FOSS Diversity of Life Vocabulary

Defined Term	Your Take	Pg #
Abdomen: The third section of the insect body, including the digestive and reproductive organs and most of the circulatory and respiratory systems.		
Adult: The fully developed and sexually mature stage in an organism's life cycle.		
Alga (algae, pl.): Algae are aquatic protists containing chlorophyll. They may be microscopic and unicellular or huge and multicellular.		
Amoeba (amoebae, pl.): Amoebae are microscopic, unicellular protists found in decaying organic material at the bottom of bodies of freshwater.		
Anther: The part of the stamen (at the tip) where pollen is produced.		
Aquatic: Living or occurring in water.		
Bacterium (bacteria, pl.): Microscopic, unicellular organisms that lack a nucleus and organelles (prokaryotic). Bacteria are found in all environments and most are harmless to humans.		
Cell: The basic unit of life. All organisms are cells or are made of cells.		
Cell membrane: A semipermeable "skin" surrounding the cell and separating it from its environment.		
Cell wall: A semirigid structure that surrounds cells of plants, fungi, and bacteria.		
Chlorophyll: A green pigment in chloroplasts that captures light energy, which is used to make food.		
Chloroplast: An organelle containing chlorophyll found in plant cells and some protists.		
Cotyledon: The white, starchy part of a seed. The cotyledon contains food to nourish the embryo during germination.		

Cilium (cilia, pl.): Short hairlike structures that propel protists through their fluid environment.		
Cuticle: A waxy layer on the outside of plant cell walls that reduces water loss through evaporation.		
Cytoplasm: The fluid portion of a cell's interior. The organelles are suspended in the cytoplasm.		
Dormant: A state of suspended biological activity. Dormant organisms are alive but inactive.		
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Egg: The female sex cell.		
Elodea: Aquatic plant with translucent leaves that grows in freshwater ponds and slow-moving streams throughout North America.		
Embryo: The early developmental stage of a plant or animal.		
Energy: The capacity to do work. Most of the energy used by living organisms comes from the Sun.		
Epidermis: The outermost layer of an organism. In humans it is composed of skin cells. In plants it is the outer layer of cells.		
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Exoskeleton: A rigid outer covering that supports some soft-tissuedorganisms, such as insects.		
Fertilization: The union of the nucleus of an egg cell with the nucleus of a sperm cell to produce a cell that will divide to become a new organism of the same type as the parent cells.		
Flagellum (flagella, pl.): A whiplike structure that propels protists through water.		
Focal plane: In a microscope, the focal plane is a flat region parallel to the microscope slide where the image of the specimen is in focus. The focal plane always stays at a specific distance from the objective lens.		
Fruit: The ripened ovary of a plant containing the seeds.		
Fungus (fungi, pl.): One of the five kingdoms of life, fungi are always composed of eukaryotic cells. Fungi, including molds, mushrooms, and yeasts, can be single cell or multicellular. They digest food externally and absorb the nutrient molecules.		
Gas exchange: Gas exchange is one of the characteristics of all organisms. Gas exchange occurs at the cellular level with carbon dioxide, oxygen, and water vapor being the most common gases exchanged.		
Gastropod: Snails and slugs are members of this class, which comprises the largest group of animals in phylum Mollusca. The name means belly foot.		
Germination: The start of growth and development of a seed.		
Guard cell: A specialized epidermal plant cell that controls the opening and closing of the stomates, thus regulating transpiration.		

Hermaphroditic: A condition of an organism that has both male and female sexual reproduction organs, producing both eggs and sperm.		
Insect: One of the classes of animals in the phylum Arthropoda. Most insects have three body parts (head, thorax, and abdomen), six legs, and antennae.		
Larva: The immature, wingless, feeding stage in the life cycle of many insects.		
Metamorphosis, complete: The life cycle of some insects that progresses from egg, to larva, to pupa, and finally to adult.		
Metamorphosis, incomplete: The life cycle of some insects that progresses from egg, to a number of nymphal stages, and finally to adult. Different insects have different numbers of nymphal stages.		
Mitochondrion: A cell organelle that processes sugar, providing energy for the cell and releasing simple chemicals into the cell cytoplasm.		
Monera: One of the five kingdoms of life. Organisms in this kingdom are all prokaryotic cells called bacteria.		
Nucleus: This cell organelle regulates the production of proteins and contains genetic material.		
Organelle: Structure inside eukaryotic cells that performs specialized functions.		
Organism: An individual living thing, such as a plant, animal, fungus, bacterium, or protist.		
Ovary: The part of the plant at the base of the pistil that contains the egg. After fertilization the ovary turns into a fruit.		
Ovule: The potential seeds found within the ovaries of a plant.		
Palisade layer: The tightly packed photosynthetic cell found just under the epidermis in many leaves.		

Paramecium (paramecia, pl.): A ciliated protist that lives in fresh water and eats other tiny organisms for food.		
Pheromone: A chemical released by an animal to communicate with or influence another member of the same species.		
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Photosynthesis: The process by which plants, and some protists and bacteria use light energy, carbon dioxide, and water to make sugar.		
Pistil: A part of a flower. It is the female reproductive structure. It consists of the ovary, containing the seeds, and the stigma.		
Pollen: The tiny particles that contain the male sex cells. Pollen develops on the anthers. The pollen must be transported to the pistil for fertilization to occur.		
Pollination: The transfer of male pollen grains from the anther in one flower to the stigma on the female pistil in another flower.		
Prokaryotic: A primitive kind of cell containing no nucleus or organelles. All prokaryotic cells are organisms called bacteria.		
Protista: One of the five kingdoms of life. This very diverse kingdom is made up of eukaryotic cells, most of which are single-celled organisms.		
Pupa: One of the stages in the life cycle of insects that go through complete metamorphosis. The pupa is a nonfeeding, resting stage.		
Radula: A tonguelike structure containing rows of teeth in the mouths of most gastropods that is used for eating.		
Reproduction: The process by which organisms create new individuals of their kind. Some reproduce asexually and others reproduce sexually.		

Response: All organisms are influenced by their environments. The things organisms do when they are influenced by the environment are called responses.		
Root: The underground part of a plant that functions as an organ to take up water and minerals, store food, and anchor the plant.		
Root hair: An extension of an epidermal cell near the root tip that takes in water and minerals.		
Seed: A young plant in a dormant or resting stage, capable of growing into an adult plant.		
Sperm: The male sex cell.		
Spiracle: An opening on the side of an insect that allows for gas exchange (oxygen enters and carbon dioxide exits). The spiracle is connected to the tracheal system.		
Spongy layer: A ground tissue in plant leaves that contains spaces.		
Stamen: A part of a flower. It is the male reproductive structure. At the end of the long stamen is the anther where pollen grains form. Inside the pollen grains are the sperm cells.		
Stigma: The stigma is the tip of the pistil that is often sticky and receives the pollen grain.		
Stomate: An opening on the surface of a leaf. Carbon dioxide, oxygen, and water vapor pass in and out of the stomates. Guard cells control the opening and closing of the stomates.		
Sugar: One type of chemical compound produced by plants as a result of photosynthesis. Sugars are sources of energy for living organisms.		
Taxonomy: The science of classifying organisms based on similarities.		
Tentacle: A soft sensory appendage used by animals to get information about the environment. Snails have tentacles.		

Thorax: The middle body part of insects where legs and wings attach.		
Transpiration: The process by which water flows through plants, entering the roots and exiting the stomates.		
Vacuole: A fluid-filled membrane in the cytoplasm of plant cells, fungus cells, and protist cells. In protists there are food vacuoles and water vacuoles (contractile vacuoles).		
Waste: Solids, liquids, or gases that are unusable by the cells of organisms and must be moved outside the cell.		
Xylem: The vascular system within a plant (made of long connected cells) that transports water and minerals from the roots to the rest of the plant.		
Yeast: A single-celled fungus.		