Science knowledge organiser: Light and electricity

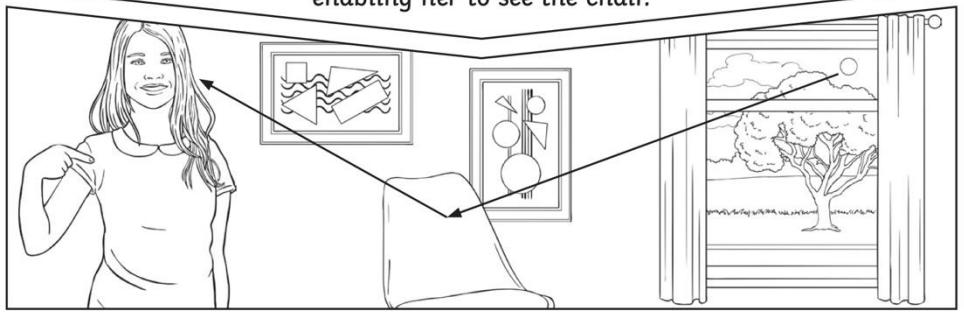
Light:

Key Vocabulary	
light	A form of energy that travels in a wave from a source.
light source	An object that makes its own **light**.
reflection	**Reflection** is when **light** bounces off a surface, changing the direction of a ray of **light**.
incident ray	A ray of **light** that hits a surface.
reflected ray	A ray of **light** that has bounced back after hitting a surface.
the law of reflection	The law states that the angle of the **incident ray** is equal to the angle of the **reflected ray**.

Key Knowledge

We need **light** to be able to see things. **Light** waves travel out from sources of **light** in straight lines. These lines are often called rays or beams of **light**.

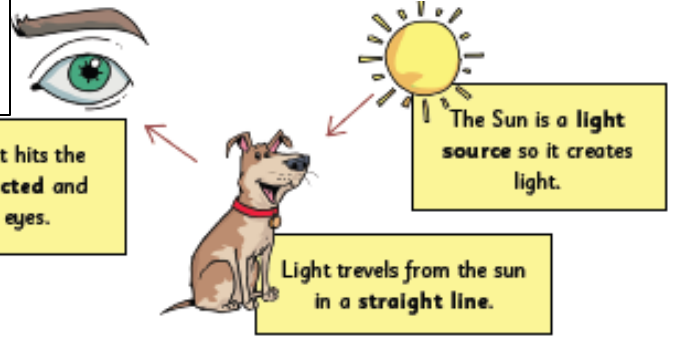
Light from the sun travels in a straight line and hits the chair. The **light** ray is then **reflected** off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.



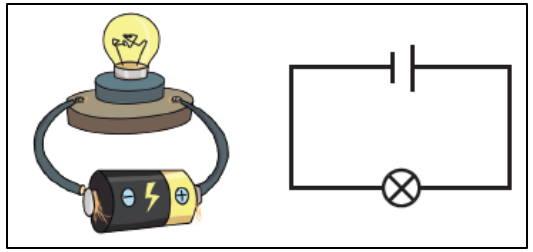
Light sources

A **light source** makes light. The **Sun** and other **stars**, **fires**, **torches** and **lamps** all make their own light, so they are examples of sources of light.

FACT: A shadow is made when an object blocks the light.



This is an example of a simple circuit which includes a power and light source:



Electricity:

How is electricity made?

Electricity can be made using a simple **generator**. We could make one in school using a **magnet** and a **coil of wire**. If we turn a magnet around inside a coil of wire, it creates **electricity** in the wire. Doing this only makes a **small amount** of electricity so we need large generators to make enough for everyone. These generators are usually in **power stations**. There are **different types** of power stations.

Key Vocabulary

appliance – a device or piece of equipment that has been made to perform a specific task
battery – a small item used to power small appliances
circuit – a route through which electricity flows
components – the parts of a circuit
conductor – allows electricity to flow through it
electrical – something that uses electricity to work
insulator – doesn't allow electricity to flow through it
mains power – electricity provided by power stations
portable – can be easily carried around
pylon – a tower used for keeping electrical wires above the ground