



# LKS2 Science Knowledge and Skills Organiser

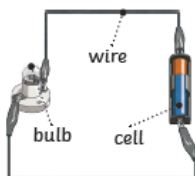
## Incredible Inventions

### Key Knowledge and Skills

#### Electrical Appliances

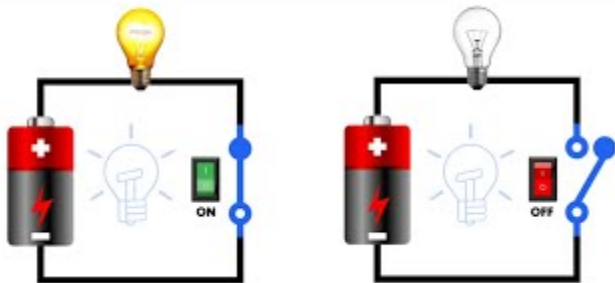
We have different appliances at home and in school that we use for particular purposes. We have electric appliances (e.g. hairdryer) and non-electric appliances (e.g. can opener).

**A Circuit** - An electrical circuit provides a path that electricity can flow.



#### Switches

When we turn a switch on in a circuit, it completes the circuit and allows electricity to flow around the circuit. When we turn a switch to the off, this creates a break in the circuit meaning the electricity cannot flow anymore and the appliance will not work.



#### Insulators and Conductors

Insulators are objects that do not allow electricity to pass through them.

Conductors are objects that do allow electricity to pass through them.

#### Forces

A force is a push or pull that acts upon an object. When we push or pull objects we can move the object, change the shape of the object or make the object change direction.

#### Magnets

- Magnets can attract and repel other objects with their magnetic forces.
- Magnetic forces act at a distance meaning that a magnet does not need to be in contact with another object for the magnetic forces to act.
- Magnets will always have a north and south magnetic pole.



#### Magnetic Objects

- A magnet attracts objects that are magnetic.
- Not all metals are magnetic.

Magnetic	Non-Magnetic
Iron Nickel Cobalt Steel	Rubber Paper Wood Plastic

### Key Vocabulary

Word	Definition
appliance	A piece of equipment or a device designed to perform a particular job. An electrical appliance runs on electricity.
Mains electricity	Items that run on <b>mains electricity</b> are plugged into a socket.
Battery electricity	To make <b>battery</b> -powered items run, you need to insert a <b>battery</b> into them.
component	A circuit contains components like batteries, switches, bulbs, buzzers & wires.
Series circuit	A series circuit has all the components in one loop connected by wires, so there is only one route for current to flow.
Incomplete circuit	Electricity does not flow around the circuit as there is a break in it.
Force	A push or pull that acts upon an object that can cause it to move, change shape or change direction.
Attract	Pulls towards.
Repel	Push away.
Friction	The force that acts upon one surface when it moves against another .
Magnetic force	Magnetic force is an invisible force where the space around a magnet has attracting and repelling forces.

