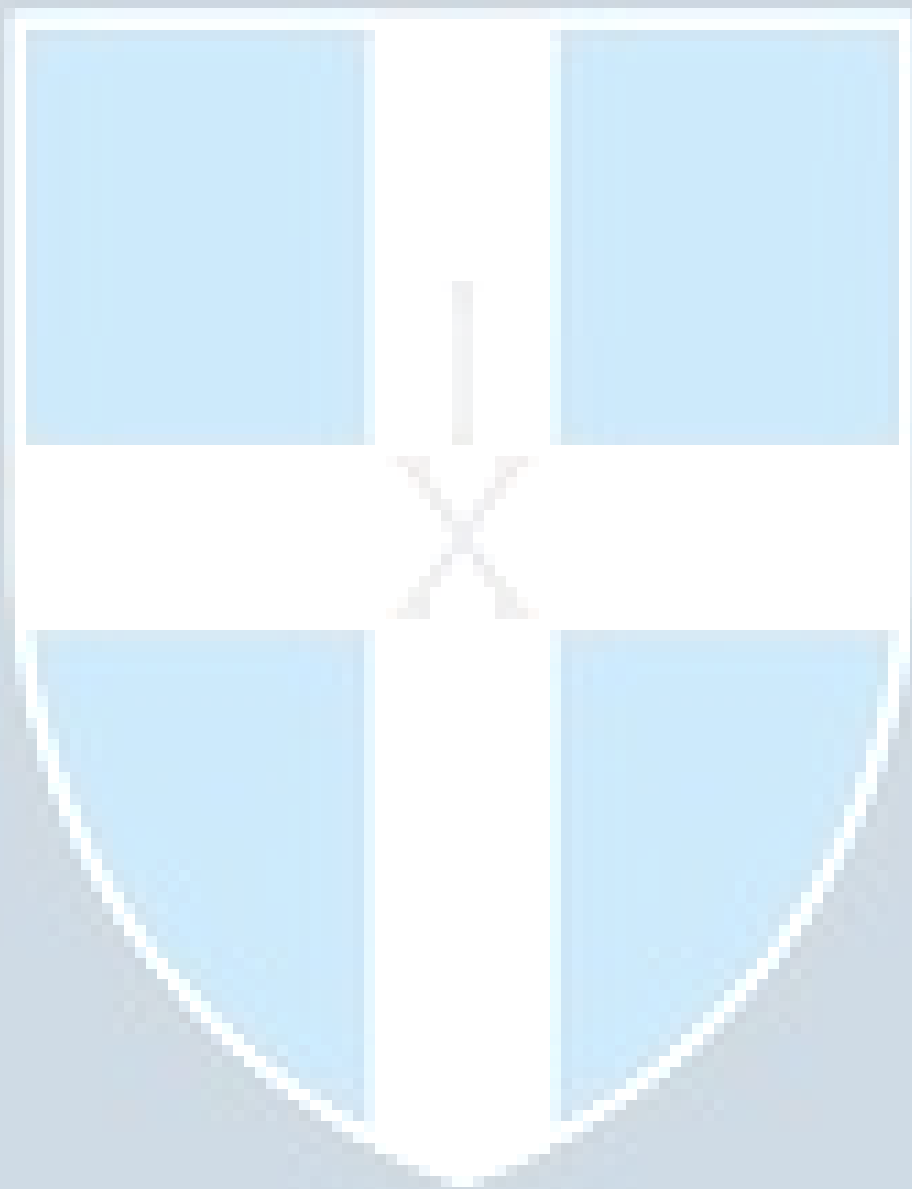


Year 8 Science

Glossary

This glossary contains the majority of the multi-structural material you will need to learn for Year 8 science.

How to use your glossary...



Health & lifestyle

Key word	Definition
addiction	A need to keep taking a drug in order to feel normal.
alcoholic	A person who is addicted to alcohol.
anus	Muscular ring through which faeces pass out of the body.
balanced diet	Eating food containing the right nutrients in the correct amounts.
bile	Substance that breaks fat into small droplets.
carbohydrase	Enzyme that breaks down carbohydrates into sugar molecules.
carbohydrate	Nutrient that provides energy.
catalyst	Substance that speeds up a reaction without being used up.
deficiency	A lack of minerals, that causes poor growth
depressant	A drug that slows down the body's reactions by slowing down the nervous system.
digestion	Process where large molecules are broken down into small molecules.
digestive system	Group of organs that work together to break down food.
drug	Chemical substance that affects the way your body works.
enzyme	Special protein that can break large molecules into small molecules.
ethanol	The drug found in alcoholic drinks.
fibre	Provides bulk to food to keep it moving through the digestive system.
food test	Chemical test to detect the presence of particular nutrients in a food.
gullet	Tube that food travels down into the stomach.
hypothesis	An idea that is a way of explaining scientists' observations.
large intestine	Organ where water passes back into the body, leaving a solid waste of undigested food called faeces.
lipase	Enzyme that breaks down lipids into fatty acids and glycerol.

lipids	Nutrients that provide a store of energy and insulate the body.
malnourishment	Eating the wrong amount or the wrong types of food.
medicinal drug	Drug that has a medical benefit to your health.
mineral	Essential nutrient needed in small amounts to keep you healthy.
nutrient	Essential substance that your body needs to survive, provided by food.
obese	Extremely overweight.
passive smoking	Breathing in other people's smoke.
protease	Enzyme that breaks down proteins into amino acids.
protein	Nutrient used for growth and repair.
recreational drug	Drug that is taken for enjoyment.
rectum	Feces are stored here, before being passed out of the body.
small intestine	Organ where small digested molecules are absorbed into the bloodstream.
starvation	Extreme case of not eating enough food.
stimulant	A drug that speeds up the body's reactions by speeding up the nervous system.
stomach	Organ where food is churned with digestive juices and acids.
unit of alcohol	10 ml of pure alcohol.
villi	Tiny projections in the small intestine wall that increase the area of absorption.
vitamin	Essential nutrients needed in small amounts to keep you healthy.
withdrawal symptom	Unpleasant symptom a person with a drug addiction suffers from when they stop taking the drug.

Ecosystem processes

Key word	Definition
aerobic respiration	Chemical reaction where glucose reacts with oxygen to release energy, carbon dioxide, and water.
algae	Green unicellular or multicellular organisms that perform photosynthesis and live underwater.
anaerobic respiration	Chemical reaction that takes place without oxygen. Glucose is converted into lactic acid and energy is released.
bioaccumulation	The build-up of toxic chemicals inside organisms in a food chain.
chemosynthesis	Reaction performed by bacteria, using energy transferred from chemical reactions to produce glucose.
chlorophyll	Green pigment that absorbs light for use in photosynthesis.
co-exist	Plants and animals living in the same habitat at the same time.
community	The collection of the different types of organism present in an ecosystem.
consumer	Organisms that eat other organisms as food.
deficiency	A lack of minerals, that causes poor growth.
ecosystem	The name given to the interaction between plants, animals, and their habitat in a particular location.
fermentation	Chemical reaction used by microorganisms to convert glucose into ethanol, carbon dioxide, and energy.
fertiliser	Chemical containing minerals, normally applied to soil.
food chain	A diagram that shows the transfer of energy between organisms.
food web	A diagram showing a set of linked food chains.
habitat	The area in which an organism lives.
haemoglobin	The substance in blood that carries oxygen around the body.
interdependence	The way in which living organisms depend on each other to survive, grow, and reproduce.
magnesium	A mineral needed by plants for making chlorophyll.
niche	A particular place or role that an organism has in an ecosystem.
nitrates	Minerals containing nitrogen for healthy growth.
oxygen debt	Extra oxygen required after anaerobic respiration to break down lactic acid.

phosphates	Minerals containing phosphorus for healthy roots.
photosynthesis	The process plants use to make their own food, glucose. In photosynthesis, carbon dioxide and water react together to make glucose and oxygen.
plasma	The liquid part of blood, which carries carbon dioxide to the lungs where it is exhaled.
population	The number of plants or animals of the same type that live in the same area.
potassium	A mineral needed by plants for healthy leaves and flowers.
predator	An animal that eats other animals.
prey	An animal that is eaten by another animal
producer	Organism that makes its own food using photosynthesis.
stomata	Holes found on the bottom of the leaf that allow gases to diffuse in and out of the leaf.

Adaptation and inheritance

Key word	Definition
adaptation	Characteristic that helps an organism to survive in its environment.
chromosome	Long strand of DNA, which contains many genes.
competition	Competing with other organisms for resources.
continuous variation	Characteristic that can take any value within a range of values.
discontinuous variation	Characteristic that can only be a certain value.
DNA	Chemical that contains all the information needed to make an organism.
evolution	Development of a species over time
extinct	When no more individuals of a species are left anywhere in the world.
fossil	The remains of plants and animals that have turned to stone.
gene	Section of DNA that contains the information for a characteristic.
gene bank	A store of genetic samples, used for research and to try to prevent extinction.
interdependence	The way in which living organisms depend on each other to survive, grow, and reproduce.
natural selection	Process by which the organisms with the characteristics that are most suited to the environment survive and reproduce, passing on their genes.
species	Organisms that have lots of characteristics in common, and can mate to produce fertile offspring.
variation	Differences in characteristics within a species.

The Periodic table

Key word	Definition
acid rain	Rain that has a non-metal dissolved in it.
chemical property	How a substance behaves in its chemical reactions.
density	The mass of a material in a certain volume.
displace	A more reactive metal displaces – or pushes out – a less reactive metal from its compound.
displacement reaction	In a displacement reaction, a more reactive metal displaces – or pushes out – a less reactive metal from its compound.
group	A vertical column of the Periodic Table. The elements in a group have similar properties.
Group 0	Group 0 is on the right of the Periodic Table. Group 0 elements include helium, neon, argon, and krypton.
Group 1	The elements in the left column of the Periodic Table, including lithium, sodium, and potassium.
Group 7	Group 7 is the second from the right of the Periodic Table. Group 7 elements include fluorine, chlorine, bromine, and iodine.
halogen	Another name for the Group 7 elements.
metal	Elements on the left of the stepped line of the Periodic Table. Most elements are metals. They are good conductors of energy and electricity.
metalloid	Elements near the stepped line of the Periodic Table are metalloids.
noble gases	Another name for the Group 0 elements.
non-metal	Elements on the right of the stepped line of the Periodic Table. They are poor conductors of energy and electricity.
period	A horizontal row of the Periodic Table. There are trends in the properties of the elements across a period.
physical property	A property of a material that you can observe or measure.
reactive	A substance is reactive if it reacts vigorously with substances such as dilute acids and water.
unreactive	Elements that take part in few chemical reactions are unreactive.

Separation techniques

Key word	Definition
chromatogram	An image obtained from chromatography.
chromatography	A technique to separate mixtures of liquids that are soluble in the same solvent.
dissolve	The mixing of a substance (the solute) with a liquid (the solvent) to make a solution.
distillation	A technique that uses evaporation and condensation to obtain a solvent from a solution.
filtering	A way of separating pieces of solid that are mixed with a liquid or solution by pouring through filter paper.
filtrate	The liquid or solution that collects in the container after the mixture has passed through the filter paper.
filtration	A way of separating pieces of solid that are mixed with a liquid or solution by pouring through filter paper.
impure	A substance is impure if it has different substances mixed with it.
insoluble	A substance that cannot dissolve in a certain solvent is insoluble in that solvent.
mixture	A mixture is made up of substances that are not chemically joined together.
pure	A substance is pure if it has no other substances mixed with it.
residue	The solid that collects in the filter paper.
saturated solution	A solution in which no more solute can dissolve.
solubility	The solubility of a substance is the mass that dissolves in 100 g of water.
solute	The solid or gas that dissolves in a liquid.
solution	A mixture of a liquid with a solid or a gas. All parts of the mixture are the same.
solvent	The liquid in which a solid or gas dissolves.

Metals & Acids

Key word	Definition
carbon fibre	A material made of thin tubes of carbon.
ceramic	A compound such as a metal silicate or oxide that is hard, strong, and has a high melting point.
composite	A mixture of materials with properties that are a combination of those of the materials in it.
displace	A more reactive metal displaces – or pushes out – a less reactive metal from its compound.
displacement reaction	In a displacement reaction, a more reactive metal displaces – or pushes out – a less reactive metal from its compound.
metal	Elements on the left of the stepped line of the Periodic Table. Most elements are metals. They are good conductors of energy and electricity.
natural polymer	Polymers made by plants and animals, including wool, cotton, and rubber.
ore	A rock that you can extract a metal from.
polymer	A substance made up of very long molecules.
reactive	A substance is reactive if it reacts vigorously with substances such as dilute acids and water.
reactivity series	A list of metals in order of how vigorously they react.
state symbol	A state symbol gives the state of a substance in a chemical equation. (s) means solid, (l) means liquid, (g) means gas, and (aq) means dissolved in water.
synthetic polymer	A substance made up of very long molecules that does not occur naturally.
thermite reaction	Reaction of aluminium with iron oxide to make aluminium oxide and iron.

The Earth

Key word	Definition
atmosphere	The mixture of gases surrounding the Earth.
biological weathering	The breaking up or wearing down of rocks by the action of living things.
carbon cycle	The carbon cycle shows stores of carbon, and summarises how carbon and its compounds enter and leave these stores.
carbon store	A place where carbon and its compounds may remain for a long time. Carbon stores include the atmosphere, oceans, sedimentary rocks, fossil fuels, the soil, and living organisms.
cementation	The 'gluing together' of sediments by different chemicals to make sedimentary rocks.
chemical weathering	The breaking up or wearing down of rocks by the action of chemicals such as those in rainwater.
climate change	A long-term change in weather patterns.
combustion	A burning reaction, in which a substance reacts quickly with oxygen, and gives out light and heats the surroundings.
compaction	The process of squashing sediments together to make new rocks by the weight of layers above.
crust	The rocky outer layer of the Earth.
deforestation	The cutting down or burning of trees in forests.
deposition	The settling of sediments that have moved away from their original rock.
durable	A property of a material meaning that it is difficult to damage.
erosion	The breaking of a rock into sediments, and their movement away from the original rock.
freeze-thaw	Weathering of rocks that happens as a result of water repeatedly freezing and thawing.
global warming	The gradual increase in the Earth's mean air temperature.
greenhouse effect	The absorbing of energy by gases in the atmosphere, such as carbon dioxide.
greenhouse gas	A gas that contributes to climate change, such as carbon dioxide.
igneous	Rock made when liquid rock (magma or lava) cools and freezes.
inner core	The solid iron and nickel at the centre of the Earth.
lava	Liquid rock that is above the Earth's surface.
Magma	Liquid rock that is below the Earth's surface.

mantle	The layer of Earth that is below the crust. It is solid but can flow very slowly.
metamorphic	Rock formed by the action of heating and/or pressure on the sedimentary or igneous rock.
outer core	The liquid iron and nickel between the Earth's mantle and inner core.
photosynthesis	The process plants use to make their own food, glucose. In photosynthesis, carbon dioxide and water react together to make glucose and oxygen.
physical weathering	The breaking up or wearing down of rocks by the effects of changing temperature.
porous	A porous material has small gaps that may contain substances in their liquid or gas states. Water can soak into a porous material.
radiation	The transfer of energy as a wave.
recycling	Collecting and processing materials that have been used, to make new objects.
respiration	The process that transfers energy from plants and animals. In respiration, glucose reacts with oxygen to make carbon dioxide and water.
rock cycle	The rock cycle explains how rocks change and are recycled into new rocks over millions of years.
sediment	Pieces of rock that have broken away from their original rock.
sedimentary	Rock made from sediments.
transport	Movement of sediments far from their original rock.
troposphere	The part of the atmosphere nearest the Earth.
uplift	Uplift happens when huge forces from inside the Earth push rocks upwards.
weathering	Weathering breaks up all types of rock into smaller pieces, called sediments.

Electricity and magnetism

Key word	Definition
ammeter	A device for measuring electric current in a circuit.
amps	Units of measurement of electric current, symbol A.
atom	A neutral particle; everything is made of atoms.
attract	Be pulled together, for example, opposite poles of a magnet attract and positive and negative charges attract.
battery	Two or more electrical cells joined together.
cell	A chemical store of energy, which provides the push that moves charge around a circuit.
conductor	A material that conducts charge or energy well, such as a metal or graphite.
core	A rod of a magnetic material placed inside a coil to make the magnetic field of an electromagnet stronger.
current	The flow of electrical charge (electrons) around a complete circuit per second.
electric charge	A property of a material or particle that can be positive or negative.
electrical field	A region where a charged material or particle experiences a force.
electromagnet	A temporary magnet produced using an electric current.
electron	A negatively charged particle found in atoms. Electrons flow through a wire when a current flows.
insulator	A material that does not conduct electricity or transfer energy well.
lightning	A current through the air that produces light and sound.
magnetic field	A region where there is a force on a magnet or magnetic material.
magnetic field lines	Imaginary lines that show the direction of the force on magnetic material.
magnetic material	A material that is attracted to a magnet, such as iron, steel, nickel, or cobalt.
magnetise	Make into a magnet.
motor	A component or machine that spins when a current flows through it.
negative	The charge on an electron, or on an object that has had electrons transferred to it.
neutral	Describes an object or particle that has no charge, or in which positive and negative charges cancel out, giving no charge

	overall.
neutron	A neutral particle found in atoms.
north pole	The pole of a magnet that points towards the north.
ohms	The unit of resistance, symbol Ω .
parallel	A circuit in which there are two or more paths or branches for the current.
positive	The charge on a proton, or on an object that has had electrons transferred from it.
potential difference	A measure of the push of a cell or battery, or the energy that the cell or battery can supply.
proton	A positively charged particle found in atoms.
rating	The value of potential difference at which a cell or bulb operates.
relay	Electrical device that uses current flowing through it in one circuit to switch on and off a current in a second circuit.
repel	Be pushed away from each other, for example, like magnetic poles repel or like electrical charges repel.
resistance	How difficult it is for current to flow through a component in a circuit.
series	A circuit in which components are joined in a single loop.
south pole	The pole of a magnet that points towards the south.
switch	A component that controls the current by making or breaking the circuit.
voltage	A measure of the strength of a cell or battery used to send a current around a circuit.
voltmeter	A device for measuring voltage.
volts	Units of measurement of voltage, symbol V.

Energy

Key word	Definition
chemical store	Energy stored in food and fuels.
conduction	A way in which energy is transferred through solids, and to a much lesser extent in liquids and gases.
conductor	A material that conducts charge or energy well, such as a metal or graphite.
convection	The transfer of energy by the movement of gases or liquids.
convection current	The movement of heated liquids or gasses.
dissipated	Energy that has become spread out or 'wasted' by heating the environment.
elastic store	Energy stored when objects change shape
energy	Associated with changes in temperature or with work.
energy resources	Materials or mechanisms for heating or generating electricity.
energy store	Something such as a food or hot object that enables you to account for the energy at the start and end of a transfer.
equilibrium	Objects are at thermal equilibrium when they are at the same temperature.
fossil fuel	Coal, oil, and gas made from the remains of trees and sea creatures over millions of years.
gear	A rotating lever that reduces the force required to do work.
gravitational potential store	Energy due to the position of an object in a gravitational field.
infrared radiation	Radiation given off by the Sun and other objects that brings about energy transfer.
insulator	A material that does not conduct electricity or transfer energy well.
joules	The unit of energy, symbol J.
kilojoules	1 kilojoule = 1000 J, symbol kJ.
kilowatt hours	The unit of energy used by electricity companies, symbol kWh.
kilowatts	1 kilowatt = 1000 W, symbol kW.
kinetic store	Energy of moving objects.
law of conservation of energy	Energy cannot be created or destroyed, only

	transferred.
lever	A simple machine that multiplies the force.
non-renewable	Energy resources that have a limited supply.
power rating	The number in watts or kilowatts that tells you the rate at which an appliance transfers energy.
radiation	The transfer of energy as a wave.
renewable	Energy resources whose supply will not run out.
simple machine	Lever or gear that reduces the force required to do something, but increases the distance.
temperature	A measure of how hot or cold something is, measured in degrees Celsius.
thermal imaging camera	A camera that absorbs infrared and produces a (false-colour) image.
thermal power station	A power station that uses fossil fuels to generate electricity.
thermal store	Energy in objects as a result of the motion of their particles.
thermometer	Instrument used to measure temperature.
watt	The unit of power, symbol W.
work	A way of transferring energy that does not involve heating.

Motion and pressure

Key word	Definition
acceleration	The amount by which speed increases in one second.
atmospheric pressure	Pressure caused by the collisions of air molecules that produce a force on an area.
average speed	The total distance travelled in the total time taken for a complete journey.
centre of gravity	The point in an object where the force of gravity seems to act.
centre of mass	The point in an object where the mass of an object seems to act.
compressed	Squashed into a smaller space.
density	The mass of a material in a certain volume.
distance-time graph	A graph that shows how far an object moves each second.
gas pressure	The force exerted by air particles when they collide with a surface.
incompressible	Cannot be compressed (squashed)
instantaneous speed	The speed at a particular moment.
law of moments	An object is in equilibrium if the clockwise moments equal the anticlockwise moments.
liquid pressure	The pressure produced by collisions of particles in a liquid.
metres per second	A unit of speed.
moment	A measure of the ability of a force to rotate an object about a pivot.
newton metres	The unit of moment.
newtons per metre squared	A unit of pressure.
pivot	The point about which a lever or see-saw balances.
pressure	A force exerted on a certain area.
relative motion	The difference between the speeds of two moving objects, or of a moving and a stationary object.
speed	A measure of how far something travels in a given time.