

## Glossary

### A

**acid** - a chemical compound which dissolves in water. Acids have sour taste and turn a vegetable dye called litmus, red. An acid separates into two or more electrically charged parts when it is dissolved in water.

**acid rain** - The acidic rainfall which results when rain combines with sulfur oxides emissions from combustion of fossil fuels (coal).

**adaptation** - The process in which a species slowly or rapidly becomes better suited to survive in an environment.

**adsorption** - The adhesion of a substance to the surface of a solid or liquid. Adsorption is often used to extract pollutants by causing them to be attached to such adsorbents as activated carbon or silica gel. Hydrophobic, or water-repulsing adsorbents, are used to extract oil from waterways in oil spills.

**air resistance** - The friction that acts on something moving through air.

**alkaline** - Sometimes water or soils contain an amount of alkali substances sufficient to raise the pH value above 7.0 or to be harmful to the growth of crops. Such a condition is called alkaline.

**atom** - The smallest particle of an element that can be identified with that element. It consists of protons and neutrons in a nucleus surrounded by electrons.

### B

**Bernoulli's principle** - The statement that the pressure in a fluid decreases as the speed of the fluid increases.

**boiling** - The change of state from liquid to gas that occurs beneath the surface of the liquid. The gas that forms beneath the surface occurs as bubbles, which rise to the surface and escape.

**boiling point** - The temperature at which a liquid boils. It is the temperature at which the vapor pressure of a liquid equals the pressure on its surface. If the pressure of the liquid varies, the actual boiling point varies. For water it is 212° Fahrenheit (F) or 100° Celsius (C).

**buoyancy** - The apparent loss of weight of an object submerged in a fluid. The tendency of a body to float or rise when immersed in a fluid; the power of a fluid to exert an upward force on a body placed in it.

**buoyant force** - The net upward force exerted by a fluid on a submerged object.

### C

**capillarity** - The property of tubes or earth like particles with hairline openings which, when immersed in a fluid, raise (or depress) the fluid in the tubes above (or below) the surface of the fluid in which they are immersed.

**Celsius scale** - A temperature scale in which the number 0 is assigned to the temperature at which water freezes, and the number 100 is assigned to the temperature at which water boils (at standard pressure).

**center of gravity** - The point at the center of an object's weight distribution, where the force of gravity can be considered to act.

**center of mass** - The point at the center of an object's mass distribution, where all its mass can be considered to be concentrated. For everyday conditions, it is the same as the center of gravity.

**circuit** - Any complete path along which charge can flow.

**compound** - A chemical substance made of atoms of two or more different elements combined in a fixed proportion.

**compound microscope** - A microscope that has more than one lens.

**condensation** - (a) The change of state of a gas into a liquid; the opposite of evaporation. (b) In sound, a pulse of compressed air (or other matter).

**conduction** - A means of heat transfer within certain materials and from one material to another when the two are in direct contact. It involves the transfer of energy from atom to atom.

**conductor** - (a) A material through which heat can flow. (b) A material, usually a metal, through which electric charge can flow. Good conductors of heat are generally good conductors of charge.

**convection** - A means of heat transfer by movement of the heated substance itself, such as by currents in a fluid.

**converging lens** - A lens that is thickest in the middle and that causes parallel rays of light to converge to a focus.

**cytoplasm** - The protoplasm of a cell excluding the nucleus.

## D

**density** - A property of substance, equal to the mass divided by the volume; commonly thought of as the "lightness" or "heaviness" of a substance.

**decomposers** - Bacteria and yeasts that break down the tissues and excretions of other organisms.

**diffusion** - The movement of molecules from an area of greater concentration to one of lesser concentration.

**direct current** - Electric current whose flow of charge is always in one direction only.

**dissolved oxygen** - The amount of oxygen dissolved in water or sewage. Concentrations of less than 5 parts per million can limit aquatic life or cause offensive odors. Low DO is generally due to excessive organic matter present in water as a result of inadequate wastewater treatment and runoff from agricultural or urban land.

## E

**ecology** - The study of the relationships of living things to their surroundings and to one another.

**ecosystem** - A unit of the biosphere in which living and non living things interact.

**electrical force** - A force one electric charge exerts on another. When the charges are both positive or both negative, the force is repulsive; when the charges are unlike, the force is attractive.

**electric resistance** - The resistance of material to the flow of an electric current through it; measured in ohms.

**electric current** - The flow of electric charge; measured in amperes.

**electric field** - A force field that fills the space around every electric charge or group of charges. Another electric charge introduced into this region will experience an electric force acting on itself.

**electric power** - The rate at which electric energy is converted into another form, such as light, heat, or mechanical energy (or converted *from* another form).

**electromagnet** - A magnet whose field is produced by an electric current. Usually in the form of a wire coil with a piece of iron inside the coil.

**element** - A substance made of only one kind of atom. Examples of elements are carbon, hydrogen, oxygen, and nitrogen.

**energy** - The ability or capacity of doing work. Various forms of energy include kinetic, potential, thermal, nuclear, rotational, and electromagnetic. One form of energy may be changed to another, as when coal is burned to produce steam to drive a turbine which produces electric energy.

**environment** - Outside forces of all types that act upon an organism. An organism's surroundings. Water is a major part of an organism's surroundings in many instances.

**estuary** - An area where fresh water meets salt water; for example, bays, mouths of rivers, salt marshes, and lagoons.

**evaporation** - The change of state from liquid to gas that takes place at the surface of a liquid.

**evolution** - The process of slow change by which organisms have acquired their distinguishing characteristics.

## F

**Fahrenheit scale** - The temperature scale in common use in the United States. The number 32 is assigned to the freezing point of water, and the number 212 to the boiling point of water (at standard atmospheric pressure).

**fluid** - Anything that flows; in particular, any liquid or gas.

**food chain** - The transfer of energy when one living thing consumes another.

**force** - Any influence that tends to accelerate an object; commonly, a push or pull; measured in Newton's.

**freezing** - The change in state from liquid to solid.

**friction** - The force that acts to resist the relative motion (or attempted motion) of objects or materials that are in contact.

**fulcrum** - The pivot point of a lever.

## G

**gallon** - A unit of volume. A U.S. gallon contains 231 cu. in., 0.133 cubic feet, or 3.785 liters. One U.S. gallon of water weighs 8.3 lbs.

**gravitational field** - A force field that fills the space around every mass. Another mass in this region will experience a gravitational force.

**greenhouse effect** - The warming effect whose cause is that short-wavelength radiant energy from the sun can enter the atmosphere and be absorbed by the earth more easily than long-wavelength energy from the earth can leave.

**groundwater** - The supply of water under the earth's surface in an aquifer that forms a natural reservoir. Water seeps down from the earth's surface and can be stored as groundwater.

## H

**habitat** - The place in which an organism lives.

**herbivores** - Animals that feed on plants.

**homogeneous** - Matter that has identical properties throughout.

**hydroid** - water molecule character/illustration used in Hydromania curriculum.



**hydrologic cycle (water cycle)** - The cycle of water movement from the atmosphere to the earth and back to the atmosphere through various processes. These processes include: precipitation, runoff, infiltration, percolation, storage, evaporation, transpiration and condensation.

**hypothesis** - An educated guess; a reasonable explanation of an observation or experimental result that is not fully accepted as factual until tested over and over again by experiment.

## I - J

**inertia** - The resistance of any material object to change in its state of motion.

**in parallel** - Term applied to portions of an electric circuit that are connected at two points and provide alternative paths to the current between those two points.

**in series** - Term applied to portions of an electric circuit that are connected in a row so that the current that goes through must go through all of them.

**insulator** - A material that is a poor conductor of heat and that delays the transfer of heat. Also, a material that is a poor conductor of electricity.

**invertebrate** - An animal without a backbone

**ion** - An atom that carries a positive or negative electric charge.

## K

**kilogram** - The fundamental SI unit of mass. One kilogram (symbol kg) is the amount of mass in one liter of water at 4°C.

**kinetic energy** - The energy of motion.  $\frac{1}{2}$  is equal to half the mass multiplied by the square of the speed.

## L

**larva** - An immature stage in the life of an animal.

**law of inertia** - The statement that every body continues in its state of rest, or of motion in a straight line at constant speed, unless it is compelled to change that state by a net force exerted upon it. Also known as *Newton's first law*.

**leaching** - The process by which soluble materials in the soil, such as nutrients, pesticide chemicals or contaminants, are washed into a lower layer of soil or are dissolved and carried away by water.

**lever** - A simple machine, made of a bar that turns about a fixed point.

**lift** - In the application of Bernoulli's principle, the net upward force produced by the difference between upward and downward pressures. When the lift equals the weight, horizontal flight is possible.

## **M**

**magnetic field** - A force field that fills the space around every magnet or current-carrying wire. Another magnet or current-carrying wire introduced into this region will experience a magnetic force acting on itself.

**mass** - A measure of the quantity of matter a body contains; may also be considered a measure of the inertia of an object.

**matter** - The material from which everything living and non living is made. Anything which is solid, liquid or gas, and has mass.

**metabolism** - The sum of the chemical processes of the body.

**metamorphosis** - A marked change in the structure of an animal.

**migration** - Seasonal movements of animals from one environment to another.

**milt** - The sperm-containing discharge of the male fish.

**molecule** - Two or more atoms of the same or different elements joined to form a larger particle.

**momentum** - The "inertia of motion" of an object, or the product of mass and velocity. Also called *linear momentum*.

## **N**

**natural selection** - The result of survival in the struggle from existence among organisms possessing those characteristics that give them an advantage.

**niche** - The particular role played by organisms.

**nucleus** - The part of the cell that contains chromosomes; the center of an atom that contains protons and neutrons.

## **O**

**organism** - A complete and entire living thing.

**osmosis** - The diffusion of water through a selectively permeable membrane from an area of greater concentration of water to an area of lesser concentration.

## **P - Q**

**parallel circuit** - An electric circuit in which devices are connected to the same two points of the circuit, so that any single device completes the circuit independently of the others.

**parasite** - An organism that lives in or on the body of another.

**parts per million (ppm)** - The number of "parts" by weight of a substance per million parts of water. This unit is commonly used to represent pollutant concentrations. Large concentrations are expressed in percentages.

**permeable membrane** - one that allows substances to pass through it.

**petiole** - The stalk of a leaf.

**pH** - A way of expressing both acidity and alkalinity on a scale of 0-14, with 7 representing neutrality; numbers less than 7 indicate increasing acidity and numbers greater than 7 indicate increasing alkalinity.

**photosynthesis** - The process by which certain plant cells combine carbon dioxide and water in the presence of chlorophyll and light.

**physical change** - A change in which states of matter are altered by the particles that make up the matter are not changed.

**physics** - The science of matter and motion.

**phytoplankton** - The minute plant organisms that are free-floating on or near the surface of bodies of water.

**plankton** - A collective name for the minute, free-floating organisms that live in water.

**pressure** - The force per unit of surface area, where the force is perpendicular to the surface; measured in Pascal's.

**projectile** - Any object that is projected by some force and continues in motion by its own inertia.

**propagation** - The multiplication of plants by vegetative means.

**protozoa** - Microscopic, unicellular, animal like organisms.

**pseudopodia** -The "false feet" of the ameba or ameba like cells.

## R

**relative humidity** - The ratio of the amount of water vapor actually present in the air to the greatest amount possible at the same temperature.

## S

**saturated** - Term applied to a substance, such as air, that holds the maximum amount of another substance, such as water vapor, at a given temperature.

**scavenger** - An animal that feeds on dead organisms.

**scientific method** - An orderly method for gaining, organizing, and applying new knowledge.

**seed** - A complete embryo plant surrounded by an endosperm and protected by seed coats.

**selectively permeable** - The ability of a cells' plasma membrane to allow certain substances to pass through more readily than others.

**series circuit** - A electric circuit in which devices are arranged so that charge flows through each in turn. If one part of the circuit should stop the current, it will stop throughout the circuit.

**solute** - The dissolved substance in a solution.

**solution** - A homogeneous mixture of two or more substances where one is dissolved in another.

**solvent** - The dissolving component of a solution.

**species** - A group of organisms that are similar in structure and can mate and produce fertile offspring.

**spectrum** - For sunlight and other white light, the spread of colors seen when the light is passed through a prism. In general, the spread of radiation by frequency, so that each frequency appears at a different position.

**speed** - How fast something is moving; the distance moved per unit of time.

**state** - One of the four possible forms of matter: solid, liquid, gas, and plasma.

**substrate** - The material upon which an organism lives.

#### **T - U**

**temperature** - The property of a material that tells how warm or cold it is with respect to some standard.

**theory** - A synthesis of a large body of information that encompasses well-tested and verified hypotheses about certain aspects of the natural world.

#### **V**

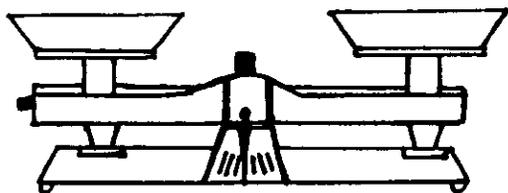
**volt** - The SI unit of electric potential. One volt (symbol V) is the electric potential at which one coulomb of charge would have one joule of potential energy.

#### **W - Z**

**water cycle** - The liquid that descends from the clouds as rain; forms streams, lakes, and seas, and is a major constituent of all living matter; is an odorless, tasteless, colorless, very slightly compressible liquid.

**watershed** - The area of land that contributes surface runoff to a given point in a drainage system.

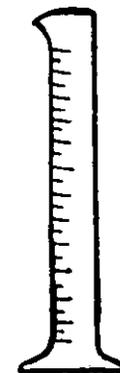
**weight** - The force on a body of matter due to the gravitational attraction of another body (commonly the earth).



BALANCE



BEAKER

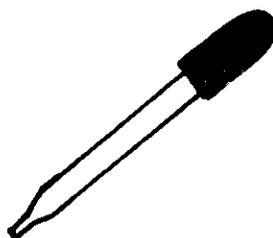


GRADUATED CYLINDER

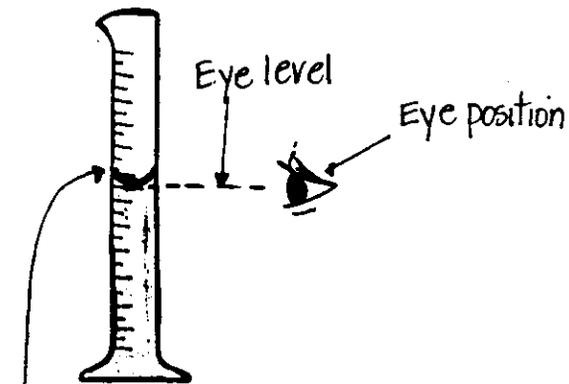
1/2



MASS SET



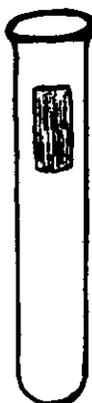
MEDICINE DROPPER



MENISCUS



PROFIL. TUBE



TEST TU



VIAL

## Glossary

### A

- acid** Any of a large class of substances whose aqueous solutions are capable of turning litmus paper red, of reacting with and dissolving certain metals to form salts, of reacting with bases or alkalis to form salts, or having a sour taste.
- aerobic** Living or occurring only in the presence of oxygen.
- alevin** A young salmon during the first two weeks after hatching, until the yolk sac has been absorbed.
- algae** Any of various chiefly aquatic plants, one-celled or multicellular plants without true stems, roots, and leaves but containing chlorophyll.
- amber** A hard, translucent, yellow, orange, or brownish-yellow fossil resin, used for making ornamental objects.
- amines** Any of a group of organic compounds of nitrogen that may be regarded as ammonia derivatives in which one or more hydrogen atoms has been replaced by a hydrocarbon radical.
- anadromous** Migrating up rivers from the sea to breed in fresh water, as salmon do.
- anaerobic** Capable of living in the absence of free oxygen.
- andesite** A fine-grained, gray volcanic rock, composed mainly of plagioclase and feldspar.
- annulus** A ringlike figure, part, structure, or marking.
- aquifer** A water-bearing rock, rock formation, or group of rock formations.
- atom** A unit of matter which is the smallest complete part of an element made up of a dense, central, positively charged nucleus surrounded by a system of electrons.
- autotroph** An organism like a plant which is capable of manufacturing it
- B**
- basalt** A hard, dense, dark, often, glassy volcanic rock composed chiefly of plagioclase, augite, and magnetite.
- base** Any of a large class of compounds, including hydroxides and oxides of metals, having a bitter taste, a slippery solution, the ability to turn litmus paper blue, and the ability to react with acids to form salts.

## Glossary

<b>Belted Kingfisher</b>	Kingfishers are any of the birds of the family Alcedinidae, having crested heads; the Belted Kingfisher is the most common kingfisher in North America.
<b>biosphere</b>	The part of the earth and its atmosphere in which living things exist.
<b>bony fish</b>	Any fish that has a skeleton made of bones rather than cartilage.
<b>C</b>	
<b>Caddisfly</b>	Any of various four-winged insects of the order Trichoptera, found near lakes and streams.
<b>caldera</b>	A large crater formed by volcanic explosion or the collapse of a volcanic cone.
<b>carnivore</b>	A flesh-eating or predatory organism, as a bird of prey or an insectivorous plant.
<b>chemical</b>	A substance produced by or used in a chemical process.
<b>circuit</b>	A closed path followed or capable of being followed by an electric current.
<b>circuli</b>	Growth rings which surround the center or nucleus of a scale, typical of fish.
<b>composite volcano</b>	A volcano form which has resulted from a combination of quiet effusive lava flows alternating with explosive eruptions of ash and ejecta.
<b>conclusion</b>	The outcome or result of the steps in the scientific process.
<b>conductor</b>	A substance or medium that conducts electricity, heat, light, or sound.
<b>Continental Drift</b>	The concept that the continents can drift on the surface of the earth because of the suboceanic crust, much as ice can drift through water.
<b>Coulomb's Law</b>	The fundamental law of electrostatics stating that the force between two charge particles is directly proportional to the product of their charges and inversely proportional to the square of the distance between them.
<b>current</b>	The amount of electric charge flowing past a specified point per unit of time.
<b>D</b>	
<b>data</b>	Information organized for analysis, can be used to form a scientific conclusion.
<b>decomposer</b>	An organism in an ecosystem that breaks down dead organic matter into its constituent parts.

## Glossary

<b>decomposition</b>	The act or result of decomposing.
<b>density</b>	The mass per unity volume of a substance under specified or standard conditions of temperature and pressure.
<b>dissolved oxygen</b>	Oxygen that has formed a solution with teh surrounding medium, often as dissolve doxygen content in water.
<b>E</b>	
<b>earthquake</b>	A series of elastic waves in the earth's crust, caused by abrupt easing of strains built up along geologic faults and volcanic action, and resulting in movement in the earth's crust.
<b>ecosystem</b>	An ecological community with tis physcial environment, regarded as a unit.
<b>eggs</b>	One of the female reproductive cells of various animals, consisting usually of an embryo surrounded by a nutrient material with a protective covering.
<b>electromagnetic</b>	The field of force associated with electric charge in motion, with both electric and magnetic components and containing a specific amount of electromagnetic energy.
<b>electron</b>	A subatomic particle of ordinary matter having a very small mass and a negative electrical charge.
<b>endangered species</b>	A species which is in danger of extinction throughout all or a significant portion of its range.
<b>energy</b>	The capacity to do work.
<b>English system</b>	The system of measurement that is based on the inch, foot, pound unity of measure.
<b>experiment</b>	A test performed to demonstrate a known trugh, examine the validity of a hypothesis, or determine the effectiveness of something untried.
<b>extinction</b>	The condition of having been removed from existence.
<b>F</b>	
<b>food chain</b>	The transfer of food energy from the source in plants through a series of animals, with repeated eating and being eaten.
<b>food web</b>	An interlocking pattern of food chains.
<b>fry</b>	The young of fish.

# Glossary

## G

**Gondwana** Theoretical ancient continent including India, Australia, Antarctica, and parts of southern Africa, and South America supposed to have fragmented and drifted apart over 200 million years ago.

**gyotaku** The Japanese art of fish printing.

## H

**herbivore** An animal that feeds on plants.

**heterotroph** An organism that derives its nourishment from organic substances, as do some plants and animals.

**hydroelectric** Generating electricity by conversion of the energy of running water.

**hypothesis** An explanation accounting for a set of facts that can be tested by further experimentation.

## I

**insulator** An insulating material, especially a nonconductor of heat or electricity.

**ion** An atom, group of atoms, or molecule that has acquired or is considered to have acquired a net electric charge by gaining electrons in or losing

## K

**kilogram** The basic unit of mass in the metric system, equal to 2.2046 pounds.

**Kokanee** Freshwater land-locked variety of salmon.

## L

**Laurasia** Hypothetical continent in the northern hemisphere which supposedly broke up about 290 million years ago and formed the present northern continents.

**liter** A metric unit of volume equal to approximately 1.056 quarts

**lithosphere** The solid portion of the earth, as contrasted with the hydrosphere and atmosphere. More particularly, the earth's crust.

**litmus paper** An unsized white paper colored with litmus and used as an acid-base indicator.

**lodestone** A magnetized piece of the mineral magnetite used by ancient mariners for navigation.

## Glossary

logarithmic scale	A scale in which the distances that numbers are at from a reference point are proportional to their logarithms.
Lorax	A make believe creature that tries to help the environment.
<b>M</b>	
magma	Molten matter beneath the earth's crust, from which igneous rock is formed by cooling.
magnetite	A dark mineral that is an important ore of iron and can be magnetized.
mass	The physical volume of bulk of a piece of matter.
matter	Any material that takes up space and has mass.
meniscus	The curved upper surface of a nonturbulent liquid in a container that is concave if the liquid wets the container walls and convex if it does not.
metabolism	The complex of chemical and physical processes involved in the maintenance of life.
metamorphosis	A change in the structure and habits of an organism during normal growth, usually in the postembryonic stage.
meter	The basic unit of length in the metric system that equals 39.37 inches.
metric system	A decimal system of weights and measures based on the meter as the unit of length and the kilogram as the unit of mass.
milliliters	A unit of volume equal to one thousandth of a liter.
Miocene	That portion of geologic time from 25 to 5 million years before the present time, marked by the presence of primitive apes, whales, and grazing animals.
<b>N</b>	
neutral	Relating to a compound or substance that is neither acidic or basic.
neutron	An electrically neutral subatomic particle normally bound to an atomic nucleus.
non-point source pollution	A non-specific source of pollution.
nucleus	The positively charged central region of an atom, made up of protons and neutrons and containing almost all of the mass of an atom.
<b>O</b>	
oceanic crust	The crust of the earth that lies beneath the oceans which is generally much thinner than the continental crust.

## Glossary

<b>ocher</b>	A mineral that is used as a pigment to intensify color; it occurs in brown, yellow, and red hues.
<b>olfactory</b>	Of or relating to the sense of smell.
<b>Oncorhynchus</b>	The that Pacific salmon, steelhead, and trout belong to.
<b>operculum</b>	A fold of tissue that covers the gill slits in most species of fish.
<b>organic</b>	Relating to or derived from a living organism.
<b>P</b>	
<b>pahoehoe</b>	A Hawaiian term for basaltic lava flows that have a ropy appearance.
<b>Pangaea</b>	Theoretical great continent in the Northern Hemisphere which fragmented to produce the present continents.
<b>Panthalassa</b>	Theoretical sea surrounding surrounding Pangaea before its fragmentation.
<b>parallel circuit</b>	An electric circuit in which the elements, branches, or components are connected between two points, with one of the two ends of each component connected to each point.
<b>parr</b>	The fingerling stage of young fish.
<b>pH paper</b>	A specially treated paper that can indicate the pH of a liquid from 1-12 by changing colors.
<b>photosynthesis</b>	The process by which chlorophyll-containing cells in green plants convert incident light to chemical energy and synthesize organic compounds from inorganic compounds.
<b>Plate Tectonics</b>	A branch of geology concerned with seismic activity and continental movement, based on the theory that the earth's surface is composed of a small number of large semirigid sections that float across the mantle, with seismic activity and volcanism occurring primarily at the junction of these sections.
<b>Pleistocene</b>	The earlier of the two epochs comprised in the quaternary period of the geological time scale, from 2.5 million years to 10,000 years before present.
<b>point source pollution</b>	An identified source of pollution.
<b>producer</b>	An autotrophic organism in an ecosystem which synthesizes complex organic substances from simple inorganic materials, as by photosynthesis or chemosynthesis.

## Glossary

<b>proton</b>	A stable positively charged subatomic particle in the baryon family with a mass of 1,836 times that of an electron.
<b>pumice</b>	A porous lightweight volcanic rock used commonly used as an abrasive.
<b>Q</b>	
<b>quahog</b>	A hard-shelled edible clam.
<b>R</b>	
<b>redd</b>	The gravelly nest a female salmon digs and deposits her eggs in.
<b>Richter scale</b>	A logarithmic scale ranging from 1 to 10, for expressing the magnitude or total energy of an earthquake.
<b>S</b>	
<b>Salmonidae</b>	A family of soft-rayed fishes in the suborder Salmonoidei including the trouts, salmons, whitefishes, and graylings.
<b>seismic</b>	Pertaining to, characteristic of, or produced by earthquakes or earth vibration, as seismic disturbances.
<b>series circuit</b>	A circuit in which all parts are connected end to end to provide a single path for current.
<b>sinew</b>	Common name for a tendon.
<b>smolt</b>	The stage in a salmon's development when they migrate from freshwater to the sea.
<b>solubility</b>	The ability of a substance to form a solution with another substance.
<b>stalactites</b>	A deposit that projects down from the roof of a cavern due to the dripping of mineral rich water.
<b>stalagmites</b>	A deposit that projects upward from the floor of a cavern as a result of the dripping of mineral rich water.
<b>subduction zone</b>	The zone where one crustal block descends beneath another, such as the descent of the Pacific plate beneath the Andean plate along the Andean Trench.
<b>synthesize</b>	To make by combining separate elements.
<b>T</b>	
<b>Tethys</b>	A Greek mythological Titaness and sea goddess who was both sister and wife of Oceanus.

# Glossary

**thermometer** An instrument for temperature measurement, especially one having a graduated glass tube with a bulb containing a liquid that expands and rises in the tube as the temperature rises.

**threatened species** A species that is likely to become endangered.

## V

**vent** The opening of a volcano on the earth's surface.

**vitelline vein** Any of the embryonic veins in vertebrates uniting the yolk sac and the sinus venosus.

**vitric ash** Ash composed principally of volcanic glass fragments.

**volume** The capacity of a three dimensional object or region of space.

**vortex** Fluid flow involving rotation about an axis such as a whirlpool.

## W

**wampum** Small cylindrical beads made from polished shells, once used by North American Indians as currency or jewelry.

**watershed** The region draining into a river, river system, or body of water.

## Z

**zooplankton** Floating, often microscopic aquatic animals.

## Glossary of Terms

<b>acid</b>	Any chemical compound that is capable of transferring a hydrogen ion in solution.
<b>anatomy</b>	A branch of science dealing with the structure of plants and animals.
<b>anode</b>	The positive terminal of a cell or storage battery.
<b>atmosphere</b>	The gaseous mass or envelope surrounding a celestial body.
<b>base</b>	Any chemical compound capable of accepting or receiving a proton from another substance.
<b>blotter</b>	A material or paper used to soak up liquid.
<b>brain storming</b>	A method of generating ideas without regard for quality or correctness.
<b>carbon dioxide</b>	A colorless, odorless, tasteless gas about 1.5 times as dense as air.
<b>carbonic acid</b>	The acid formed by the combination of carbon dioxide and water (H <sub>2</sub> CO <sub>3</sub> ).
<b>cathode</b>	The negative pole of a primary cell or storage battery.
<b>caudal</b>	Toward, belonging to, or pertaining to the tail of posterior end of an animal.
<b>chemical action</b>	Involving a chemical reaction or change.
<b>circuit</b>	A path or group of interconnected paths capable of carrying electric currents.
<b>concentrated</b>	Increasing the numbers or amount of something in a given space.
<b>conservation</b>	The controlled use and systematic protection of natural resources.
<b>contaminant</b>	A contaminating agent.
<b>de-oxygenated</b>	Condition of having oxygen removed.
<b>diffusion</b>	The spontaneous movement and scattering of liquids, gases, and solids.
<b>dissolved</b>	Passed into solution.
<b>dissolved oxygen</b>	Oxygen that is in a liquid solution.
<b>dorsal</b>	Located near or on the back of an organism or one of its parts.
<b>drainage basin</b>	The part of the earth's surface occupied by a drainage system.
<b>drought</b>	A period of abnormally dry weather that causes a serious hydrologic imbalance.
<b>electrode</b>	An electric conductor through which an electric current enters or leaves a medium.
<b>electrolyte</b>	A chemical compound which when molten or dissolved will conduct an electric current.
<b>eutrophic</b>	Pertaining to an oxygen deficient lake containing a high concentration of dissolved nutrients.
<b>external structures</b>	Parts of an organism found on the outside of the body.
<b>filament</b>	Metallic wire or ribbon which is heated in an incandescent lamp to produce light.
<b>food chain</b>	The scheme of feeding relationships by trophic levels which unites community member species.
<b>graduated cylinder</b>	A cylindrical vessel which is graduated to measure the volume of liquids.
<b>grounding</b>	An intentional electrical connection or pathway for electricity to the earth.
<b>habitat</b>	The part of the physical environment in which a plant or animal lives.
<b>hydrogen</b>	The first chemical element, a colorless, odorless, tasteless gas.
<b>incandescence</b>	The emission of visible radiation by a hot body.
<b>inert</b>	Lacking an activity, reactivity, or effect.
<b>internal structures</b>	Parts of an organism located inside of the body.
<b>invention</b>	A new method, device, or process developed from study and experimentation.
<b>ion</b>	An isolated particle which has by loss or gain of electrons has acquired a net electric charge.
<b>lateral line</b>	A line along the sides of the body of most fishes.
<b>liter</b>	A unit of volume or capacity equal to a decimeter cubed or .001 cubic meter.
<b>macroscopic</b>	Large enough to be observed by the naked eye.
<b>microscopic</b>	Visible only under a microscope.
<b>milliliter</b>	A unit of volume or capacity equal to .001 liter
<b>molecule</b>	A group of atoms held together by chemical forces.
<b>negative</b>	The electrical charge which is the same as that of an electron.

## Glossary of Terms

<b>oligotrophic</b>	A lake or river with low concentration of nutrients hence, is not deficient in oxygen.
<b>operculum</b>	A fold of tissue that covers the gill slits of most fish.
<b>organism</b>	An individual constituted to carry out all life functions.
<b>outlet</b>	A power line termination from which electric power can be obtained.
<b>oxygen</b>	Chemical element number 8, an essential element in cellular respiration and combustion.
<b>patent</b>	A grant made by a government to an inventor assuring the right to make or sell and invention.
<b>pH</b>	A measure of acidity or alkalinity of a solution equal to 7 for neutral solutions.
<b>pollution</b>	Contamination of air, soil, or water by discharging harmful substances.
<b>population</b>	A group of individuals of the same type within a community.
<b>positive</b>	The electrical charge which is opposite to that of an electron's negative charge.
<b>precipitate</b>	A substance separating, in solid particles, from a liquid as the result of a change in conditions.
<b>precipitation</b>	Any form of solid or liquid water particles that fall from the atmosphere and reach the ground.
<b>properties</b>	Characteristics or attributes of an object.
<b>proton</b>	An elementary particle that is the positively charged constituent of ordinary matter.
<b>recycle</b>	Using materials again and again by reprocessing.
<b>resistance</b>	The opposition that a device or material offers to the flow of a direct current.
<b>resources</b>	A reserve source of supply such as a mineral, area, or material.
<b>saturated</b>	Soaked, filled, or loaded to capacity.
<b>second-hand</b>	
<b>smoke</b>	Cigarette smoke which is breathed in as a result of others people smoking.
<b>short</b>	A low resistance connection across a voltage source.
<b>sodium</b>	
<b>bicarbonate</b>	Common compound used in medicine, cooking, and industry known as baking soda.
<b>solution</b>	A single homogeneous solid, liquid, or gas that is a uniform mixture of its components.
<b>streamflow</b>	The surface runoff water moving in a stream.
<b>sulfuric acid</b>	A strong acid made up of hydrogen, sulfur, and oxygen atoms (H <sub>2</sub> SO <sub>4</sub> ).
<b>texture</b>	Distinctive or identifying characteristics such as smooth, shiny, rough, etc.
<b>tissue</b>	A group of functionally similar living cells.
<b>tolerance</b>	The allowable deviation from a standard.
<b>toxic</b>	Relating to a harmful effect by a poisonous substance on or in a living body.
<b>transparent</b>	Permitting passage of radiation or particles.
<b>tributary</b>	A stream that feeds or flows into or joins a larger stream or lake.
<b>tungsten</b>	A hard, brittle, ductile metal used primarily for electrical purposes.
<b>UL approved</b>	Tested and approved for use by the electrical underwriters laboratory.
<b>ventral</b>	Located on the lower surface of an organism.
<b>volume</b>	The size or extent of a three dimensional body.
<b>waste paper</b>	Used paper products
<b>watershed</b>	The drainage area of a river or stream.