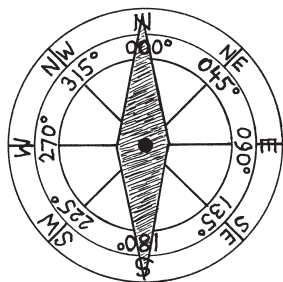


**COMMUNITY** A group of populations of various different organisms all living in the same habitat.

**COMPASS** An instrument for finding direction. It usually consists of a magnet (magnetised steel needle) which can revolve on a pivot. The earth's magnetic field affects the magnet so that the north-seeking pole (north pole) points to magnetic north.



A plotting compass is a small compass used to show the magnetic field of a magnet.

**COMPONENT** A device, or piece of apparatus, used in an electrical circuit.

**COMPOUND** A substance consisting of two or more elements combined chemically. A compound cannot be separated into its elements except by a chemical reaction.

Examples. Water, sugar, copper sulphate.

Normally, a compound looks very different from the elements it contains, e.g. sugar is a white crystalline solid, quite different from carbon (usually a black solid), hydrogen (colourless gas) and oxygen (colourless gas) from which it is made.

**CONCAVE** A concave lens or concave mirror is one which curves inwards. See LENS and MIRROR.

**CONCEIVE** (pr. kon-seev) An animal is conceived (begun) when an egg is fertilised by a sperm. This process is called conception.

**CONCENTRATED** A concentrated solution is one in which a large amount of solute is dissolved in a small amount of solvent.

Concentrated acids are acids which are not much diluted (do not contain much water), e.g. concentrated sulphuric acid.

( DANGER. DO NOT EXPERIMENT WITH CONCENTRATED ACIDS WITHOUT SUPERVISION.)

**CONDENSATION** The change of state of a substance from a gas to a liquid, normally caused by cooling (reducing the temperature).

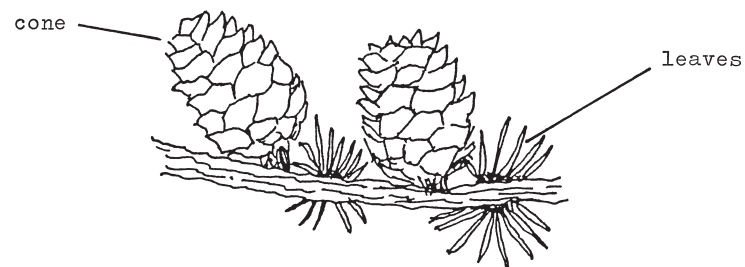
Example. The condensation of steam to form water.

**CONDUCTION** Transfer of electricity or thermal (heat) energy through a substance by energy changes in the atoms, molecules or electrons of the substance.

**CONDUCTOR** A substance, or a device made of a substance, which allows electricity or thermal (heat) energy to pass through it easily.

Example. Copper is a good conductor of electricity and thermal energy.

**CONE** The scaly female flower of a coniferous tree. A cone has no ovary but contains ovules which are fertilised by pollen from the male flowers to form seeds. When the seeds are ripe, the scales of the cone, which have stayed shut to protect the seeds, open and let the seeds drift away.



(Japanese larch)

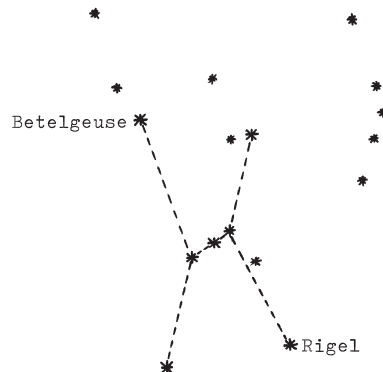
**CONIFEROUS** (pr. kon-iff-er-us) Coniferous trees are trees which have cones. Many coniferous trees (e.g. pine, spruce) are also evergreen but some are deciduous (e.g. larch). Coniferous trees usually have narrow, needle-like leaves.

**CONSERVATION** Keeping the natural world (or the environment) the same, or improving it, by preserving it and protecting it from destructive influences such as pollution, too many buildings, etc.

**CONSERVATION OF ENERGY** The law of conservation of energy states that (except in nuclear reactions) energy cannot be created or destroyed. In any system (such as an experiment or reaction) the sort of energy can change - for example, electrical energy can become light energy - but the total amount of energy stays the same.

**CONSTELLATION** A group of stars which appear in roughly the same part of the night sky, and form a distinct pattern.

Example. Orion



**CONSUMER** An organism (usually an animal) which eats producers or other consumers.

Primary consumer is a consumer which eats plant life. A herbivore.

Secondary consumer eats a primary consumer.

Tertiary consumer eats a secondary consumer.

**CONTRACEPTION** Preventing the fertilisation of an egg by a sperm.

A contraceptive is a device or chemical (hormone) used to prevent fertilisation and therefore to limit the number of children conceived (birth control or family planning).

**CONTRACT** (pr. kon-trakt) Become smaller. Many substances contract when their temperature falls. A muscle contracts when its fibres are pulled together.

**CONVEX** A convex lens or convex mirror is one which curves outwards. See LENS and MIRROR.

**COPPER** An element. A reddy-orange metal which becomes tarnished with a bluey-green compound when it is left in air. Copper compounds are often green (e.g. copper carbonate) or blue (e.g. copper sulphate) and when heated in a flame they turn the flame green.

Copper is a very good conductor of thermal (heat) energy and electricity, and is used for making electrical cables and wires. It is also used to make brass (an alloy of copper and zinc), bronze (an alloy of copper and tin) and coins (an alloy of copper and zinc and/or nickel).

The symbol for copper is Cu (from its old name cuprum).

**COPPER SULPHATE** A compound of copper, sulphur and oxygen.

Anhydrous copper sulphate is a white powder; hydrated copper sulphate is blue crystals.

Anhydrous (white) copper sulphate can be used as a test for the presence of water, as it will turn blue even if only a small amount of water is present.

**CORROSION** A chemical reaction which eats or rots away a substance (usually a metal), producing another substance.


Example. Rusting. When iron is in contact with both air and water, corrosion takes place (the iron is corroded) to form rust (a kind of iron oxide).

**CRUCIBLE** A small bowl-shaped container, sometimes with a lid, used for heating solids to high temperatures.



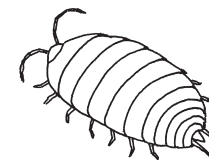
**CRUDE OIL** Oil just as it comes out of an oil well, before going to a refinery.

Many products, such as petrol, diesel fuel, plastics, paints, etc., are made from crude oil by fractional distillation.

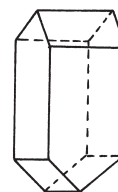
( DANGEROUS SUBSTANCE. DO NOT EXPERIMENT WITH CRUDE OIL.)

**CRUSTACEAN** (pr. krus-tay-shn) One of a class of arthropods, including crabs, lobsters, prawns, woodlice and others. Many crustaceans have a hard exoskeleton.

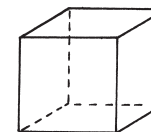
Example. Woodlouse.



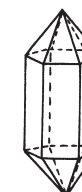
**CRYSTAL** A piece of a solid which has formed with a definite structure or shape. Each crystalline substance forms crystals of its own special shape.



Crystal of Epsom salt  
(magnesium sulphate)



Crystal of common salt  
(sodium chloride)



Crystal of quartz  
(silicon dioxide)

(Simplified shapes)