

Natural Sciences Terms

- ABDOMEN** The cavity that contains the stomach, intestines, liver, etc. Also called belly.
- ABDUCTOR** Refers to a muscle that draws a part away from the midline of the body.
- ABIOTIC** An old idea, now discredited, that living things may arise from nonliving objects.
- ABSORPTION** Passage of dissolved substances into the villi (*see*) for distribution through the body.
- ACCELERATION** An increase in speed.
- ACETYLCHOLINE** A substance secreted by nerve endings in the heart and elsewhere. It helps to lower blood pressure.
- ACTH (Adreno-Corticotrophic-Hormone)** A hormone (*see*) from the pituitary gland used in the treatment of certain rheumatic and allergic disorders.
- ADDUCTOR** Refers to a muscle that draws a part toward the midline of the body.
- ADHESION** The force of attraction between unlinked molecules.
- ADIPOSE TISSUE** Fatty tissue.
- ADRENAL GLANDS** Ductless glands attached to the kidneys.
- ADRENALIN** Hormone secreted by the medulla (*see*) of the adrenal glands.
- ACAR** A clear, jelly-like substance used to make bacterial cultures.
- AGGLUTININ** Any organic substance which causes red blood cells to clump together.
- AILERON** A movable part of an airplane wing that controls its course.
- ALBINO** An organism that has little or no color, such as a white rat.
- ALCOHOLISM** A disease involving the excessive use of alcoholic beverages.
- ALGAE** Simple green plants
- ALIMENTARY CANAL** The food tube of higher animals.
- ALKALI** Any compound that will neutralize an acid.
- ALLERGY** Condition of the body in which there is an abnormal sensitivity to particular foreign substances.
- ALTERNATING CURRENT** An electric current that reverses its direction at regularly recurring intervals.
- AMINO ACID** An organic acid that has the amino group – NH₂. Proteins are made of combinations of amino acids.
- AMMETER** A meter for measuring electric current.
- AMPERE** The unit of electric current equal to one coulomb (*see*) per second.
- AMPHIBIANS** Class of vertebrates that hatch as gill-breathing larvae and usually change into lung-breathing adults.
- AMPLITUDE** The height of a wave's crest (*see*)
- AMYLASE** An enzyme (*see*) that digests starch.
- ANABOLISM** The constructive or building-up phase of metabolism (*see*)
- ANALOGOUS** Referring to body parts that have different origins, but which have the same function.
- ANATOMY** The study of the structure of plant and animal bodies.
- ANEMIA** Condition in which the number of red blood cells is reduced below normal.
- ANEMOMETER** Instrument that measures the wind's velocity.

Natural Sciences Terms

- ANERO'S BAROMETER** A barometer (*see*) that functions without any liquid.
- ANESTHETIC** An agent that causes a partial or complete loss of sensation or feeling.
- ANTHER** The pollen-bearing part of a stamen (*see*).
- ANODE** The electrode connected to the positive terminal of a battery or other source of electromotive force.
- ANTIBIOTIC** A drug obtained from certain bacteria, used to combat dangerous microbes.
- ANTIBODY** Substance in the tissue or fluid of an organism which counteracts toxins or other foreign substances.
- ANUS** Opening at the back end of an animal's food tube.
- AORTA** The large trunk artery that carries blood from the heart to be distributed by branch arteries through the body.
- APERTURE** An opening.
- APOGEE** The point on the orbit (*see*) of a body traveling around the earth, which is most distant from the earth.
- APSE** Point on the orbit of a moving body nearest to or farthest from the center of motion.
- ARTERY** A blood vessel that carries blood away from the heart.
- ASCORBIC ACID** Vitamin C; prevents and cures scurvy.
- ASEXUAL REPRODUCTION** Reproduction without the uniting of two cells, therefore only by one parent.
- ASTEROID** Fragment that revolves around the sun between the orbits of Mars and Jupiter.
- ASTRONOMICAL UNIT** The average distance of the earth from the sun, being approximately 93 million miles.
- ATOLL** A coral reef enclosing a lagoon.
- ATOM** The smallest particle of an element having all of the chemical properties of that element.
- ATOMIC CLOCK** A highly accurate instrument using the period of vibration of atoms as a standard for the measurement of time.
- AUREOMYCIN** One of the newer antibiotics used against a wide range of germs.
- AURICLE** A chamber of the heart that receives blood coming to the heart.
- AUTOTOMY** The throwing off of a body part, usually after an injury to that body part.
- AUXIN** A hormone which affects the growth of plants.
- AVOCADRO'S PRINCIPLE** States that equal volumes of all gases at the same temperature and pressure contain the same number of molecules.
- AXON** Process of a nerve cell that conducts impulses away from the cell body.
- BACILLUS** A rod-shaped bacterium.
- BACTERIA** Smallest known one-celled, non-green plants, visible under the compound microscope.
- BARBITUATES** Habit-forming drugs used in many sleeping pills.
- BAROMETER** A device for measuring atmospheric pressure.
- BASAL METABOLISM** The turnover of energy in a resting organism using energy to maintain vital cellular activity, respiration, and circulation.
- BEHAVIOR** The responses of an organism to stimuli.

Natural Sciences Terms

- BERIBERI** Disease caused by lack of the vitamin thiamin.
- BETA RAYS** Streams of fast-moving electrons ejected from radioactive nuclei.
- BILE** A fluid which is secreted by the liver in vertebrates. It aids in the digestion of fats in the small intestine.
- BINARY FISSION** Type of asexual reproduction by means of which an organism divides into two approximately equal parts.
- BINARY STAR** A system of two stars which individually travel around the common center of gravity of the system.
- BIOGENESIS** The doctrine that living things are produced only from living things; opposite of abiogenesis.
- BIOME** Plant and animal community.
- BIOPSY** The removal and examination of tissue, cells, or fluids from the living body.
- BLOOD COUNT** A count of the number of red or white blood cells in a cubic millimeter of blood.
- BLOOD PLATELET** Blood cell aiding the clotting of blood.
- BOTANY** The study of plants.
- BRONCHIAL TUBES** Tubes branching from the lower end of the windpipe and leading into lung tissue.
- BROWNIAN MOVEMENT** The zigzag movement of tiny particles suspended in a gas or liquid resulting from bombardment by the fast-moving molecules of the gas or liquid.
- BUDDING** A form of asexual reproduction in which a small bud of the parent produces a new individual, as in some yeasts, sponges, and hydras.
- BUFFER** A substance of mixture that neutralizes both acids and bases and thereby maintains the original hydrogen ion concentration of the solution.
- CALORIE** The quantity of heat needed to raise the temperature of one gram of water one centigrade degree; the unit measuring energy-producing value in food.
- CAMBIUM** Layer of living cells from which new xylem (*see*) and phloem (*see*) cells are formed in the stems of higher plants.
- CANINES** The tearing teeth of animals.
- CAPILLARY** The very small blood vessel through which blood passes from arteriole to vein.
- CARBOHYDRATE** A class of foods (*starches and sugars*) composed of carbon, hydrogen, and oxygen.
- CARNIVORES** The order of the flesh-eating mammals, such as lions, tigers, cats and dogs.
- CAROTENE** Yellow coloring matter in carrots and other plants. It is the source of vitamin A in the human body.
- CATABOLISM** The destructive or breaking down phase of metabolism.
- CELL** A unified mass of protoplasm (*see*), usually composed of a nucleus and cytoplasm surrounded by a cell membrane; basic unit of all living things.
- CELL DIFFERENTIATION** The changing of embryonic cells into specialized cells, as in muscle, wood, nerve.
- CELL MEMBRANE** Thin layer that covers animal and young plant cells.
- CELL THEORY** The theory that all living things are made of cells and cell products.
- CELL WALL** Thick layer that covers most plant cells.

Natural Sciences Terms

CENTIGRADE SCALE Temperature scale having 100 subdivisions between the melting point of ice, fixed at 0° (° = “degrees”), and the boiling point of water, fixed at 100°.

CEREBELLUM The portion of the vertebrate brain in front of and above the medulla; controls equilibrium and muscular coordination.

CEREBRUM Portion of the vertebrate brain that controls voluntary and conscious behavior.

CHEMICAL CHANGE A change in matter that involves a change in the kinds of atoms in the molecules.

CHLOROMYCETIN One of the newer antibiotics used against a wide variety of germs.

CHLOROPHYLL Green coloring matter in plants.

CHLOROPLAST Small body, containing chlorophyll, in green plants.

CHORDATES Group of animals having a notochord (*see*), a tubular nervous system, and gill slits present at some time in their life history.

CHROMOSOME Small definitely shaped body in a cell nucleus. It contains the hereditary materials.

CHROMOSPHERE Middle layer in the sun’s atmosphere.

CILIA Short hair-like projections of cytoplasm (*see*) from a cell.

CLIMAX Final stage in a plant succession, tending to persist indefinitely.

COASTAL PLAIN A plain, formerly underwater, that has emerged from the sea.

COCCUS A spherical bacterium.

COHESION The force of attraction between molecules of the same kind.

COLCHICINE Poisonous substance extracted from the seeds of the autumn crocus. It is used to double or triple the number of cell chromosomes.

COLD-BLOODED Pertaining to a vertebrate whose temperature changes with that of its surroundings.

COLLOID A glue-like substance, such as protoplasm or raw egg white.

COLONY Group of individuals organically joined together, with each individual more or less independent.

COMPOUND A substance whose molecule is composed of two or more kinds of atoms in chemical combination.

COMPOUND A substance whose molecule is composed of two or more kinds of atoms in chemical combination.

CONDENSATION The changing of a gas or vapor into a liquid.

CONDITIONED REFLEX An acquired response to a stimulus.

CONDUCTION OF HEAT The transfer and distribution of heat energy from molecule to molecule within a body.

CONDUCTOR A substance through which electricity or heat can readily flow.

CONJUGATION Uniting of two cells, often of similar size and appearance, such as in *spirogyra* or *paramecium*.

CONSERVATION Wise use and development of our natural resources such as forests, flowers, and soil.

CONSTELLATION The groups or divisions into which the stars are divided for purposes of identification.

Natural Sciences Terms

CONTINENTAL SHELF Shallow submarine plain forming a border to a continent and ending in a steep slope to the oceanic depths.

CONTOUR INTERVAL The vertical distance between two successive contour lines.

CONTOUR LINES Lines drawn on a map connecting all places on the ground having the same elevation above sea level.

CONVECTION The transfer of heat in a gas or liquid by the automatic formation of currents in the heated fluid.

CORONA The pearly-white light which surrounds the darkened sun during a total eclipse of the sun.

CORONARY ARTERIES Arteries which supply the tissue of the heart.

CORONARY THROMBOSIS The formation of a blood clot in a coronary artery.

CORTISONE Hormone secreted by the cortex of the adrenal glands.

COSMIC RAYS High energy particles, mainly protons, which originate outside the earth's atmosphere and have considerable penetrating power.

COSMOLOGY The study of the nature and structure of the physical universe.

COULOMB Unit of electrical charge transferred by a current of one ampere in one second.

CREST The top of a wave.

CRETIN One born with a deficient thyroid or none at all.

CROSSING OVER The breaking of two adjacent chromosomes, with the subsequent union of a fragment of the other.

CYCLOTRON An instrument which speeds up the movement of atomic particles for the study of the properties of atoms.

CYST A sac, or an encased resting stage.

CYTOPLASM Portion of the protoplasm of a cell that lies outside the nucleus.

DECLINATION Angular distance of the sun's vertical ray from the Equator.

DEFICIENCY DISEASE Disease caused by lack of vitamins, minerals, amino acids or other essential elements in the diet.

DENDRITES Branches of a nerve cell which carry impulses toward the cell body.

DENSITY Mass of a substance per unit volume.

DEW POINT Temperature at which the saturation of air with moisture occurs.

DIABETES Disease in which sugar and fats cannot be properly oxidized due to insufficient insulin.

DIAPHRAGM Muscular partition that separates the thoracic and abdominal cavities in mammals. It is used in breathing.

DIATOMS Simple marine animals related to green and brown algae but microscopic in size.

DIFFRACTION Deflection and dispersion of light when it passes the edge of an obstacle.

DIFFUSION The random migration of molecular particles of one substance through a second substance resulting from molecular motion.

DIGESTION The changing of food molecules into simpler molecules.

DIPLOID NUMBER Twice the number of chromosomes found in a reproductive cell.

DISPERISON The separation of white light into its constituent colors when it is bent or refracted by a lens or glass prism.

DISTILLATION Process of driving gas from liquids by heating and condensing to liquid products.

Natural Sciences Terms

- DOPPLER EFFECT** Change in the pitch of sound waves, heard when the sound and observer are moving toward or away from each other.
- DORSAL** Pertaining to the back of an animal.
- DUCTLESS GLAND** Gland that secretes a hormone and passes the hormone into the bloodstream, but not through a duct.
- DUODENUM** The first part of the small intestine leading from the stomach.
- DWARF STARS** Stars relatively low in luminosity and apparent brightness.
- ECLIPSE** The covering of one body by the shadow of another.
- ECOLOGY** Division of biology that deals with the relations of organisms to each other and to their nonliving environment.
- EFFERENT** Converging outward or away from a structure.
- EGG** The female sex cell.
- ELECTRIC FIELD** Space which can exert an electric force on a charge placed at any point in it.
- ELECTROCARDIOGRAM** Recording of the waves sent out by the heart.
- ELECTRODE** A positively or negatively charged terminal of a device.
- ELECTROLYSIS** Process of separating the positive and negative ions in a substance containing free ions by passing an electric current through it.
- ELECTROLYTE** A solution containing free positive and negative ions by means of which an electric current can pass.
- ELECTROMAGNET** Device consisting of a coil of wire wound around a soft iron core. A magnetic field is produced in the core by passing an electric current through the coil.
- ELECTROMOTIVE FORCE** Energy given to each unit of charge in a circuit by a source of electrical energy.
- ELECTRON MICROSCOPE** An optical instrument in which a beam of electrons focused by means of an electron lens is used to produce an enlarged image of a minute object on a fluorescent screen or photographic plate.
- ELECTROSCOPE** A sensitive instrument used to detect and identify small electric charges.
- ELEMENT** A substance containing only one kind of atom.
- EMBRYO** Young plant or animal before germination hatching, or birth.
- EMULSION** A mixture consisting of two liquids which do not form a solution (*see*).
- ENERGY** The ability to work.
- ENTOMOLOGY** The study of insects.
- ENVIRONMENT** Place where a species of animal is found in nature and the conditions that are present.
- ENZYME** Organic compound which hastens a chemical change, being used up itself only to a slight degree, if at all.
- EQUILIBRIUM** A Condition in which the forces acting on a system completely neutralize one another's effect.
- EQUINOX** Time of the year when daytime and night each equal twelve hours.
- ERA** One of the five main divisions of geologic time.
- ESCAPE VELOCITY** Velocity which a body must have to escape from the earth's gravitational pull.
- ESOPHAGUS** Portion of the food tube connecting the mouth region and the stomach.

Natural Sciences Terms

- ESTROGENS** Hormones secreted by the ovaries.
- EUGENICS** Branch of genetics that aims at improving mankind by breeding.
- EUTHENICS** Science of improving the human species by providing the best possible environment.
- FAHRENHEIT SCALE** Temperature scale having 180 subdivisions between the melting point of ice, fixed at 32°, and the boiling point of water, fixed at 212°.
- FATTY ACIDS** The products of the digestion of fats.
- FAULT** A fracture and displacement of part of the earth's crust.
- FAUNA** Term referring to animal life of a given period of region.
- FERMENTATION** Chemical changes brought about in sugar solutions by yeast plants, whose wastes are alcohol and carbon dioxide.
- FERNS** A large group of plants representing a stage of development below the flowering plants.
- FERTILIZATION** Union of a mature egg and mature sperm to form a zygote. (*see*)
- FIBRIN** The fibers that form a blood clot.
- FIBRINOGEN** A plasma protein which is changed to the fibers that form the blood clot under certain conditions.
- FIBROVASCULAR BUNDLE** Group of xylem and phloem cells.
- FILAMENT** Thread-shaped alga or fungus (*see*) composed of cells end-to-end.
- FIORD** Large, deep bay formed when a glacier erodes the bottom of a valley below sea level.
- FIXED POINTS** The temperatures of melting ice and boiling water, used as a standard in calibrating thermometers.
- FLAGELLUM** A long whiplike cytoplasmic part of a cell; capable of vibration.
- FLUORESCENCE** Process whereby a substance emits radiation when struck by charged particles.
- FOCAL INFECTION** A localized pocket of infection, always a threat to health.
- FOLIC ACID** Vitamin in the B complex, used in pernicious anemia.
- FOOD CHAIN** Series of organisms, each of which, depends for its food on the one following it in the series, the final link being a green plant.
- FOOD WEB** Relationships of feeding inside a biological community.
- FORCE** A push or pull that changes the motion of a body unless counteracted by an equal and opposite push or pull.
- FOSSIL** The remains or other indication of a prehistoric form of life.
- FREQUENCY OF LIGHT** The number of waves passing a given point every second.
- FRICTION** The force that opposes the motion of a body over or through another.
- FROST** Covering consisting of minute ice crystals, on a cold surface.
- FRUIT** A ripened ovary.
- FULCRUM** The support about which a lever turns.
- FUNGI** Simple non-green plants, which cannot make their own food, and so are parasitic.
- GALAXY** System made up of a vast number of stars and other heavenly bodies within one gravitational field.
- GALL BLADDER** Sac in which reserve bile is stored; attached to the liver.

Natural Sciences Terms

- GALVANOMETER** Instrument used to detect and measure small electric currents.
- GAMETE** Reproductive cell (ovum or sperm) which unites to produce a zygote.
- GAMMA GLOBULIN** A substance in human blood, used as a preventive in polio.
- GAMMA RAYS** Highly penetrating electro-magnetic radiations emitted by the nuclei of radioactive atoms.
- GANGLION** A group of cell bodies of nerve cells.
- GASTIC JUICE** Digestive juice in the stomach which acts on protein foods.
- GASTROLITH** Stone in the stomach of a fish, used to grind food.
- GEIGER COUNTER** Instrument that detects radioactive substances by their ability to ionize the matter through which they pass.
- GENERATOR** Device that converts mechanical energy into electrical energy.
- GENES** Units in the chromosomes, which transmit specific characteristics from parents to offspring.
- GENUS** A grouping of plants and animals.
- GEOCENTRIC** Based on the assumption that the earth is the center of the universe.
- GEOLOGY** Study of the earth's crust, both present and past.
- GERM** Any microscopic plant or animal which causes disease.
- HYBRIDIZATION** Crossing individuals that show contrasting traits.
- HYDRA** Fresh-water relative of the jellyfish.
- HYGROMETER** An instrument used to measure relative humidity.
- HYPERTENSION** High blood pressure.
- HYPOTHESIS** A temporary explanation advanced in an effort to solve a problem.
- IDEAL GAS** An imaginary gas which obeys the universal gas law.
- IDENTICAL TWINS** Twins developed from the same fertilized ovum.
- IMMUNITY** The condition of being unable to contract a particular disease.
- IMPRINTS** Markings left in sediments of shells, leaves, or body parts.
- IMPULSE** Message traveling along a nerve or nerve pathway.
- INCISORS** The cutting teeth on the front of mammal jaws.
- INCLINED PLANE** A simple machine consisting of a sloping surface.
- INERTIA** The property of matter by which it resists any change in its state of motion or rest.
- INFECTIOUS DISEASES** Diseases caused by germs or similar agents.
- INGEST** To take any substance from the outside into the digestive tract of an animal.
- INOCULATION** The introduction of bacteria or virus into surroundings in order to produce immunity.
- INORGANIC** Term applied to anything that is not alive and not produced by living things.
- INPUT** The work put into any machine.
- INSERTION** The place of attachment of a muscle to a movable body part.
- INSULATOR** A material that is a poor conductor of electricity or heat.

Natural Sciences Terms

INSULIN Hormone made in the pancreas delivered directly into the blood stream and used for proper oxidation of sugars and fats.

INTESTINE Part of the digestive tract lying behind the stomach.

INVERTEBRATE Any animal without a backbone or notochord (*see*).

ION An atom or group of atoms having an unbalanced electrical charge.

IRIS The colored portion of the vertebrate eye.

IRRITABILITY Capacity of protoplasm to receive impulses from and respond to stimuli.

ISONIZIDS New drugs for tuberculosis.

ISOSTASY Movement of rock materials to equalize crust stresses.

ISOTOPE Any of two or more forms of the same element which differ in the number of neutrons their atoms contain.

JET STREAM Strong horizontal air current in the lower stratosphere.

JOULE A unit of energy in the metric system.

KAME A cone-shaped hill of sand and gravel deposited by streams coming from a melting glacier.

KELVIN SCALE The scale of absolute temperature.

KETTLE HOLE Basin in a glacial drift created when blocks of ice under deposits of marine (*see*) melt away, causing the overlying cover of loose rock to fall into the basin.

KIDNEY The chief organ in vertebrates for the excretion of liquid wastes.

KILOGRAM The standard unit of mass in the metric system.

KINETIC ENERGY The energy associated with the motion of a mass and equal to one-half the product of the mass and the square of its velocity.

KNOT Unit of speed equivalent to 1 nautical mile per hour.

LACTEAL A lymph vessel which absorbs digested fats out of the intestine.

LAGOON A shallow body of water such as a bay, inlet, or pond.

LARVA The wormlike stage of an insect having complete metamorphosis (*see*), as a caterpillar.

LARYNX The organ situated between the trachea (*see*) and tongue, which contains the vocal cords.

LATERAL Pertaining to the side of the body.

LATITUDE Distance measured in degrees, north or south of the equator.

LAW OF CONSERVATION OF ENERGY AND MATTER The law stating that the total quantity of energy and matter in the universe remains constant.

LEGUME Any plant that has a blossom shaped like a pea and a pod of the pea or bean type.

LENS The focusing portion of the eye.

LENTICEL Breathing pore in the young bark of trees.

LETHAL GENE A gene that is capable of bringing about death.

LEVEE Embankment of debris along the banks of a river.

LEVER A simple machine consisting of a rigid bar free to turn about a fixed point.

LEUCOCYTE A white blood cell.

Natural Sciences Terms

- LIGAMENT** A tough, fibrous band of tissue connecting bones.
- LIGHT** The visible part of the electromagnetic spectrum.
- LIGHT YEAR** The distance which light travels in a year.
- LINKAGE** A tendency for certain traits to stick together in heredity because the genes for such traits are located in the same chromosome.
- LIPASE** A fat-splitting enzyme.
- LITER** A volume of 1,000 milliliters, or about one quart.
- LOESS** Rock dust, a wind deposit.
- LONGITUDE** Distance measured in degrees, east or west of the Prime Meridian in Greenwich, England.
- LUMINOUS BODY** A source of light.
- LUNAR ECLIPSE** Eclipse which occurs when the earth is between the sun and the moon.
- LYMPH** The part of the blood serum which is outside the blood vessels, found in lymph vessels throughout the body.
- LYMPH NODE** One of the masses of tissue through which the lymph passes on its way back toward the heart.
- MAGGOT** A wormlike legless larva of an insect. A maggot is usually found in decaying matter.
- MAGNETIC FIELD** The space, usually around a magnet or an electric current, at each point of which a magnetic force is exerted.
- MALARIA** Disease caused by a protozoan (*see*) that lives in the bloodstream and is carried from person to person by a species of mosquito.
- MALPIGHIAN BODY** A small rounded body in the kidney, consisting of a tuft of blood vessels.
- MAMMALS** Hairy vertebrates that breathe by lungs throughout their lives and nourish their young with milk.
- MAMMARY GLANDS** Milk-secreting glands of mammals.
- MANDIBLE** A jaw.
- MARSUPIALS** Mammals with a pouch, such as the kangaroo.
- MASS** The quantity of matter a body contains.
- MASTICATION** The act of chewing food with the teeth.
- MATTER** Bodies having weight and occupying space.
- MEDULLA** The lowest part of the vertebrate brain, in which processes such as heartbeat and respiration are centered.
- MELTING POINT** The temperature at which a solid changes to a liquid at normal atmospheric pressure.
- MEMBRANE** A thin sheet of cells or material secreted by cells.
- MENINGES** The three membranes covering the brain and spinal cord.
- MESODERM** Middle layer of cells of an embryo.
- METABOLISM** The sum total of the chemical changes going on in a living organism.
- METAMORPHOSIS** Changes in the development of young animals, as the change of a tadpole into a frog.
- METEOR** Fragment of matter scattered throughout the solar system in the space between the planets.
- METEORITE** A meteor which reaches the earth's surface.
- METER** The standard unit of length in the metric system.

Natural Sciences Terms

MICROBE Any exceedingly small organism.

MICROMETER Instrument used in conjunction with a microscope or telescope for measuring small distances.

MICRON The unit used in measuring microscopic objects.

MILT Sperms (*see*) of fish.

MITOSIS Cell division in which the chromosomes duplicate themselves.

MOLARS The grinding teeth of animals.

MOLECULE The smallest particle of a substance having the substance's chemical and physical properties.

MOLLUSK Soft-bodied animal usually encased in shells, as oysters.

MOMENTUM The product of the mass of a body and its velocity.

MONSOON Seasonal winds, frequent over land areas near the equator.

MORaine Debris that has been carried by a glacier.

MORPHOLOGY The study that deals with the form and structure of organisms.

MOTOR NERVE FIBERS Those that carry impulses from the central nervous system to muscles or other organs which make responses.

MUCOUS MEMBRANE The lining membrane of the food canal and other cavities that connect with the outside.

MUTATION A new trait, caused by gene or chromosome change, in which offspring differ from their parents.

MYCELIUM Fine white threads that make up the main plant body of many fungi.

NATURAL SELECTION Natural survival of the best-adapted individuals which become the parents of the next generation.

NATURAL SUCCESSION A series of changing plant or animal populations at a given location.

NAUTICAL MILE The unit of distance used by ships at sea, aircraft, and the Weather Bureau.

NEBULA A vast, diffuse cloud of gas.

NEGATIVE ACCELERATION Acceleration that acts to slow up a moving body.

NEURON A nerve cell.

NEUTRON An electrically neutral particle of the nucleus of nearly all atoms.

MASS The quantity of matter a body contains.

MASTICATION The act of chewing food with the teeth.

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- NEURON** A nerve cell.
- NEUTRON** An electrically neutral particle of the nucleus of nearly all atoms.
- NEWTON** The unit of force in the metric system.
- NICACIN** The name of the anti-pellagra vitamin.
- NICOTINE** Poison present in the tobacco plant.
- NITRATE** Compound in which nitrogen is combined with oxygen and at least one other element.
- NITROGEN** An element constituting about four-fifths of the air.
- NITROGEN CYCLE** The course of the element nitrogen from the air into organic compounds in living things and back into the air again.
- NITROGEN-FIXING BACTERIA** Bacteria that have the ability to cause nitrogen to unite with oxygen and another element to form nitrates.
- NODULES** Little lumps on the roots of clover and other legumes.

Natural Sciences Terms

NOTOCHORD An elastic rod of cartilage lying just below the nerve cord in all chordates, at least in the embryo.

NOVA A star which suddenly flares up in the heavens.

NUCLEAR REACTOR A device in which a controlled chain reaction involving nuclear fission is used to supply energy and to produce new radioactive elements.

NUCLEUS The positively charged core of an atom: a rounded body in the cell, containing the chromosomes.

NYMPH The young of certain insects that have incomplete metamorphosis.

OHM The unit of electrical resistance (named after the German physicist, George Simon Ohm).

OLFACTORY Pertaining to the sense of smell.

OLFACTORY LOBES The portion of the vertebrate brain in which the sense of smell is centered.

OPTIC LOBES The portion of the vertebrate brain in which the sense of sight is centered.

ORBIT The path of a revolving body.

ORDER OF MAGNITUDE The power of ten that is nearest to a given number.

ORGAN A group of tissues that together do a particular job.

ORGANIC COMPOUND Any compound that contains carbon.

ORGANISM Any living thing.

OSMOSIS A special kind of diffusion in which water molecules diffuse through a semipermeable membrane.

OUTPUT The work produced by a machine.

OUTWASH PLAIN Stratified layers formed from the pouring off of the melting water of a glacier.

OVARY The egg-forming organ of flowers and of animals.

OVIDUCT The duct from the ovary through which eggs are passed.

OVULE The sac in the ovary of a flower within which egg is formed.

OVUM An egg cell.

OXIDATION The uniting of oxygen with another element.

OXYGEN An element which constitutes about one-fifth of the air; a component part of all protoplasm.

OZONE A heavier form of oxygen, usually present in a thunderstorm.

PALEONTOLOGY The study of fossils.

PALISADE LAYER A layer of green cells just under the upper epidermis of a leaf.

PANCREAS A digestive gland lying just near the stomach, delivering pancreatic juice into the small intestine through a duct.

PARALLAX The apparent change in the position of a distant object, caused by a change in the observer's position.

PARAMECIUM The slipper-shaped protozoan.

PARASITE An organism that takes its food from another living organism, in or on which the parasite lives.

PARATHYROIDS Glands located near the thyroid.

PASTEURIZATION Process of treating milk by heating it to 145 degrees F. for a few minutes, and then cooling it rapidly, to kill most of the disease-causing organisms in the milk.

Natural Sciences Terms

PATCH TEST A skin test for tuberculosis.

PATHOGENIC Disease-producing.

PATHOLOGIST A doctor who specializes in the study of diseased tissues.

PELLAGRA A disease caused by lack of the vitamin, niacin.

PELLICLE The thin protective layer on the surface of some protozoans.

PENDULUM A mass suspended from a point so that it can swing freely under the influence of gravity.

PENICILLIN A medicine extracted from a common mold and used in treating diseases caused by certain types of bacteria.

PENUMBRA The part of a shadow that is partially illuminated by the light source.

PEPSIN An enzyme in the gastric juice, which acts upon protein foods.

PERIGEE The point on the moon's orbit that is nearest to the earth.

PERIPHERAL NERVOUS SYSTEM All parts of the nervous system except the brain and spinal cord.

PERISTALSIS The progressive contraction of circular muscles in the food tube of higher animals, which forces the food onward.

PETRIFIED Turned to stone.

PHAGOCYTE A type of white blood cell that engulfs and digests bacteria and other foreign materials.

PHYARYNX The anterior end of the food tube of many animals.

PHLOEM Food-conducting cells in the roots, stems, and leaves of ferns and seed plants.

PHOTOSYNTHESIS The manufacture of glucose out of carbon dioxide and water by green plants in the sunlight.

PHYLUM One of the main groups of the plant or animal kingdom.

PHYSICAL CHANGE Any change in matter that does not involve a change in the kinds or number of atoms in the molecule.

PHYSIOLOGY The science dealing with the functions in organisms.

PIGMENT Coloring matter.

PINEAL GLAND Ductless gland situated at the base of the brain.

PISTIL The organ of a flower in which the ovary is located.

PLACENTA The structure through which a mammal embryo is nourished before birth.

PLANARIA A common flatworm.

PLANET Each of the nine bodies revolving around the sun.

PLANETOID Fragment which revolves around the sun between the orbits of Mars and Jupiter.

PLASMA The liquid part of the blood.

PLASTID A specialized mass of protoplasm found in certain cells, often containing pigment.

PLUMULE That portion of a seed-plant embryo which grows into the shoot.

POLIOMYELITIS Medical name of infantile paralysis, often called polio for short, injuring nerve cells of the brain or spinal cord.

POLLED CATTLE Hornless cattle.

POLLEN The male or fertilizing element in a seed plant.

Natural Sciences Terms

- POLLINATION** The transfer of pollen from anther to stigma.
- POLYCHROMATIC LIGHT** Light that is a mixture of many colors.
- POLYPLOIDS** Organisms with three, four, or more times as many chromosomes as the haploid number.
- POSTERIOR** Toward the end, opposite the head end of an animal with a right and left side.
- POTENTIAL ENERGY** The stored energy that a body has because of its position with respect to other bodies.
- POUCHED ANIMALS** Mammals that carry the young in pouches on the abdomen, as kangaroos.
- POUND** Unit of weight equal to 16 ounces.
- POWER** The rate of doing work.
- PRECIPITATION** Any moisture falling from the sky.
- PREGNANT** Pertaining to a mammal that is carrying unborn young.
- PRIMATES** Order of mammals that walk more or less upright.
- PROLACTIN** Hormone secreted by the pituitary body, stimulating the secretion of milk in mammals.
- PROTEINS** Class of foods composed of carbon, hydrogen, oxygen, and nitrogen, and sometimes other elements.
- PROTHROMBIN** Substance in the blood needed for clotting.
- PROTON** Positively charged particle in the nucleus of all atoms.
- PROTOPLASM** The living substance found in all cells.
- PROTOZOA** All one-celled animals. Protozoan or protozoon is the singular.
- PSYCHOLOGY** The science of behavior.
- PTYALIN** A digestive enzyme in saliva which changes starch to maltose.
- PULSE** The beat felt in an artery, as in the wrist.
- PUPA** The stage between larva and adult in the complete metamorphosis of insects.
- PUPIL** The opening in the iris of the eye.
- PURE-LINE BREEDING** A method of breeding, in which the individuals bred are pure (all alike) for a particular trait or set of traits.
- QUARANTINE** Restriction by government of free activities to prevent the spread of infectious disease.
- QUININE** A drug used in the treatment of malaria.
- RABIES** A disease caused by a virus that attacks the central nervous system.
- RADAR** A method of measuring distance from an observer to an object by means of radio echoes.
- RADIANT ENERGY** Energy transferred by electromagnetic waves.
- RADIATION** The transfer of energy by electromagnetic waves.
- RADIOACTIVE ELEMENTS** Elements which give off particles, as radium does.
- RADIOCARBON DATING** Method of dating organic remains by measuring the ratio of radioactive to ordinary carbon in them.
- RAY** A straight line of light.

Natural Sciences Terms

- REACTION TIME** The time required for an animal to respond to a stimulus.
- RECEPTORS** The sense organs, such as eyes, ears, end organs in the skin.
- RECESSIVE** Pertaining to the trait in a contrasting pair that does not show in a hybrid produced by that pair.
- REFLECTION** The rebounding of waves from the surface of a new medium or barrier.
- REFLEX ARC** A pathway through an animal's nervous system involving two or more neurons along which an impulse travels from the point of stimulus to the organ that makes the response.
- REFRACTION** The bending of a ray as it passes obliquely from one medium to another.
- REGENERATION** Growing a new body part which replaces one that has been injured and lost, such as the growing of a new arm by a starfish where one has been broken off.
- RELATIVE HUMIDITY** The ratio between the absolute humidity of the air and its capacity for holding water vapor at a given temperature.
- RENNIN** An enzyme in the gastric juice, which curdles milk.
- REPRODUCTION** The production by an organism of others of its kind.
- REPTILES** Scaly-skinned vertebrates that breathe by lungs throughout their lives.
- RESISTANCE** Opposition of a circuit or part of a circuit to the flow of current.
- RESOLUTION** The process of dividing a force into two or more components.
- RESPONSE** The reaction of an organism to a stimulus.
- RETINA** A layer of light-sensitive cells in the vertebrate eye.
- RH FACTOR** A substance in the red blood cells of most, but not all persons; can cause damage in the blood of infants.
- RIBOFLAVIN** One of the vitamins isolated from the B complex; vitamin B2.
- RICKETS** A disease in which bones are softened, caused by a lack of vitamin D.
- RICKETTSIA** A type of minute disease-producing agents that may be intermediate between bacteria and viruses, causing typhus fever and other diseases.
- ROE** Fish eggs, especially before they are laid.
- ROOT HAIR** An elongation of an epidermal cell of a root, used in absorption.
- ROTATION OF CROPS** Planting a succession of different crops in a given field, year after year.
- ROUNDWORMS** Round, un-segmented worms, including the hookworm.
- SALIVA** Digestive juice secreted by glands near the mouth.
- SAPROPHYTE** Plant living on decayed organic matter.
- SCALAR** Pertaining to a quantity, such as length and mass, having magnitude but not direction.
- SCHICK TEST** Test used to determine a person's immunity to diphtheria.
- SGION** The bud or twig that is attached to the stock in grafting.
- SCURVY** A disease caused by lack of vitamin C.
- SECTION** A thin slice of tissue.

Natural Sciences Terms

- SEDIMENTARY ROCK** Rock made from sediment that has been under pressure, characterized by layers.
- SEED** A ripened ovule made of a protective coating stored food, and an embryo plant.
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- SEED** A ripened ovule made of a protective coating stored food, and an embryo plant.
- SELECTION** A method used in plant breeding and animal breeding.
- SEMICIRCULAR CANALS** The portion of the inner ear in which the sense of balance is located.
- SEMIPERMEABLE MEMBRANE** A membrane through which some kinds of molecules diffuse readily while others diffuse with difficulty, or not at all.
- SENSORY NERVE FIBERS** Those that carry impulses toward the central nervous system.
- SEPAL** The outermost leaflike flower organ, usually green, enclosing the bud.
- SERUM** The watery portion of an animal fluid. Blood serum is blood plasma from which the fibrinogen has been removed.
- SETAE** Bristles such as those embedded in the body wall of an earthworm.
- SEX-LINKED TRAIT** A trait whose gene is in the chromosome, which is inherited peculiarly and appears in only one sex.
- SEXUAL REPRODUCTION** Reproduction that starts with the union of two sex cells or gametes.
- SHORT CIRCUIT** An electric circuit in which the resistance is so low as to permit a dangerously large current to flow.
- SKELETON** Hard supporting structure of an animal's body.
- SLOPE** A measure of the degree of inclination of a line to the horizontal.
- SOIL DEPLETION** Removal of humus and essential minerals from the soil by crops grown upon it.
- SOLAR SYSTEM** The grouping of the sun and the bodies revolving around it as a result of the force of gravity.
- SOLSTICE** The time of the year when the sun is at its greatest distance north or south of the equator.
- SOLUTION** Mixture of one substance dissolved in another.
- SOUND WAVES** Longitudinal waves in air and other material media, set up by vibrating bodies.
- SPECIALIZATION OF CELLS** Changing of originally similar cells into different forms suited to special work.
- SPECIES** The group that is named second in the scientific name of any plant or animal. Genus is the group named first, as in *Homo sapiens*.
- SPECIFIC GRAVITY** The ratio of the weight of a substance to the weight of an equal volume of water.
- SPECTRUM OF LIGHT** The array of colors in the order of wavelengths that results when light from a source is dispersed into its component colors.
- SPERM** A male sex cell or gamete.
- SPINAL CORD** The main nerve cord of vertebrates.
- SPIRACLES** The breathing pores of insects.
- SPIRILLUM** A spiral-shaped bacterium.

Natural Sciences Terms

- SPLEEN** A large organ, characteristic of most vertebrates, lying near the stomach and known to destroy red blood cells in mammals.
- SPONTANEOUS GENERATION** A theory once accepted, but now considered disproved, that dead matter could produce living organisms.
- SPORE** A single-celled reproductive body, formed sexually or asexually, with or without a resistant wall, produced by plants and some protozoa.
- STAMEN** The pollen-producing organ in flowers.
- STAPHYLOCOCCUS** Certain round bacteria that often form clusters like bunches of grapes.
- STATIC ELECTRICITY** Electric charges at rest.
- STERILE** Free from living germs, or unable to reproduce.
- STETHOSCOPE** An instrument used by doctors to listen to heart sounds and other internal body sounds.
- STIGMA** The top of a pistil, where the pollen germinates.
- STIMULANT** Any substance which, when taken into the body, speeds up vital activities such as heartbeat.
- STIMULUS** Anything which induces a response in a plant or an animal.
- STOMATE** Opening in the epidermis of a plant leaf through which there is an exchange of gases between the air spaces and the outside atmosphere.
- STRATOSPHERE** The zone of the atmosphere above the troposphere and below the ionosphere.
- STREPTOCOCCUS** Certain round bacteria that often form chains.
- STREPTOMYCIN** An antibiotic from a fungus.
- STRIP CROPPING** A method of cultivating fields in alternating strips of close-growing and clean-tilled crops.
- SYMBIOSIS** A partnership between two dissimilar organisms in which they live intimately together and help each other, as the alga and fungus relationship in a lichen.
- SYNAPSE** The point at which the nerve impulse passes from one neuron into another.
- SYPHILIS** An infectious disease located at first in the reproductive organs.
- TALUS** Accumulation due to gravity of jagged pieces of rock at the base of a cliff.
- TERRACING** A method of farming hillsides to prevent erosion.
- TESTIS** The sperm-forming organ of animals.
- THERMOTROPISM** The behavior response of an organism to heat.
- THIAMIN** One of the B vitamins, used to prevent beriberi.
- THIGMOTROPISM** The behavior response of an organism to contact.
- THORAX** The middle division of an animal's body between the head and abdomen. The thorax, enclosed by the ribs, contains the lungs, heart, etc.
- THROMBIN** A substance formed under certain conditions from prothrombin in the blood.
- THYROID GLAND** A ductless gland in the neck, called a goiter when enlarged.
- TISSUE** A group of similar cells specialized in a certain line of work.
- TOPOGRAPHIC MAP** A map which uses contour lines to show elevations and the shape of land.

Natural Sciences Terms

TOXIN A poison produced by such living organisms as disease germs, snakes, insects or various fungi.

TRACE ELEMENTS Elements in soil used only in minute quantities by plants.

TRACHEA The windpipe, through which air passes from the throat to the lungs.

TRADE WINDS Strong and steady winds coming from the area of the horse latitudes.

TRANSPIRATION The loss of water from plants by evaporation, mostly through the stomates of leaves.

TRICEPS The muscle on the outside of the upper arm used in straightening the arm.

TROPISM The turning of an organism away from, or toward, a stimulus.