

Glossary of Terms Used in Science Teaching in Primary Schools

Absorbent	A property of a material which means it is able to take in and hold water.
Adaptation	Ways in which an animal or plant has evolved over time to suit the environment in which it lives.
Air resistance	A force acting on an object moving through air. The amount of air resistance will affect how quickly the object moves.
Amphibian	A group of cold-blooded vertebrates characterised by having gills and breathing in water as young, then developing lungs and breathing air as adults. For example, tadpoles and frogs.
Anther	The part of a flower's stamen that contains pollen .
Artery	A vessel forming part of the circulatory system which carries oxygen-rich blood away from the heart and lungs and to the rest of the body.
Asexual reproduction	A type of reproduction where new individuals come from a single organism. An example would be a strawberry plant which puts out 'runners' to make new plants.
Attract	Certain metals are attracted to magnets, meaning that they are pulled in by the magnet's magnetic field. Magnets also attract one another, opposite pole to opposite pole.
Battery	A cell consisting of certain chemicals which combine to create electricity in a circuit .
Canines	Sharp, pointed teeth used for ripping and tearing food. Humans have four canine teeth.
Carnivore	An animal which mainly eats meat and hunts for prey .
Cell	See battery .
Changing state	The process by which a material changes from a solid , to a liquid , to a gas and back again.
Chrysalis	A stage in the life cycle of many insects, where the larva changes into an adult. See also pupa .
Circuit	A circuit is a closed loop for electricity to move around. In primary school children build simple series circuits which contain a battery and wires, and may also contain a switch , motor, bulb or buzzer.
Circuit diagram	A simple way of representing an electrical circuit using lines and symbols to represent the components of the circuit.
Circulatory system	The network of organs (including the heart and lungs) and blood vessels which carry blood, oxygen and nutrients around the body.
Classifying	The scientific process of deciding which group an animal or plant belongs to, based on its characteristics.
Comparative test	A test which compares the effect of different actions or the characteristics of different materials .
Condensation	The process by which a gas turns into a liquid , due to a reduction in the energy in its particles.
Conductor	A material which allows heat and/or electricity to pass through it. Most metals are good electrical and thermal conductors.

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Consumer	In a food chain , an animal (or occasionally plant) which eats another animal or plant. For example, when a cow eats grass, it is a consumer .
Crust	The outer layer of the Earth.
Current	An electrical flow through a circuit .
Data logger	An instrument often used in schools to record data over time, using recording devices and probes. For example, a data logger can be used to measure the changing temperature of water or the rising and falling level of noise or light in a room.
Deciduous	Any species of tree which loses its leaves in autumn and winter and grows new ones in the Spring.
Decomposer	In a food chain , any plant or animal which eats dead and decaying material. For example, woodlice are decomposers as they eat dead leaves and other plant material.
Digestive system	The network of organs within the body that break down and process the food that has been eaten.
Dispersal	The means by which a plant ensures its seeds are spread as far as possible from the parent plant, to give the seeds the best chance of germination .
Dissolving	A way of mixing a solid and a liquid. When a solid dissolves in a liquid, this creates a solution . Not all solids are soluble .
Eco-system	A community of interacting organisms, plants and animals within an environment .
Electricity	A form of energy caused by the movement of electrons.
Enquiry	The process of doing practical and experimental activities in order to learn about science.
Environment	The surroundings or conditions within which an organism lives.
Erosion	The action of elements such as wind or water in breaking down rocks and soils and moving them to other places.
Evaporation	The process by which a liquid turns into a gas as a result of increased energy in its particles.
Evergreen	Any species of tree which does not lose its leaves in the autumn, but keeps them all year round.
Evolution	The process of change in animal and plant species over very long periods of time, or how species change from generation to generation. Often connected with adaptation .
Fair test	A test which controls all but one variable in an attempt to answer a scientific question.
Fertilisation	This occurs when two sex cells fuse together, for example sperm and egg, or pollen and ovule in a plant
Filament	The part of a flower's stamen which supports the anther and often holds it up in order to make pollination easier.
Filtering	Removing small particles of insoluble or undissolved material from a liquid, usually by using a barrier with very small holes such as filter paper. See also sieving .
Food chain	A diagram that shows us how animals are linked by what they eat, for example grass -> rabbit -> fox
Food web	A set of linked food chains, often occurring within the same ecosystem .

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Force	Pushes and pulls which act on objects to make them move or stop moving.
Fossil	The remains or imprint of a prehistoric organism which has been embedded in rock and has turned to rock itself over millions of years.
Freezing	The process by which a liquid turns into a solid, as a result of lowered energy in its particles.
Friction	A force which is caused when two surfaces rub against one another. It is a 'sticking force', causing objects to slow down or stop. Air resistance, water resistance and surface resistance are all types of friction.
Gas	A material whose particles have high energy and large gaps between each other. A gas takes the shape of the container it is in and will flow; unless it is contained, it will not stay within a vessel but will rapidly move through a room.
Germination	The process by which a seed begins to grow and develop into a plant. Most seeds need warmth and water to germinate but do not need light.
Gestation period	The length of time it takes for an animal's young to develop before birth.
Gravity	A pulling force exerted by the Earth on falling objects, causing them to move towards the ground.
Habitat	A home environment for plants and animals.
Herbivore	An animal which eats only plant material.
Igneous rock	A rock formed when magma breaks through the earth's crust and cools. Examples include, basalt, granite and pumice.
Incisors	Flat, sharp-edged teeth used for cutting and slicing food. Humans have eight incisors.
Insoluble	An insoluble material does not dissolve in water.
Insulator	A material which does not easily allow heat and/or electricity to pass through it. Wood is an example of a good insulator.
Invertebrate	An animal which does not have an internal backbone. An example is a beetle, which has a hard external shell (exoskeleton) but no backbone.
Irreversible change	A chemical change where new materials are created and the original materials cannot be recovered. Examples include, boiling an egg, or mixing bicarbonate of soda with vinegar, which creates carbon dioxide gas.
Key	A way of sorting and classifying organisms according to their characteristics.
Life cycle	The different stages of life of a living creature. For example, egg, larva, pupa , adult insect.
Light	A type of energy that enables us to see.
Light source	A light source generates light using another form of energy such as heat or electricity .
Liquid	A material whose particles have gaps between them and moderate energy. A liquid takes the shape of the container it is in; it will flow but can be contained relatively easily.
Magma	Hot liquid and semi-liquid rock which is found beneath the Earth's crust . It forms igneous rock if it comes through the crust and cools.
Magnet	An object which has an invisible magnetic field and can attract or repel some materials.

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Magnetic force	An invisible force created by electrons. It controls and creates magnetism and electricity.
Magnetism	A force caused by electrons in a magnet.
Mammal	A group of vertebrates characterised by being warm-blooded, giving birth to live young, feeding their young on milk, and having hair or fur.
Material	The matter or substances that objects are made from. Examples are metal, wood, rock and plastic. Different materials have different properties .
Matter	Matter makes up our Earth and the universe. On Earth, matter exists in one of three states – solid , liquid or gas .
Mechanism	A system of parts that work together in a machine.
Melting	The process by which a solid turns into a liquid due to an increase in energy in its particles.
Micro-habitat	A very small, specific habitat for animals and plants, for example a pond or a rotting log.
Micro-organism	An organism too small to be seen by the naked eye. Examples include, mould spores, viruses and bacteria.
Molars	Large, square teeth with a rough edge, used for grinding and chewing food. Adult humans have 24 molar teeth.
Moon	A celestial object that orbits a planet .
Metamorphic rock	Rock which is created when other existing rocks are subject to intense heat and/or pressure as a result of seismic activity in the Earth's crust, and change as a result. Examples include, anthracite, marble and slate.
Nutrition	The process of providing or obtaining the food needed for health and growth.
Oesophagus	The tube which leads from the mouth to the stomach.
Omnivore	An animal which eats both meat and plant material.
Opaque	An opaque material does not allow light to pass through it.
Organism	Any living creature, plant or animal.
Ovary (plant)	Part of the female reproductive organ of a flower. It contains ovules that will develop into seeds, if fertilised by pollen .
Ovule	A part of a flower which contains the female seed cell, and after pollination becomes the seed.
Photosynthesis	The process by which plants convert energy from the Sun into carbohydrates for growth. Also requires water and carbon dioxide.
Pistil	The female parts of a flower. Consists of the stigma , style and ovary .
Pitch	The quality of a sound. Pitch depends on how fast or slow an object is vibrating .
Planet	A celestial object that orbits a star.
Pole	One of two ends of a magnet , with magnets having a North and a South pole. Like poles repel and opposite poles attract .
Pollen	A fine powdery substance produced by flowering plants, which contains the male sex cell. When joined with the ovule , fertilisation occurs, which leads to the creation of a seed.

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Pollination	The process by which a plant's pollen , from the male anther , is transferred to the female ovule in order to fertilise it and create a seed.
Precipitation	Rain, sleet, hail or snow – an element of the water cycle .
Predator	An animal which hunts other animals for food.
Prey	An animal which is hunted for food. An animal can be both predator and prey.
Producer	In a food chain , an organism which provides food for another living thing but is not itself a consumer . Typically, producers are green plants.
Properties	The qualities which a material possesses which may suit it to specific purposes. Examples of properties are hardness, flexibility and absorbency .
Puberty	The period during which an animal reaches sexual maturity and is capable of reproduction .
Pupa	See chrysalis
Reflection	When light hits the surface of an object and bounces back into our eyes so that we can see the object.
Repel	In a magnet , like poles will repel each other – their magnetic fields will push each other away.
Reptile	A group of vertebrates characterised by being cold-blooded, laying eggs and having scaly skin.
Reproduction	The process by which an organism creates new versions of itself.
Reversible change	A chemical change where no new materials are created, and the original materials can be recovered. Examples include, freezing water to make ice, or melting chocolate.
Season	A period of the year in certain parts of the world which is characterised by certain changes in weather patterns and in the environment. Caused by the earth's tilt as it orbits the Sun.
Sedimentary rock	Rocks formed over millions of years by the build-up and pressurisation of layers of tiny rocks, particles and decaying plants or animals. Examples include, sandstone and chalk.
Senses	The five senses enable us to make sense of the world. They are sight, hearing, touch, smell and taste.
Sepal	Green, leaf-like structures which enclose a flower bud before it opens.
Series circuit	A type of circuit where all the elements are laid out in a chain, so there is only one path that the electrical current can take.
Sexual reproduction	A type of reproduction where new individuals come from the joining of sex cells from two parents, one male and one female. An example would be reproduction in humans, or the pollination of a flower to create a seed.
Shadow	A shadow is created when an opaque material or object is placed in front of a light source and prevents the light from passing through.
Sieving	Removing particles of insoluble or undissolved material from a liquid, usually by using a barrier with small to medium-sized holes. See also filtering .
Simple machines	Simple machines turn small forces into larger ones. Examples include, levers, pulleys and gears.

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Solid	A material whose particles are closely packed together and have low energy. A solid holds its own shape. It can sometimes be stretched or squeezed but it does not run or flow.
Soluble	A soluble material will dissolve in a liquid.
Solution	A liquid containing dissolved material.
Sound	Sound is created when an object vibrates and sends waves of energy into our ears.
Spawn	The eggs of certain organisms, typically amphibians , which are laid without a shell and are often fertilised in water, outside the parent's body.
Stamen	The male, pollen-producing part of a flower. Consists of the anther and the filament .
Standard units	Units of measurement which are in common use, e.g. centimetres, grams, litres, degrees Centigrade.
States of matter	Matter exists in one of three states – solid , liquid or gas .
Steam	Tiny droplets of liquid water suspended in air. Not to be confused with water vapour .
Stigma	Part of the female reproductive organ of a flower. The stigma often sits on top of the ovary and holds the style up to receive pollen , then allows the pollen to be transferred to the ovule to fertilise it and create a seed.
Style	Part of the female reproductive organ of a flower, and the place where pollen is transferred to the stigma and from there to the ovule .
Sun	A star – a giant ball of hot gas and the nearest star to Earth. The centre of our solar system. Enables all life on Earth.
Surface resistance	See friction .
Switch	A component within an electrical circuit which enables the flow of electricity to be turned on and off.
Transparent	A transparent material allows light to pass through easily.
Variable	In a fair test any one of the elements of the test which could be changed. In a fair test, only one variable is allowed – all others have to be kept the same. For example, if testing whether seeds need warmth to germinate , only the temperature could vary – any other elements which may influence germination, such as water or light, have to be kept constant.
Vein	A vessel within the body which carries the blood back to the heart once it has delivered oxygen to the body's organs and systems.
Vertebrates	Organisms which have an internal backbone and skeletal system. Classified in five main groups: mammals , birds, fish, reptiles and amphibians .
Vibration	Very quick movement of an object back and forth, which in turn creates waves of energy in the air, typically heard as sound.
Voltage	The amount of electrical energy used. Measured in volts.

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Water cycle	The process of precipitation , evaporation and condensation which explains such events as cloud formation and weather patterns. Water evaporates from large bodies such as oceans and lakes, turning into water vapour and rising up, where it cools and condenses into tiny droplets (clouds). When the droplets combine and become larger, they fall to earth as rain, snow or hail (precipitation), back into rivers, lakes and oceans, and the cycle continues.
Water resistance	A force acting on an object moving through or floating on water. Objects which float do so due to water resistance.
Water vapour	Water in the form of a gas . Water vapour is invisible and should not be confused with steam, which is actually lots of tiny droplets of water.