LIFE SCIENCE VOCABULARY TERMS

abiotic - Nonliving, physical features of the environment, including air, water, sunlight, soil, temperature, and climate.

acid precipitation - Precipitation with a pH below 5.6; occurs when pollutants from burning fossil fuels react with water in the air to form acids; pollutes water, kills fish and plants, damages soil.

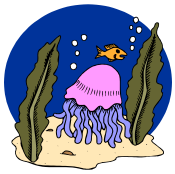
active immunity - Long-lasting immunity that results when the body makes its own antibodies in response to a specific antigen.

active transport - Energy-requiring process in which transport proteins bind with particles and move them through a cell membrane.

adaptation - Any variation that makes an organism better suited to its environment.

aerobe - Any organism that uses oxygen for respiration.

aggression - Forceful behavior, such as fighting, used by an animal to control or dominate another animal in order to protect young, defend territory, or get food.



algae chlorophyll-containing, plantlike protists that produce oxygen as a result of photosynthesis.

allele - An alternate form that a gene may have for a single trait; can be dominant or recessive.

allergen - Substance that causes an allergic reaction.

allergy - Overly strong reaction of the immune system to a foreign substance.

alveoli - Tiny, thin-walled, grapelike clusters at the end of each bronchiole that are surrounded by capillaries, where carbon dioxide and oxygen exchange takes place.

amino acids - Building blocks of proteins.

amniotic egg - Egg covered with a leathery shell that provides a complete environment for the embryo's development; for reptiles, a major adaptation for living on land.

amniotic sac - Thin, liquid-filled, protective membrane that forms around the embryo.

anaerobe - Any organism that is able to live without oxygen.

angiosperms - Flowering vascular plants that produce a fruit containing one or more seeds; monocots and dicots.

antibiotics -Chemicals produced by some bacteria that are used to limit the growth of other bacteria.

antibody - A protein made in response to a specific antigen that can attach to the antigen and cause it to be useless.

antigen - Complex molecule that is foreign to your body.

anus - Opening at the end of the digestive tract through which wastes leave the body.

appendages - Jointed structures of arthropods, such as legs, wings, or antennae.

artery - Blood vessel that carries blood away from the heart and has thick, elastic walls made of connective tissue and smooth muscle tissue.

ascus - Saclike, spore-producing structure of sac fungi.

asexual reproduction - A type of reproduction--fission, budding, and regeneration--in which a new organism is produced from one parent and has DNA identical to the parent.

asthma - Lung disorder in which the bronchial tubes contract quickly and cause shortness of breath, wheezing, or coughing; may occur as an allergic reaction.

LIFE SCIENCE VOCABULARY TERMS

atmosphere -Air surrounding Earth; made of gases, including 78 percent nitrogen, 21 percent oxygen, and 0.03 percent carbon dioxide.
atriums - Two upper chambers of the heart that contract at the same time during a heartbeat.
auxin - Plant hormone that causes plant leaves and stems to exhibit positive phototropisms.
axon - Neuron structure that carries messages away from the cell body.
basidium Club - shaped, reproductive structure in which club fungi produce spores.
behavior - The way in which an organism interacts with other organisms and its environment; can be innate or learned.
bilateral symmetry - Body parts arranged in a similar way on both sides of the body, with each half being a mirror image of the other half.
binomial nomenclature - Two-word naming system for organisms; first word is the genus and second word is the species.
biogenesis - Theory that living things can come only from other living things.
biological vector - Disease-carrying organism, such as a rat, mosquito, or fly, that spreads infectious disease.
biomes - Large geographic areas with similar climates and ecosystems; includes tundra, taiga, desert, temperate deciduous forest, tropical and temperate rain forest, and grassland.
biosphere - Part of Earth that supports life, including the top portion of Earth's crust, the atmosphere, and all the water on Earth's surface.
biotic - Features of the environment that are alive or were once alive.
bladder - Elastic, muscular organ that holds urine until it leaves the body through the urethra.
brain stem - Connects the brain to the spinal cord and is made up of the midbrain, the pons, and the medulla.
bronchi - Two short tubes that branch off the lower end of the trachea and carry air into the lungs.
budding - Form of asexual reproduction in which a new, genetically identical organism forms on the side of its parent.
cambium - Vascular tissue that produces xylem and phloem cells as a plant grows.
capillary - Microscopic blood vessel that connects arteries and veins, has walls one cell thick, through which nutrients and oxygen diffuse into body cells and waste materials and carbon dioxide diffuse out.
carbohydrate - Nutrient that usually is the body's main source of energy.
Carbon cycle - Model describing how carbon molecules move between the living and nonliving world.
cardiac muscle - Striated, involuntary muscle found only in the heart.
carnivore - Animal that eats only other animals or the remains of other animals.
carrying capacity - Largest number of individuals of a particular species that an ecosystem can support over time.
cartilage - Tough, flexible tissue that joins vertebrae and makes up all or part of the vertebrate endoskeleton.
cell - Smallest unit of a living thing that can perform the functions of life; has an orderly structure and contains hereditary material.
cell membrane - Protective outer covering of all cells that is made up of a double layer of fatlike molecules and regulates the interaction between the cell and the environment.

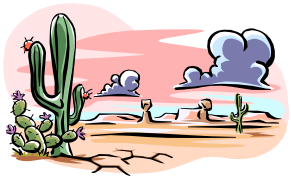
LIFE SCIENCE VOCABULARY TERMS

cell theory - States that all organisms are made up of one or more cells, the cell is the basic unit of life, and all cells come from other cells.
cell wall - Rigid structure that encloses, supports, and protects the cells of plants, algae, fungi, and most bacteria.
cellulose - Chemical compound made out of sugar; forms tangled fibers in the cell walls of many plants and provides structure and support.
central nervous system - Division of the nervous system, made up of the brain and spinal cord.
cerebellum - Part of the brain that controls voluntary muscle movements, maintains muscle tone, and helps maintain balance.
cerebrum - Largest part of the brain, where memory is stored, movements are controlled, and impulses from the senses are interpreted.
chemical digestion - Occurs when enzymes and other chemicals break down large food molecules into smaller ones.
chemosynthesis – Process in which producers make energy-rich nutrient molecules from chemicals.
chemotherapy - Use of chemicals to destroy cancer cells.
chlorophyll – Green, light-trapping pigment in plant chloroplasts what is important in photosynthesis.
chloroplast - Green, chlorophyll-containing, plant-cell organelle that converts sunlight, carbon dioxide, and water into sugar.
chordate - Animal that has a notochord, a nerve cord, gill slits, and a postanal tail present at some stage in its development.
chromosome - Structure in a cell's nucleus that contains genetic material.
chyme - Liquid product of digestion.
cilia - Short, threadlike structures that extend from the cell membrane of a ciliate and allow the organism to move quickly.
climate – Average weather conditions of an area over time, including wind, temperature, and rainfall or other types of precipitation such as snow, wind, or sleet.

climax community - Stable, end stage of ecological succession in which the plants and animals of a community use resources efficiently and balance is maintained by disturbances such as fire.
closed circulatory system - Blood circulation system in which blood moves through the body in closed vessels.
cochlea Fluid - filled structure in the inner ear in which sound vibrations are converted into nerve impulses that are sent to the brain.
commensalism - A type of symbiotic relationship in which one organism benefits and the other organism is not affected.
community - All the populations of different species that live in an ecosystem.
conditioning - Occurs when the response to a stimulus becomes associated with another stimulus.
condensation – Process that takes place when a gas changes into liquid.
consumer - Organism that cannot create energy-rich molecules but obtains its food by eating other organisms.
contour feathers - Strong, lightweight feathers that give birds their coloring and shape and that are used for flight.
control - In an experiment, the standard to which the outcome of the test will be compared.

LIFE SCIENCE VOCABULARY TERMS

coral reef – Diverse ecosystem formed from the calcium carbonate shells secreted by corals.
courtship behavior - Behavior that allows males and females of the same species to recognize each other and prepare to mate.
crop - Digestive system sac in which earthworms store ingested soil.
cuticle - Waxy protective layer that covers the stems, leaves, and flowers of many plants and helps prevent water loss.
cyclic behavior - Behavior that occurs in repeated patterns.
cytoplasm - Constantly moving gel-like mixture inside the cell membrane that contains hereditary material and is the location of most of a cell's life processes.
day neutral plant - Plant that doesn't require a specific photoperiod and can begin the flowering process over a wide range of night lengths.
dendrite - Neuron structure that receives messages and sends them to the cell body.
dermis - Skin layer below the epidermis that contains blood vessels, nerves, oil and sweat glands, and other structures.
desert - Driest biome on Earth with less than 25 cm of rain each year; has dunes or thin soil with little organic matter and plants and animals specially adapted to survive extreme conditions.



diaphragm - Muscle beneath the lungs that contracts and relaxes to move gases in and out of the body.
dicot - Angiosperm with two cotyledons inside its seed, flower parts in multiples of four or five, and vascular bundles in rings.
diffusion - A type of passive transport in cells in which molecules move from areas where there are more of them to areas where there are fewer of them.
diploid – Cell whose chromosomes occur in pairs.
DNA - Deoxyribonucleic acid, which is the genetic material of all organisms, made up of two twisted strands of sugar-phosphate molecules and nitrogen bases.

dominant - Describes a trait that covers over another form of that trait.
down feathers - Soft, fluffy feathers that provide an insulating layer next to the skin of adult birds and that cover the bodies of young birds.
ecology - Study of the interactions that take place among organisms and their environments.
ecosystem - All the living organisms that live in an area and the nonliving features of their environment.
ectotherm - Vertebrate animal whose internal temperature changes when the temperature of its environment changes.
egg - Haploid sex cell formed in the female reproductive organs.
embryo - Fertilized egg that has attached to the wall of the uterus.
embryology - Study of embryos and their development.
emphysema - Lung disease in which the alveoli enlarge.
endocytosis - Process by which a cell takes in a substance by surrounding it with the cell membrane.
endoplasmic reticulum - Cytoplasmic organelle that moves materials around in a cell and is made up of a complex series of folded membranes; can be rough or smooth.

LIFE SCIENCE VOCABULARY TERMS

endoskeleton - Supportive framework of bone and/or cartilage that provides an internal place for muscle attachment and protects a vertebrate's internal organs.
endospore - Thick-walled, protective structure produced by a pathogen when conditions are unfavorable for survival.
endotherm - Vertebrate animal with a constant internal temperature.
energy pyramid – Model that shows the amount of energy available at each feeding level in an ecosystem.
enzyme - A type of protein that regulates nearly all chemical reactions in cells.
epidermis - Outer, thinnest skin layer that constantly produces new cells to replace the dead cells rubbed off its surface.
equilibrium - Occurs when molecules of one substance are spread evenly throughout another substance.
erosion - Movement of soil from one place to another.
estivation - Inactivity in hot, dry months during which amphibians hide in cooler ground.
estuary - Extremely fertile area where a river meets an ocean; contains a mixture of freshwater and salt water and serves as a nursery for many species of fish.
evaporation – Process that takes place when a liquid changes to a gas.
evolution - Change in inherited characteristics over time.
exocytosis - Process by which vesicles release their contents outside the cell.
exoskeleton - Thick, hard outer covering that protects and supports arthropod bodies and provides places for muscles to attach.
fat Nutrient that stores energy, cushions organs, and helps the body absorb vitamins.
fermentation - Process by which some oxygen-lacking cells and some one-celled organisms release small amounts of energy from glucose molecules and produce wastes such as alcohol, carbon dioxide, and lactic acid.
fertilization - In sexual reproduction, the joining of a sperm and egg.
fetal stress – Can occur during the birth process or after birth as an infant adjusts from the watery , dark, constant-temperature environment to its new environment.
fetus - A developing baby after the first two months of pregnancy until birth.
fin - Fanlike structure used by fish for steering, balancing, and movement.
fission - Simplest form of asexual reproduction in which two new cells are produced with genetic material identical to each other and identical to the previous cell.
flagellum - Long, thin whiplike structure of some protists that helps them move through moist or wet surroundings.
food group - Group of foods--such as bread, cereal, rice, and pasta--containing the same type of nutrients.
food web - Model that shows the complex feeding relationships among organisms in a community.
fossil fuels - Nonrenewable energy sources--coal, oil, and natural gas--that formed in Earth's crust over hundreds of millions of years.
free living organism - Organism that does not depend on another organism for food or a place to live.
frond - Leaf of a fern that grows from the rhizome.
gametophyte stage - Plant life cycle stage that begins when cells in reproductive organs undergo meiosis and produce haploid cells (spores).

LIFE SCIENCE VOCABULARY TERMS

gene - Section of DNA on a chromosome that contains instructions for making specific proteins.
genetic engineering - Biological and chemical methods to change the arrangement of a gene's DNA to improve crop production, produce large volumes of medicine, and change how cells perform functions.
genetics - Study of how traits are inherited through the actions of alleles.
genotype - An organism's genetic makeup.
genus - A group of similar species.
geothermal energy - Heat energy within Earth's crust, available only where natural geysers or volcanoes are located.
germination – Series of events that results in the growth of a plant from a seed.
gestation period - Period during which the embryo develops in the uterus; the length of time varies among species.
gills - Organs that exchange carbon dioxide for oxygen in water.
gill slits - In developing chordates, the paired openings found in the area between the mouth and digestive tube.
gizzard - Muscular digestive system structure in which earthworms grind soil and organic matter.
golgi bodies - Organelles that package cellular materials and transport them within the cell or out of the cell.
gradualism - Model describing evolution as a slow process by which one species changes into a new species through a continuing series of mutations and variations over time.
grasslands - Temperate and tropical regions with 25 cm to 75 cm of precipitation each year; dominated by climax communities of grasses; ideal for growing crops and raising sheep and cattle.
greenhouse effect - Heat-trapping feature of the atmosphere that keeps Earth warm enough to support life.
guard cells - Pairs of cells that surround the stomata and control their opening and closing.
gymnosperms - Vascular plants that do not flower, generally have needlelike or scalelike leaves, and produce seeds that are not protected by fruit; conifers, cycads, ginkgoes, and gnetophytes.
habitat - Place where an organism lives and that provides the types of food, shelter, moisture, and temperature needed for survival.
haploid – cell that has only each type of one chromosome.
hazardous wastes - Waste materials, such as pesticides and leftover paints, that are harmful to human health or poisonous to living organisms.
hemoglobin - Chemical in red blood cells that carries oxygen from the lungs to body cells and carries some carbon dioxide from body cells back to the lungs.
herbivore - Animal that eats only plants or parts of plants.
heredity - The passing of traits from parent to offspring.
hermaphrodite - Animal that produces both sperm and eggs in the same body, but its own sperm cannot fertilize its own eggs.
heterozygous - Describes an organism with two different alleles for a trait.
hibernation - Cyclic response of inactivity and slowed metabolism that occurs during periods of cold temperatures and limited food supplies.
homeostasis - Regulation of an organism's internal, life-maintaining conditions despite changes in its environment.

LIFE SCIENCE VOCABULARY TERMS

hominid - Humanlike primate that appeared about 4 million to 6 million years ago, ate both plants and meat, and walked upright on two legs.
homo sapiens - Early humans that likely evolved from Cro-Magnons.
homologous - Body parts that are similar in structure and origin and can be similar in function.
homozygous - Describes an organism with two alleles that are the same for a trait.
hormone - Chemical produced by the endocrine system, released directly into the bloodstream by ductless glands; affects specific target tissues, and can speed up or slow down cellular activities.
host cell - Living cell in which a virus can actively reproduce or in which a virus can hide until activated by environmental stimuli.
hybrid – An offspring that was given different genetic information for a trait from each parent.
hydroelectric power - Electricity produced when the energy of falling water turns the blades of a generator turbine.

hyphae - Mass of many-celled, threadlike tubes forming the body of a fungus.
hypothesis - A prediction that can be tested.
immune system - Complex group of defenses that protects the body against pathogens--includes the skin and respiratory, digestive, and circulatory systems.
imprinting - Occurs when an animal forms a social attachment to another organism during a specific period following birth or hatching.
incomplete dominance - Production of a phenotype that is intermediate between the two homozygous parents.
incubate - To keep eggs warm until they hatch; the length of time varies among species.
infectous disease -Disease caused by a vius, bacterium, fungus, or protest that is spread from an infected organism ot the environment to another organism.
innate behavior - Behavior that an organism is born with and does not have to learn, such as a reflex or instinct.
inorganic compound - Compound, such as water, that is made from elements other than carbon and whose atoms can usually be arranged in only one structure.
insight - Form of reasoning that allows animals to use past experiences to solve new problems.
instinct - Complex pattern of innate behavior, such as spinning a web, that can take weeks to complete.
intertidal zone - Part of the shoreline that is under water at high tide and exposed to the air at low tide.
invertebrate - Animal without a backbone.
involuntary muscle - Muscle, such as heart muscle, that cannot be consciously controlled.
joint - Any place where two or more bones come together; may be movable or immovable.
kidney bean - shaped urinary system organ that is made up of about 1 million nephrons and filters blood, producing urine.
kingdom - First and largest category in the scientific classification system of groups: phylum, class, order, family, genus, and species.
larynx - Airway to which the vocal cords are attached.

LIFE SCIENCE VOCABULARY TERMS

law - A scientific statement about how things happen in nature and that seems to be true at all times.
lichen - Organism made up of a fungus and a green alga or a cyanobacterium.
ligament - Tough band of tissue that holds bones together at joints.
limiting factor - Anything that can restrict the size of a population, including living and nonliving features of an ecosystem, such as predators or drought.
long day plant - Plant that generally requires short nights--less than ten to 12 hours of darkness--to begin the flowering process.
lymph - Tissue fluid that has diffused into the capillaries.
lymph node - Bean-shaped organ found throughout the body that filters out microorganisms and foreign materials taken up by the lymphocytes.
lymphatic system - Carries lymph through a network of lymph capillaries and vessels and drains it into large veins near the heart; helps fight infections and diseases.
lymphocyte - A type of white blood cell that fights infection.
mammals - Endothermic vertebrates that have hair, teeth specialized for eating certain foods, and whose females have mammary glands that produce milk for feeding their young.

mammary glands - Milk-producing glands of female mammals used to feed their young.
mantle - Thin layer of tissue that covers a mollusk's body organs; secretes the shell or protects the body of mollusks without shells.
marsupial - A mammal with an external pouch for the development of its immature young.

mechanical digestion - Breakdown of food through chewing, mixing, and churning.
medusa - Cnidarian body type that is bell-shaped and free-swimming.
meiosis - Reproductive process that produces four haploid sex cells from one diploid cell and ensures offspring will have the same number of chromosomes as the parent organisms.
melanin - Pigment produced by the epidermis that protects skin from sun damage and gives skin and eyes their color.
menstrual cycle - Hormone-controlled suited to their environment are more likely to survive and reproduce; includes concepts of variation, overproduction, and competition.
nervecord – Tubelike structure above the notochord that in most chordates develops into the brain and spinal cord.
neuron - Tiny filtering unit of the kidney.
niche - In an ecosystem, refers to the unique ways an organism survives, obtains food and shelter, and avoids danger.
nitrogen cycle - Model describing how nitrogen moves from the atmosphere to the soil, to living organisms, and then back to the atmosphere.
nitrogen fixation – process in which some types of bacteria in the soil change nitrogen gas into a form of nitrogen that plants can use.

LIFE SCIENCE VOCABULARY TERMS

nitrogen fixing bacteria - Bacteria that convert nitrogen in the air into forms that can be used by plants and animals.
noninfectious disease - Disease, such as cancer, diabetes, or asthma, that is not spread from one person to another.
nonrenewable resources - Natural resources, such as petroleum, minerals, and metals, that are used more quickly than they can be replaced by natural processes.
Nonvascular plant - Plant that absorbs water and other substances directly through its cell walls instead of through tubelike structures.
notochord - Firm but flexible structure that extends along the upper part of a chordate's body.
nuclear energy - Energy produced from the splitting apart of billions of uranium nuclei by a nuclear fission reaction.
nucleus - Organelle that controls all the activities of a cell and contains hereditary material made of proteins and DNA.
nutrients - Substances in foods--proteins, carbohydrates, fats, vitamins, minerals, and water--that provide energy and materials for cell development, growth, and repair.
olfactory cell - Nasal nerve cell that becomes stimulated by molecules in the air and sends impulses to the brain for interpretation of odors.
omnivore - Animal that eats plants and animals or animal flesh.
open circulatory system - Blood circulation system in which blood moves through vessels and into open spaces around the body organs.
organ - Structure, such as the heart, made up of different types of tissues that all work together.
organelles - Structure in the cytoplasm of a eukaryotic cell that can act as a storage site, process energy, move materials, or manufacture substances.
organic compounds - Compounds that always contain hydrogen and carbon; include carbohydrates, lipids, proteins, and nucleic acids.
organism - Any living thing; uses energy, is made of cells, reproduces, responds, grows, and develops.
osmosis - A type of passive transport that occurs when water diffuses through a cell membrane.
ovary - Female reproductive organ that produces eggs and is located in the lower part of the body.
ovary - Female reproductive organ that produces eggs and is located in the lower part of the body.
ovulation - Monthly process in which an egg is released from an ovary and enters the oviduct, where it can become fertilized by sperm.
ovule - In gymnosperms, the female reproductive part that produces eggs and food-storage tissues.
ozone depletion - Thinning of Earth's ozone layer caused by chlorofluorocarbons (CFCs) leaking into the air and reacting chemically with ozone, breaking the ozone molecules apart.
parasitism A type of symbiotic relationship in which one organism benefits and the other organism is harmed.
passive immunity - Immunity that results when antibodies produced in one animal are introduced into another's body; does not last as long as active immunity.
pasteurization - Process in which a liquid is heated to a temperature that kills most bacteria.

LIFE SCIENCE VOCABULARY TERMS

passive transport - Movement of substances through a cell membrane without the use of cellular energy; includes diffusion, osmosis, and facilitated diffusion.
pathogen - Disease-producing organism.
periosteum - Tough, tight-fitting membrane that covers a bone's surface and contains blood vessels that transport nutrients to the bone.
peripheral nervous system - Division of the nervous system, made up of all the nerves outside the CNS; connects the brain and spinal cord to other body parts.
peristalsis - Waves of muscular contractions that move food through the digestive tract.
petroleum – Nonrenewable resource formed over hundreds of millions of years, mostly from the remains of microscopic marine organisms buried in Earth's crust.
pharynx – Tube-like passageway for food, liquid, and air.
phenotype - Outward physical appearance and behavior of an organism.
pheromone - Powerful chemical produced by an animal to influence the behavior of another animal of the same species.
phloem - Vascular tissue that forms tubes that transport dissolved sugar throughout a plant.
photoperiodism - A plant's response to the lengths of daylight and darkness each day.
photosynthesis - Food-making process by which plants and many other producers use light energy to produce glucose and oxygen from carbon dioxide and water.
phylogeny - Evolutionary history of an organism; used by scientists to group organisms into kingdoms.
pioneer species - First organisms to grow in a new or disturbed area; break down rock and build soil.
pistil - Female reproductive organ inside the flower of an angiosperm; consists of a sticky stigma, where pollen grains land, and an ovary.

placenta - A saclike organ in which a placental embryo develops and that absorbs food and oxygen from the mother's blood.
placental - A mammal whose offspring develop inside a placenta in the female's uterus.
plasma - Liquid part of blood, made mostly of water, in which oxygen, nutrients, and minerals are dissolved.
platelet - Irregularly shaped cell fragment that helps clot blood and releases chemicals that help form fibrin.
pollen grain - Small structure produced by the male reproductive organs of a seed plant; has a water-resistant coat, can develop from a spore, and contains gametophyte parts that will produce sperm.
pollination - Transfer of pollen grains to the female part of a seed plant by agents such as gravity, water, wind, and animals.
pollutant - Substance that contaminates any part of the environment.
polygenic inheritance - Occurs when a group of gene pairs acts together and produces a specific trait, such as human eye color, skin color, or height.
polyp - Cnidarian body type that is vase-shaped and is usually sessile.
population - All the organisms that belong to the same species living in a community.

LIFE SCIENCE VOCABULARY TERMS

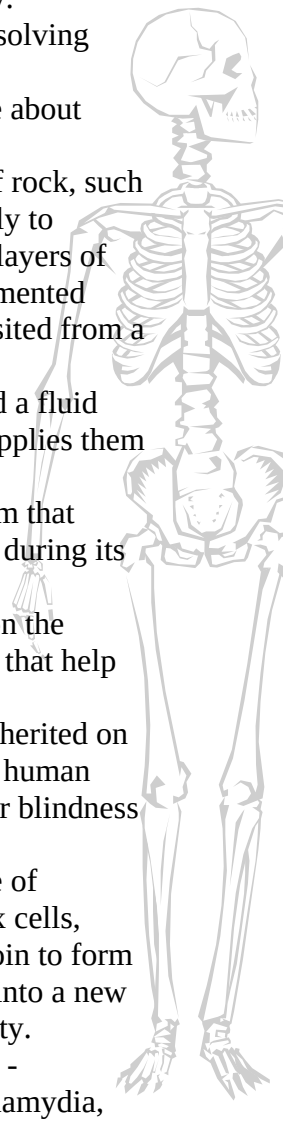
postanal tail – Muscular structure at the end of a developing chordate.
preening - Process in which a bird rubs oil from an oil gland over its feathers to condition them and make them water repellent.
pregnancy - Period of development--usually about 38 or 39 weeks in humans--from fertilized egg until birth.
primates - Group of mammals including humans, monkeys, and apes that share characteristics such as opposable thumbs, binocular vision, and flexible shoulders.

producer - Organism, such as a green plant or alga, that uses an outside source of energy like the Sun to create energy-rich food molecules.
protein - Nutrient made up of amino acids that is used by the body for growth and for replacement and repair of body cells.
prothallus - Small, green, heart-shaped gametophyte plant form of a fern that can make its own food and absorb water and nutrients from the soil.
protist - One- or many-celled eukaryotic organism that can be plantlike, animal-like, or funguslike.
protozoan - One-celled, animal-like protist that can live in water, soil, and living and dead organisms.
pseudopods - Temporary cytoplasmic extensions used by some protists to move about and trap food.
pulmonary circulation - Flow of blood through the heart to the lungs and back to the heart.
punctuated equilibrium - Model describing the rapid evolution that occurs when mutation of a few genes results in a species suddenly changing into a new species.
punnett square - A tool to predict the probability of certain traits in offspring that shows the different ways alleles can combine.
radial symmetry - Body parts arranged in a circle around a central point.
radioactive element - Element that gives off a steady amount of radiation as it slowly changes into a nonradioactive element.
radula - In gastropods, the tonguelike organ with rows of teeth used to scrape and tear food.
recessive - Describes a trait that is covered over, or dominated, by another form of that trait and seems to disappear.
recycling - Conservation method that is a form of reuse and requires changing or reprocessing an item or natural resource.

reflex - Simple innate behavior, such as yawning or blinking, that is an automatic response and does not involve a message to the brain.
renewable resources - Natural resources, such as water, sunlight, and crops, that are constantly being recycled or replaced by nature.
respiration - Series of chemical reactions used to release energy stored in food molecules.
retina - Light-sensitive tissue at the back of the eye; contains rods and cones.
rhizoids - Threadlike structures that anchor nonvascular plants to the ground.
rhizome - Underground stem of a fern.
ribosome - Small structure on which cells make their own proteins.
RNA - Ribonucleic acid, which carries codes for making proteins from the nucleus to the ribosomes.

LIFE SCIENCE VOCABULARY TERMS

saprophyte - Organism that feeds on dead or decaying tissues of other organisms.
scales - Hard, thin plates that cover a fish's skin and protect its body.
scientific method - Problem-solving techniques used to investigate observations that can be made about living and nonliving things.
sedimentary rock - A type of rock, such as limestone, that is most likely to contain fossils; formed when layers of sand, silt, clay, or mud are cemented together or minerals are deposited from a solution.
semen - Mixture of sperm and a fluid that helps sperm move and supplies them with an energy source.
sessile - Describes an organism that remains attached to one place during its lifetime.
setae - Bristlelike structures on the outside of each body segment that help segmented worms move.
sex linked gene - An allele inherited on a sex chromosome; can cause human genetic disorders such as color blindness and hemophilia.
sexual reproduction - A type of reproduction in which two sex cells, usually an egg and a sperm, join to form a zygote, which will develop into a new organism with a unique identity.
sexually transmitted disease - Infectious disease, such as chlamydia, AIDS, or genital herpes, that is passed from one person to another during sexual contact.
short day plant - Plant that generally requires long nights--12 or more hours of darkness--to begin the flowering process.
skeletal muscle - Voluntary, striated muscle that moves bones, works in pairs, and is attached to bones by tendons.



skeletal system - All the bones in the body; forms an internal, living framework that provides shape and support, protects internal organs, moves bones, forms blood cells, and stores certain minerals.
smooth muscle - Involuntary, nonstriated muscle that controls movement of internal organs.
social behavior - Interactions among members of the same species, including courtship and mating, getting food, caring for young, and protecting each other.
society - A group of animals of the same species that live and work together in an organized way, with each member doing a specific job.
soil – Mixture of mineral and rock particles, the remains of dead organisms, air, and water that forms the topmost layer of Earth's crust and supports plant growth.
sori - Fern structures in which spores are produced.
species - Group of organisms that share imilar characteristics and can reproduce among themselves.
sperm - Haploid sex cells formed in the male reproductive organs.
spiracles - Openings in the abdomen and thorax of insects through which air enters and waste gases leave.
spores- Haploid cells produced in the gametophyte stage of a plant that can divide by mitosis and form structures or an entire new plant or can develop into sex cells.
spontaneous generation - Theory that living things can come from nonliving things.
sporangium - Round spore case of a zygote fungus.
spore - Waterproof reproductive cell of a fungus.

LIFE SCIENCE VOCABULARY TERMS

sporophyte stage - Plant life cycle stage that begins when an egg is fertilized by a sperm.
stamen - Male reproductive organ inside the flower of an angiosperm; consists of an anther, where pollen grains form, and a filament.
stomata - Small openings in the surface of most plant leaves that allow carbon dioxide, water, and oxygen to enter and exit.
stinging cells – Capsules with coiled trigger-like structures that help cnidarians capture food.
succession – natural gradual changes in the types of species that live in an area: can be primary or secondary.
symbiosis - Any close relationship between species, including mutualism, commensalism, and parasitism.
synapse - Small space across which an impulse moves from an axon to the dendrites or cell body of another neuron.
systemic circulation - Largest part of the circulatory system in which oxygen-rich blood flows to all organs and body tissues, except the heart and lungs, and oxygen-poor blood is returned to the heart.
taiga World's largest biome located south of the tundra between 50 and 60 degrees N latitude; has long, cold winters, precipitation of 35-100 cm each year, cone-bearing evergreen trees, and dense forests.
taste bud - Major sensory receptor on the tongue; contains taste hairs that send impulses to the brain for interpretation of tastes.
deciduous forest - Biome usually having four distinct seasons, temperate annual precipitation of 75-150 cm, and climax communities of deciduous trees.
temperate rain forest – Biome with 200-400 cm of precipitation each year, average temperatures between 9-12 degrees C, and forest dominated by trees with needle-like leaves.
tendon - Thick band of tissue that attaches bones to muscles.
tentacles – Arm-like structures that have stinging cells and surround the mouths of most cnidarians.
testis - Male organ that produces sperm and testosterone.
theory - An explanation of events or things based on scientific knowledge resulting from repeated observations and tests.
tissue - Group of similar cells that work together to do one job.
toxin - Poisonous substance produced by some pathogens.
trachea - Air-conducting tube that connects the larynx with the bronchi, is lined with mucous membranes and cilia, and contains strong cartilage rings.
tropical rain forest - Most biologically diverse biome; has an average temperature of 25 degrees C and receives 200-600 cm of precipitation each year.
tropism - Positive or negative plant response to an external stimulus such as touch, light, or gravity.
tube feet - Hydraulic, hollow, thin-walled tubes that end in suction cups and enable echinoderms to move.
tundra - Cold, dry, treeless biome with less than 25 cm of precipitation each year, a short growing season, permafrost, and winters that can be six to nine months long.
umbilical cord - Connects the embryo to the placenta; moves food and oxygen from the placenta to the embryo and removes the embryo's waste products.
ureter - Tube that carries urine from
urethra - Tube that carries urine from the bladder to the outside of the body.

LIFE SCIENCE VOCABULARY TERMS

urine - Wastewater that contains excess water, salts, and other wastes that are not reabsorbed by the body.
urinary system - System of excretory organs that rids the blood of wastes, controls blood volume by removing excess water, and balances concentrations of salts and water.
uterus - Hollow, muscular, pear-shaped organ where a fertilized egg develops into a baby.
vaccination - Process of giving a vaccine by mouth or by injection to provide active immunity against a disease.
vaccine - Preparation made from killed bacteria or damaged particles from bacterial cell walls that can prevent some bacterial diseases.
vaccine - A solution made from damaged virus or bacteria particles or from killed or weakened viruses or bacteria; can prevent, but not cure, many viral and bacterial diseases.
vagina -Muscular tube that connects the lower end of the uterus to the outside of the body; the birth canal through which a baby travels when being born.
variable - In an experiment, the one thing that can change.
variation - Inherited trait that makes an individual different from other members of the same species and results from a mutation in the organism's genes.
vascular plant - Plant with tubelike structures that move minerals, water, and other substances throughout the plant.
vein - Blood vessel that carries blood back to the heart and has one-way valves that keep blood moving toward the heart.
ventricles Two lower chambers of the heart that contract at the same time during a heartbeat.
vertebrae – backbones that are joined by flexible cartilage and protect a vertabrate's spinal nerve cord.
vertebrate - Animal with a backbone.
vestigial structure - Structure, such as the human appendix, that doesn't seem to have a function and may once have functioned in the body of an ancestor.
villi - Fingerlike projections covering the wall of the small intestine that increase the surface area for food absorption.
virus - Extremely tiny piece of genetic material that infects and multiplies in host cells; surrounded by a protein coating.
vitamin - Water-soluble or fat-soluble organic nutrient needed in small quantities for growth, for preventing some diseases, and for regulating body functions.
voluntary muscle - Muscle, such as a leg or arm muscle, that can be consciously controlled.
water cycle - Model describing how water moves from Earth's surface to the atmosphere and back to the surface again through evaporation, condensation, and precipitation.
water vascular system - Network of water-filled canals that allows echinoderms to move, capture food, give off wastes, and exchange carbon dioxide and oxygen.
wetland – A region that is wet most or all of the year.
xylem - Vascular tissue that forms hollow vessels that transport substances, other than sugar, throughout a plant.
zygote - New diploid cell formed when a sperm fertilizes an egg; will divide by mitosis and develop into a new organism.