

# Knowledge Organiser: Electricity



## What is electricity?

Electricity is a form of energy. Electrical energy is made by electrons that move to make a current. Many of the items that we use every day run on electricity. Electricity can be supplied from the mains (these are plugged into power supplies) or from batteries.

Below are a selection of appliances that run on electricity:



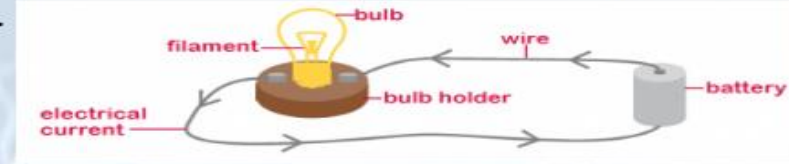
## How is electricity made?

- Burning fossil fuels (oil, gas, coal) at power stations,
- Using wind power generated by wind turbines,
- Using solar power generated by the sun,
- Using water power (sometimes called hydropower) generated by running or falling water.



## What is a circuit?

A simple series circuit is a circuit for electricity to flow around. It is simple because the circuit is made of a single wire.



## What is static electricity?

Static electricity is the build up of electrical charge on the surface of an object.

One of the objects will have a positive charge and the other a negative charge.

If you rub an object quickly, like a balloon, or your feet on the carpet, these will build-up a rather large charge.



## What are conductors and insulators?

**Conductor:** A material that allows charges to flow easily throughout the material.

**Insulator:** A material that does not allow charges to flow easily throughout the material.

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**Current:** The amount of electricity flowing through the circuit. It can be measured using an ammeter and is measured in amps.

**Circuit:** A complete route which an electric current can flow around.

**Battery:** A small energy source that provides power to electrical items.

**Cell:** A device used to generate electricity. A battery is an example of a cell.

**Renewable Energy:** Energy sources that cannot be "used up".

**Physics:** The study for forces including electricity.

**Motor:** A device that changes electrical energy into movement.

**Buzzer:** A device that changes electrical energy into sound.

**Wire:** A long thin piece of metal that carries electrical current. Often covered in plastic for safety.

**Socket:** A device on the wall you can plug electrical equipment into.