**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  |