Year 4 – Electricity

It is very important to be safe with electricity. Electricians are trained to be safe with electrical circuits and equipment.

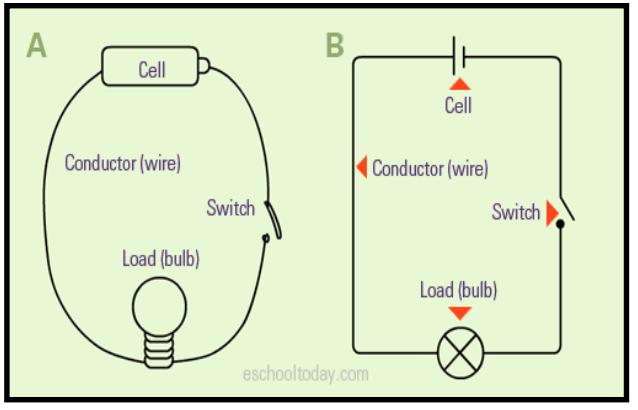
Lightening and static electricity are naturally occurring forms of electricity.

ROCKET WORDS – learn these words and their definitions

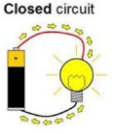
Key Word	Definition
appliance	a device or piece of equipment designed to perform a specific task
circuit	a complete path around which electricity can flow. It must include a source of electricity, such as a battery.
cell (battery = more than one cell)	a device that delivers an electric current as the result of a chemical reaction.
component	any basic device used in a circuit e.g. a cell or motor
electrical conductor	materials that electricity can pass through easily
electrical insulator	materials that do not allow electricity to pass through them

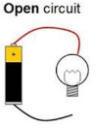
Electric circuits

We use symbols to represent the components in an electrical circuit.



Electricity can only flow around a complete circuit that has no gaps. When you turn a switch off, the flow of electrons stops. When you turn the switch on again, the electrons are able to flow around the circuit.





Electrical appliances

Batteries convert chemical energy into electrical energy.

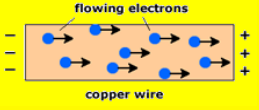
Mains electricity comes from power stations, which send an electric charge through wires to our homes.

How is mains electricity generated?

Mains electricity can be generated by the burning of fossils fuels (coal, oil and gas), wind and solar (the sun).

Electrical energy

Electricity is energy formed from the flow or presence of charged particles called electrons.



Electrical energy can be converted into other types of energy such as light, heat, sound or movement.

Electricity is dangerous so we need to be careful when using electrical appliances.

Electrical Conductors

Electrical conductors have free electrons that can be made to move in one direction, creating an electrical current.

Electrical Insulators

Electrical insulators do not have free electrons so an electrical current can't be made.