

7th grade Life Science Glossary

A

Abdomen - the distinct, usually elongated posterior region of an arthropod's body
Abiotic – the non-living things in an environment
Adaptation - the process of becoming adapted to an environment; an anatomical, physiological, or behavioral change that improves a population's ability to survive
Alleles - one of the alternative forms of a gene that governs a characteristic, such as hair color
Algae - organisms that convert the sun's energy into food through photosynthesis but that do not have roots, stems, or leaves (singular, alga)
Alveoli - any of the tiny air cells of the lungs where oxygen and carbon dioxide are exchanged; singular is alveolus
Angiosperm - a flowering plant that produces seeds within a fruit
Annelid - A worm that is made up of rings or segments.
Antennae - a feeler on the head of an invertebrate, such as an arthropod, a crustacean, or an insect, that senses touch, taste, or smell
Antibiotic - a substance that can inhibit the growth of or kill some microorganisms
Antigens - foreign bacteria in your body
Archaeobacteria - classification kingdom made up of bacteria that live in extreme environments; differentiated from other prokaryotes by various important chemical differences
Arteries - a blood vessel that carries blood away from the heart to the body's organs
Asymmetry - irregular in shape; without symmetry
Atom – the smallest part of an element

B

Bacteria - extremely small, single-celled organisms that usually have a cell wall and reproduce by cell division (singular, bacterium)
Bilateral symmetry - a condition in which two equal halves of a body mirror each other
Binary Fission - a form of asexual reproduction in single-celled organisms by which one cell divides into two cells of the same size
Biogenesis – the theory of how life began that says that living things come from other living things
Biotic – the living things in an environment
Bioremediation - the biological treatment of hazardous waste by natural or genetically engineered microorganisms
Blood - the fluid that carries oxygen and nutrients to the body and that is made up of platelets, white blood cells, red blood cells, and plasma
Bronchi - the two tubes that connect the lungs with the trachea; singular is bronchus

C

Capillaries - a tiny blood vessel that allows an exchange between blood and cells in tissue
Capsid - hard outer covering of a bacteria cell
Carbohydrates – a critical chemical of life that is an energy source
Cardiac Muscle - the type of involuntary muscle found in the heart
Cartilage - a flexible and strong connective tissue
Central Nervous System - the brain and the spinal cord; its main function is to control the flow of information in the body
Cephalothorax - in arachnids and some crustaceans, the body part made up of the head and the thorax
Characteristic – a feature that has different forms in a population
Chelicerae – the claw-like mouthparts on arachnids such as spiders, scorpions and ticks
Cilia - a hairlike structure arranged in tightly packed rows that projects from the surface of some cells; single is cilium
Class - a taxonomic category containing orders with common characteristics
Classification - the division of organisms into groups, or classes, based on specific characteristics
Closed Circulatory System - a system that contains blood with a true heart and blood vessels
Club Fungi – a type of fungus that reproduces sexually, many of which have “gills” underneath; includes mushrooms, puffballs and bracket fungi
Cnidarians - An organism that contains a stinging cell to capture prey
Coelom - a body cavity that contains the internal organs
Collar Cells - any of the flagellate cells that line the cavities of a sponge; also called a *choanocyte*
Complete Metamorphosis - the transformation from larva to adult in insects
Compound Eye - an eye composed of many light detectors separated by pigment cells
Conjugation - in prokaryotes, algae, and fungi, a type of sexual reproduction in which two cells join temporarily to recombine nuclear material
Connective Tissue - a tissue that has a lot of intracellular substance and that connects and supports other tissues
Crop - A part of the digestive system of a worm that stores soil
Cutaneous respiration - exchange of gases between the skin and the air/water
Cyanobacteria – a bacterium that can carry out photosynthesis, such as a blue-green alga

D

Dermis - the layer of skin below the epidermis

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Dichotomous Key - an aid that is used to identify unknown organisms and that consists of the answers to a series of questions, of which each involves alternate choices

Dicot - an angiosperm that has two cotyledons and flower parts in groups of four or five.

Dominant - describes the allele that is fully expressed when carried by only one of a pair of homologous chromosomes

E

Echinoderm - a radially symmetrical marine invertebrate that has an endoskeleton, such as a starfish, a sea urchin, or a sea cucumber

Element - a substance that is made up of only 1 type of atom

Endoskeleton - an internal skeleton made of bone and cartilage

Endospore - a thick-walled protective spore that forms inside a bacterial cell and resists harsh conditions

Epidermis - the outer surface layer of cells of a plant or animal

Epithelial tissue - a tissue composed of cells that form a barrier between an organism and its external environment

Esophagus - a long, straight tube that connects the pharynx to the stomach

Eubacteria - a classification kingdom that contains all prokaryotes except archaeobacteria

Eukaryotic - an organism made up of cells that have a nucleus enclosed by a membrane, multiple chromosomes, and a mitotic cycle; eukaryotes include animals, plants, and fungi but not bacteria or cyanobacteria

Eustachian tube - a channel that connects the middle ear to the mouth cavity

Exoskeleton - a hard, external, supporting structure that develops from the ectoderm

F

Family - the taxonomic category below the order and above the genus

Flagella - a long, hairlike structure that grows out of a cell and enables the cell to move

Fungus - an organism whose cells have nuclei, rigid cell walls, and no chlorophyll and that belongs to the kingdom Fungi

G

Gallbladder - sac-shaped organ that stores bile produced by the liver

Ganglia - a mass of nerve cells

Genes - a segment of DNA that is located in a chromosome and that codes for a specific hereditary trait

Genotype - the entire genetic makeup of an organism; *also* the combination of genes for one or more specific traits

Genus - the level of classification that comes after family and that contains similar species

Gizzard - A part of the digestive system that grinds up food for digestion

Gram - measurement for mass in the metric system

Gut - the digestive tract

Gymnosperm - a woody vascular seed plant whose seeds are not enclosed by an ovary or fruit

H

Heredity - the passing of genetic traits from parent to offspring

Heterotroph - an organism that obtains organic food molecules by eating other organisms or their by products and that cannot synthesize organic compounds from inorganic materials

Homeostasis - the maintenance of a constant internal state in a changing environment; a constant internal state that is maintained in a changing environment by continually making adjustments to the internal and external environment

Hyphae - a nonreproductive filament of a fungus

Hypothesis - a theory or explanation that is based on observations and that can be tested

I

Impulse - an electrical message that passes along a neuron

Incomplete Metamorphosis - a change from egg to nymph to adult with little change in appearance

Inquiry - a seeking request for truth, information, or knowledge

Invertebrate - an animal that does not have a backbone

J

Joint - a place where two or more bones meet

K

Kidney - one of the organs that filter water and wastes from the blood, excrete products as urine, and regulate the concentration of certain substances in the blood

Kingdom - the highest taxonomic category, which contains a group of similar phyla

L

Large Intestine - the broader and shorter portion of the intestine, where water is removed from the mostly digested food to turn the waste into semisolid feces, or stool

Law - a summary of many experimental results and observations; a law tells how things work

Lichen - a mass of fungal and algal cells that grow together in a symbiotic relationship and that are usually found on rocks or trees

Ligament - a type of tissue that holds together the bones in a joint

Lipids - a critical chemical of life that are made up of fats and oils

Liter - measurement for volume in the metric system

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Liver - the largest organ in the body; it produces bile, stores and filters blood, and converts sugars into glycogen

M

Mandibles - a type of mouthpart found in some arthropods and used to pierce and suck food; the lower part of the jaw

Mass - a measure of the amount of matter in an object; a fundamental property of an object that is not affected by the forces that act on the object, such as the gravitational force

Medusa - a free-swimming, jellyfish-like, and often umbrella-shaped sexual stage in the life cycle of a cnidarian; *also* a jellyfish or a hydra

Metabolism – the process of the chemical activities of life including digestion, ingestion, respiration and excretion

Meter - the basic unit of length in the SI (abbreviation, m)

Metric System - system of measurement using meters, grams, liters

Mitosis - in eukaryotic cells, a process of cell division that forms two new nuclei, each of which has the same number of chromosomes

Mold - in biology, a fungus that looks like wool or cotton

Monocot- a plant that produces seeds with only one cotyledon

Mucous glands – a gland that secretes a slippery substance called mucous

Muscle tissue - the tissue made of cells that can contract and relax to produce movement

Mycellium - the mass of fungal filaments, or hyphae, that forms the body of a fungus

N

Nematocyst - in cnidarians, a stinging cell that is used to inject a toxin into prey

Nephron - the functional unit of the kidney

Nerve - a collection of nerve fibers through which impulses travel between the central nervous system and other parts of the body

Nerve Cord – a pack of nerves on a single path; simpler than a spinal cord but serves the same purpose

Nerve Ring – a circle of nerve fibers around the mouth of an echinoderm

Nervous tissue - the tissue of the nervous system, which consists of neurons, their supporting cells, and connective tissue

Neuron - a nerve cell that is specialized to receive and conduct electrical impulses

Nictitating membrane - a third eyelid found under the lower eyelid of many vertebrates, including birds, reptiles, and amphibians

Nonvascular plant - the three groups of plants (liverworts, hornworts, and mosses) that lack specialized conducting tissues and true roots, stems, and leaves

Nucleic Acid – a critical chemical of life that builds proteins

O

Open Circulatory System - a system of blood flow that has no true heart and no blood vessels

Order - the taxonomic category below the class and above the family

Osculum - an opening in a sponge's body through which water exits

Ostia - one of the small openings in a sponge's body through which water enters

Ovary - in the female reproductive system of animals, an organ that produces eggs; in flowering plants, the lower part of a pistil that produces eggs in ovules

P

Pancreas - the organ that lies behind the stomach and that produces and secretes insulin, glucagon, and digestive enzymes

Parasite - an organism that feeds on an organism of another species (the host) and that usually harms the host; the host never benefits from the presence of the parasite

Pathogen - a virus, microorganism, or other substance that causes disease; an infectious agent

Peripheral Nervous System - all of the parts of the nervous system except for the brain and the spinal cord (the central nervous system); includes the cranial nerves and nerves of the neck, chest, lower back, and pelvis

Petal - one of the usually brightly colored, leaf-shaped parts that make up one of the rings of a flower

Phenotype - an organism's appearance or other detectable characteristic that results from the organism's genotype and the environment

Phloem - the tissue that conducts food (sugars, amino acids, and mineral nutrients) in vascular plants

Photosynthesis - the process by which plants, algae, and some bacteria use sunlight, carbon dioxide, and water to produce carbohydrates and oxygen

Phylum - the taxonomic group below kingdom and above class

Pistil - the female reproductive part of a flower that produces seeds and consists of an ovary, style, and stigma

Pollen - the tiny granules that contain the male gametophyte of seed plants

Pollination - the transfer of pollen from the male reproductive structures (the anthers) to the tip of a female reproductive structure (the pistil) of a flower in angiosperms or to the ovule in gymnosperms

Polyp - a form of a cnidarian that has a cylindrical, hollow body and that is usually attached to a rock or to another object

Prokaryote - an organism that consists of a single cell that does not have a nucleus or cell organelles; an example is a bacterium

Protein – a critical chemical of life that builds cells

Protozoa -a single-celled protist that can be aquatic or parasitic, that has organelles enclosed by a membrane, and that can move independently; examples include amebas and paramecia

Pseudopod - a retractable, temporary cytoplasmic extension that functions in food ingestion and movement in certain ameboid cells

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Pulmonary circulation - the flow of blood from the right ventricle of the heart to the lungs and back to the left atrium of the heart through the network of pulmonary arteries, capillaries, and veins

Pulmonary respiration - exchange of gases between the lungs and the air

Punnett Square - graphic used to predict the results of a genetic cross

Q

Qualitative Data – any information that uses words to describe your data (shape, color, smell, etc.)

Quantitative Data – any information that is expressed in numbers or measured (height, weight, length, etc.)

R

Radial Nerve – a nerve that runs from the nerve ring to the tip of each arm in sea stars, controlling the arm

Radial Symmetry - a body plan in which the parts of an animal's body are organized in a circle around a central axis

Receptor - a specialized sensory nerve that responds to specific types of stimuli

Recessive - describes a trait or an allele that is expressed only when two recessive alleles for the same characteristic are inherited

Reflex - an involuntary and almost immediate movement in response to a stimulus

Respiration - the process by which cells produce energy from carbohydrates; atmospheric oxygen combines with glucose to form water and carbon dioxide

Rhizoid - a rootlike structure in nonvascular plants, such as mosses or liverworts, that holds the plants in place and aids in absorption

Rhizome - a horizontal, underground stem that provides a mechanism for asexual reproduction

S

Sac Fungi – the largest group of fungi containing yeasts, mildews and truffles.

Segment - annelid worms are exterior structure that move independently

Sepal - in a flower, one of the outermost rings of modified leaves that protect the flower bud

Skeletal Muscle - a voluntary muscle that is attached to the bones and that moves parts of the body

Slime Mold – a type of colorful protist that lives on decaying plants and feeds on bacteria and other microorganisms

Small Intestine - the region of the digestive tube between the stomach and the colon (large intestine) where food's acidity is neutralized and most of the nutrients are absorbed

Smooth Muscle - the elongated muscle that is not under voluntary control and that is found in the digestive tract, blood vessels, glands, and hair follicles, but not in the heart

Sponge - an aquatic invertebrate of the phylum Porifera that attaches to stones or plants and that has a porous structure and a tough, elastic skeleton

Spore - reproductive cell or multicellular structure that is resistant to environmental conditions and that can develop into an adult without fusion with another cell

Species - a group of organisms that are closely related and can mate to produce fertile offspring; *also* the level of classification below genus

Spontaneous Generation – the theory of how life began that says that living things come from nonliving things

Stamen - the male reproductive structure of a flower that produces pollen and consists of an anther at the tip of a filament

Stigma - the expanded apex of a pistil, supported by the style; the part of the pistil that receives the pollen

Stimulus - anything that causes a reaction or change in an organism or any part of an organism

Stoma - one of many openings in a leaf or a stem of a plant that enable gas exchange to occur (plural, *stomata*)

Stomach - the saclike, expandable digestive organ that is located between the esophagus and the small intestine and that breaks down food into a liquid by the action of muscles, enzymes, and acids

Stress - a physical or mental response to an unusual environmental condition

Style - in plants, the slender, upper part of the pistil

Systemic circulation - the movement of blood from the heart to all parts of the body and back to the heart

T

Taxonomy - the science of describing, naming, and classifying organisms

Tendon - a tough connective tissue that attaches a muscle to a bone or to another body part

Theory - an explanation for some phenomenon that is based on observation, experimentation, and reasoning

Thorax - in higher vertebrates, the part of the body between the neck and the abdomen; in other animals, the body region behind the head; in arthropods, the mid-body region

Threadlike Fungus – shapeless, fuzzy molds that decompose rotting material

Trachea - the tube that connects the pharynx to the lungs

Trait - a genetically determined characteristic

Transpiration - the process by which plants release water vapor into the air through stomata

Tympanic membrane - the eardrum

U

Urinary Bladder - a hollow, muscular organ that stores urine

V

Vascular plant - a plant that has a vascular system composed of xylem and phloem, specialized tissues that conduct materials from one part of the plant to another

Veins - a vessel that carries blood to the heart

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Vertebrate - an animal that has a backbone; includes mammals, birds, reptiles, amphibians, and fish

Volume - a measure of the size of a body or region in three-dimensional space

Vomerine teeth - two rough pads in the roof of the mouth.

W

Water Vascular System - a system of canals filled with a watery fluid that circulates throughout the body of an echinoderm

X

Xylem - the type of tissue in vascular plants that provides support and conducts water and nutrients from the roots