**Science Glossary Grade 4**

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| adaptation | a characteristic of an organism that increases its chance of survival in its environment |
| atmosphere | the layers of gas that surround Earth, other planets, or stars |
| atom | the smallest unit of a chemical element that can still retain the properties of that element |
| axis | the imaginary line on which an object rotates (e.g., Earth’s axis runs through Earth between the North Pole and the South Pole); an imaginary straight line that runs through a body; a reference to the line in a coordinate system or graph |
| carnivore | an animal or plant that consumes or obtains nutrients from animals |
| change of state | a physical change that occurs when matter changes to another state (i.e., liquid, gas, or solid) |
| chemical change | a reaction or a change in a substance produced by chemical means that results in producing a different chemical |
| community | all the populations of organisms belonging to different species and sharing the same geographical area |
| compound | a substance made up of a combination of two or more elements held together by chemical bonds that cannot be separated by physical means; has properties unlike those of the elements that make up the compound |
| condensation | the process of changing from a gas (i.e., water vapor) to a liquid (i.e., dew); the act of making more dense or compact |
| conservation | controlled use and/or maintenance of natural resources; various efforts to preserve or protect natural resources |
| constellation | a star pattern identified and named as a definite group; usually thought of as forming certain shapes or figures in a specific region of the sky |
| consumer | an organism that feeds on other organisms for food |
| decomposer | any organism that feeds or obtains nutrients by breaking down organic matter from dead organisms |
| density | concentration of matter of an object; number of individuals in the same species that live in a given area; the mass per unit volume of a substance in a given area |
| deposition | layering matter in a natural process |
| earthquake | the shaking of the ground caused by a sudden release of energy in Earth’s crust |
| ecosystem | an integrated unit of a biological community, its physical environment, and interactions |
| electricity | energy created by moving charged particles |
| element | a substance that cannot be reduced to a simpler substance by chemical means |
| energy | a quantity that describes the capacity to do work; a source of usable power |
| energy pyramid | a pyramidal diagram that compares the amount of energy available at each position, or level, in the feeding order |
| energy transfer | a change of energy from one form to another (e.g., mechanical to electrical, solar to electrical) |
| environment | the sum of conditions affecting an organism, including all living and nonliving things in an area, such as plants, animals, water, soil, weather, landforms, and air |
| equator | an imaginary circle around Earth’s surface located between the poles and a plane perpendicular to its axis of rotation that divides it into the Northern and Southern Hemispheres |
| erosion | the wearing away of Earth’s surface by the breakdown and transportation of rock and soil |
| evaporation | the process by which a liquid is converted to its vapor phase by heating the liquid |
| experiment | a procedure that is carried out and repeated under controlled conditions in order to discover, demonstrate, or test a hypothesis; includes all components of the scientific method |
| food chain | transfer of energy through various stages as a result of feeding patterns of a series of organisms |
| food web (food cycle) | the interconnected feeding relationships in a food chain found in a particular place and time |
| force | a quality that tends to produce movement or acceleration of a body in the direction of its application; a push or pull |
| fossil | a whole or part of a plant or animal that has been preserved in sedimentary rock |
| friction | a force that opposes the relative motion of two material surfaces in contact with one another |
| fulcrum | the pivot point of a lever |
| galaxy | a large collection of stars, gases, and dust that are part of the universe (e.g., the Milky Way galaxy) bound together by gravitational forces |
| gas | one of the fundamental states of matter in which the molecules do not have a fixed volume or shape |
| gravitation | a force of attraction between two masses |
| gravity | the observed effect of the force of gravitation |
| habitat | a place in an ecosystem where an organism normally lives |
| heat | a form of energy resulting from the temperature difference between a system and its surroundings |
| herbivore | an animal that feeds on plants |
| igneous rock | a type of rock that forms from molten or partly molten material that cools and hardens |
| inclined plane | a type of simple machine; a slanted surface that makes it easier to move a mass from a lower point to a higher point |
| inertia | the property of a body, due to its mass, that causes it to resist any change in its motion unless overcome by a force |
| investigation | a procedure that is carried out in order to observe a response caused by a stimulus; not a complete experiment |
| kinetic energy | the energy possessed by a body because of its motion |
| lever | a type of simple machine; consists of a rigid bar that pivots about a fulcrum, used to transmit and enhance power or motion |
| life cycle | the entire sequence of events in an organism’s growth and development |
| light | electromagnetic radiation that lies within the visible range |
| liquid | one of the fundamental states of matter with a definite volume but no definite shape |
| magnetic | having the property of attracting iron and certain other materials by virtue of a surrounding field of force |
| mass | the amount of matter an object contains |
| matter | a solid, liquid, or gas that possesses inertia and is capable of occupying space |
| metamorphic rock | a type of rock that forms from existing rock because of extreme changes caused by heat, pressure, or chemical environments |
| microscopic | relating to an object too small to be visible without the use of a microscope |
| mixture | the product of a thorough blending of two or more substances, not chemically combined |
| moon | a natural satellite that revolves around a planet |
| moon phase | a phrase that indicates the fraction of the Moon’s disc that is illuminated (as seen from Earth); the eight moon phases (in order): new moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, last quarter, waning crescent |
| nonrenewable resource | a resource that can only be replenished over millions of years |
| organ | a structure containing different tissues that are organized to carry out a specific function of the body (e.g., heart, lungs, brain, etc.) |
| organism | any living plant, animal, or fungus that maintains various vital processes necessary for life |
| photosynthesis | a chemical process by which plants trap light energy to convert carbon dioxide and water into carbohydrates (sugars) |
| physical change | a reaction; a change in matter from one form to another, without forming new substances |
| planet | a large body in space that orbits a star and does not produce light of its own |
| pollution | any alteration of the natural environment producing a condition harmful to living organisms; may occur naturally or as a result of human activities |
| population | a group of organisms of the same species living in a specific geographical area |
| potential energy | the energy an object has because of its position or structure; stored energy |
| predator | an organism that preys on and consumes animals; usually an animal |
| prey | an organism caught or hunted for food by another organism |
| producer | an organism that makes its own food from the environment; usually a green plant |
| pulley | a type of simple machine; a circular lever, usually a wheel with a groove where a rope can be placed and used to change the direction of a force |
| reflection | the bouncing off or turning back of light, sound, or heat from a surface |
| refraction | the bending of waves as they enter a different medium |
| renewable resource | a resource that is replaced or restored, as it is used, by natural processes in a reasonable amount of time |
| resource | any material that can be used to satisfy a need |
| scientific method | a plan of inquiry that uses science process skills as tools to gather, organize, analyze, and communicate information |
| sedimentary rock | rock formed from layers of sediment that overlay and squeeze together or are chemically combined |
| solar system | a star and all the planets and other bodies that orbit it; the region in space where these bodies move |
| solid | having a definite shape and a definite volume; one of the fundamental states of matter |
| solution | a mixture of two or more substances uniformly dispersed throughout a single phase |
| star | a large, gaseous, self-luminous body held together by gravity and powered by thermonuclear reactions |
| Sun | the closest star to Earth and the center of our solar system |
| system | a set of objects, organisms, or different parts acting to form a whole |
| tissue | similar cells acting to perform a specific function; four basic types of tissue are muscle, connective, nerve, and epidermal |
| topography | the surface, shape, and composition of a land area |
| universe | the total sum of all matter and energy that exists |
| volcano | a vent or fissure in Earth’s surface through which magma and its associated materials are expelled; generally a mountain-like structure |
| volume | a measure of the amount of space an object takes up; also the loudness of a sound or signal |
| water cycle | the path water takes as it is being cycled through the environment, including condensation, evaporation, and precipitation |
| weathering | the natural processes that break down and change rock into soil, sand, and other materials; differs from erosion in that no transportation of those materials takes place |
| wheel and axle | a type of simple machine; a circular frame or disk revolving around a central axis |