through.

Symbols



Subject Specific Vocabulary

Electricity	The flow of an electric current or charge through a material.
Appliance	A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.
Component	A general terms for a part of a circuit. Usually a lamp or buzzer.
Electrons	Small particles with an electric charge.
Circuit	A pathway for electrical charge. The charge is pushed from the battery to the component. A circuit must be complete for the component to work.