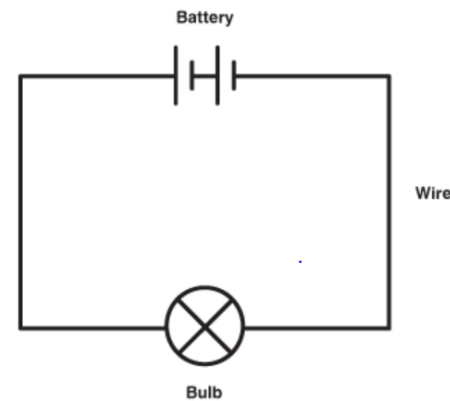
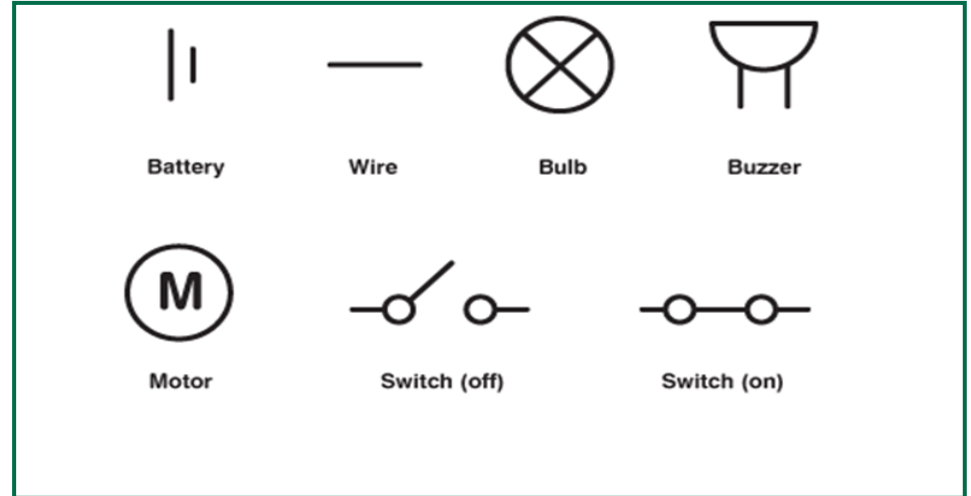


KS2 Science Knowledge Organiser: Electricity

Glossary

1	Battery	A container consisting of one or more cells that is used for generating current
2	Bulb	A glass bulb which provides light by passing an electrical current through a filament
3	Buzzer	An electrical device that makes a buzzing noise and is used for signalling (for example, in a burglar alarm)
4	Circuit	A complete and closed path around which a circulating current can flow
5	Conductor	A material or device which allows heat or electricity to carry through
6	Current	A flow of electricity which results from the ordered directional movement of electrically charged particles
7	Electricity	A form of energy resulting from the existence of charged particles
8	Filament	A conducting wire or thread with a high melting point which forms part of an electric bulb
9	Motor	A machine powered by electricity that supplies motive power for a vehicle or other moveable device
10	Static Electricity	A stationary electric charge, typically produced by friction, which causes sparks or crackling or the attraction of dust
11	Switch	A device for making and breaking the connection in a circuit
12	Voltage	The force that makes electricity move through a wire

Main components of an electrical circuit

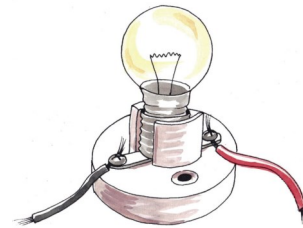


Simple series circuit

In order for electricity to flow, a circuit needs three things:

1. A source of electricity
2. No gaps in the circuit
3. Conductors

By changing the components in a circuit we can vary:



The brightness of a bulb
(brighter / dimmer)



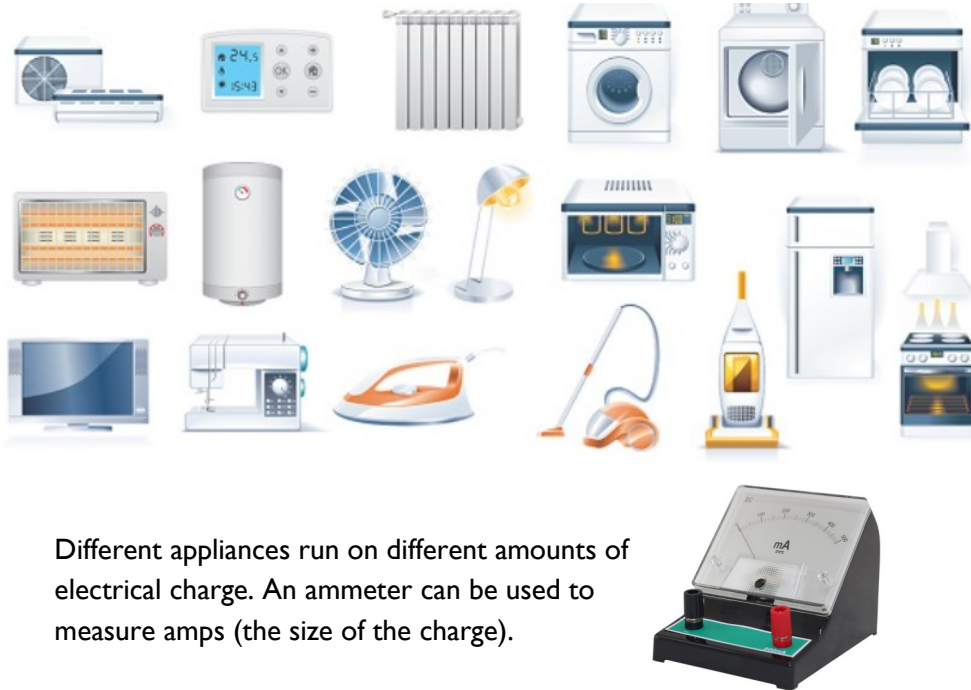
The volume of a buzzer
(louder / quieter)

Links to Other Units

Science	Forces (opposites attract and like repel)
Science	Properties of materials (insulators and conductors)
Science	Properties of materials (circuits)
Geography	Y3 Natural Disasters (lightening is static electricity)

Common appliances that run on electricity

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:

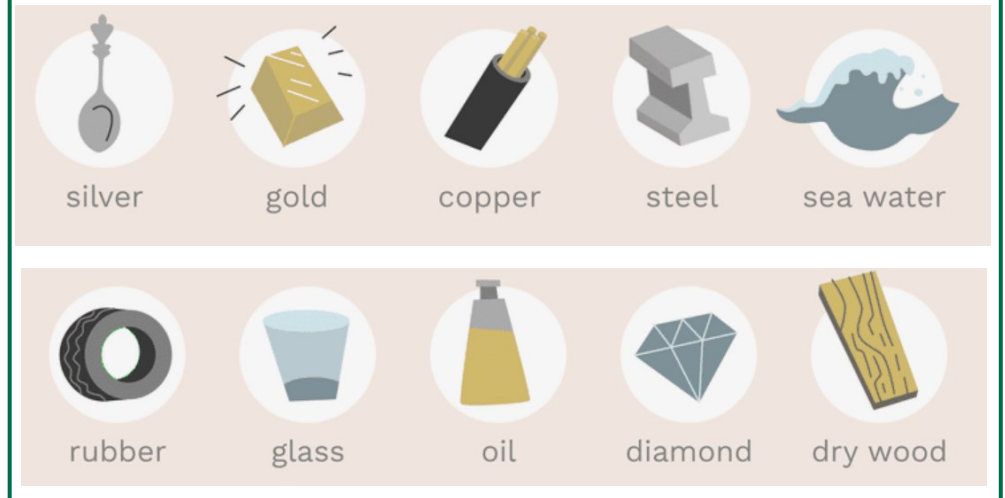


Different appliances run on different amounts of electrical charge. An ammeter can be used to measure amps (the size of the charge).

Electrical conductors and insulators

A conductor is a material that allows charges to flow easily throughout the material. Metals are often good conductors. Examples include: silver, gold, copper, steel and salt water.

An insulator is a material that does not allow charges to flow easily throughout the material. Examples include: rubber, glass, oil, diamond and dry wood.



Scientific Method: planning an investigation

Variables

Choose your **independent variable** (what you will change) and your **dependent variable** (what you will measure)

Question

Create your question: what is the effect of changing the **(independent variable)** on the **(dependent variable)**.

Prediction

Make a prediction of what you think will happen based on what you already know.

Equipment

List all of the equipment you will use.

Method

Describe the method using numbered bullet points.

Risks

Identify any risks you must be aware of to ensure safety.