Year 4 Summer Term

ELECTRICITY

OLSE Science Knowledge Organiser

ELECTIRCAL DEVICES

There are many devices and appliances that we use everyday that are powered by electricity. Some are powered by mains electricity so we plug them into an electric socket..

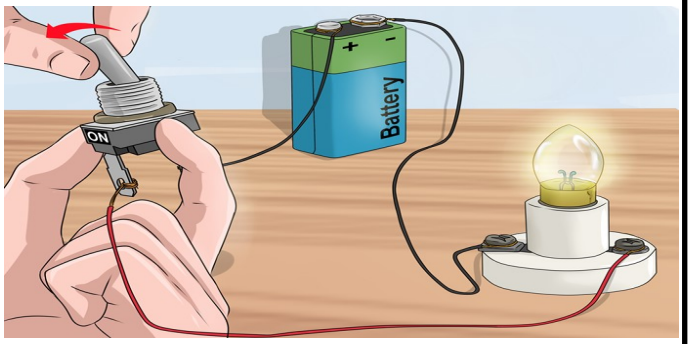


Others need to be more portable so that we can move around with them or use them outside our homes . They are powered by batteries which store electricity.



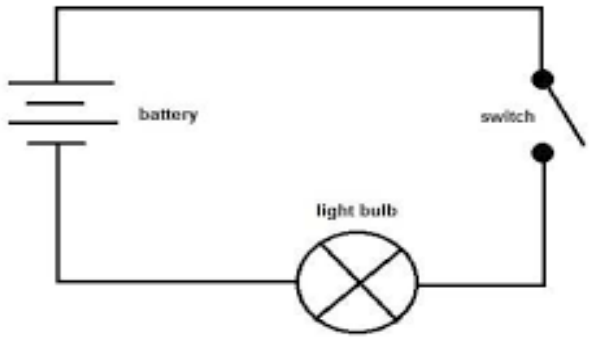
DANGER! HIGH VOLTAGE!

Electricity is everywhere so always be safe. Be careful of mains switches, open sockets and any signs to do with electricity. The human body is 80% water so it conducts electricity. If someone has had a shock always turn the electricity off first, then call for help!



ELECTRICAL CIRCUITS

In order to make a device like a lightbulb work, we need to create a circuit using wires to connect the source of electricity (battery or **cell**) to the bulb. This circuit needs to have no gaps in it or it will not work.. When the switch is closed the bulb will light.



.ELECTRICAL CONDUCTORS AND INSULATORS

The wires in an electrical circuit are covered in plastic to keep us safe. Plastic will not let electricity pass through it. It is an electrical insulator. Other materials which make good **electrical insulators** are:



wood rubber cardboard

The wire inside the plastic cover is made from copper which is a type of metal. Materials which let electricity pass through are called **electrical conductors.** They are often metals but also include water.