**Appendix D FCAT Science Glossary Grade 8**

**DO NOT LOSE – PUT IN FCAT FOLDER

Directions: Put all terms into your own words and Draw a Picture or Symbol for each. Also write additional information you know for each term. There will be a vocab quiz on these terms.
This is due Thursday. The Vocab Quiz is Friday.**

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| abiotic  | an environmental factor not associated with the activities of living organisms  |
| acceleration  | rate of change in velocity, usually expressed in meters per second; involves an increase or decrease in speed and/or a change in direction  |
| air resistance  | force of air on moving objects  |
| allele  | any of two or more alternate forms of a gene that an organism may have for a particular trait  |
| amplitude  | in any periodic function (e.g., a wave) the maximum absolute variation of the function  |
| asexual reproduction  | a form of reproduction in which new individuals are formed without the involvement of gametes  |
| biodiversity  | the existence of a wide range of different species in a given area or specific period of time  |
| biotic  | factors in an environment relating to, caused by, or produced by living organisms  |
| calorie  | unit of energy; the amount of heat needed to raise one gram of water one degree Celsius at standard atmospheric pressure  |
| chemical weathering  | the breakdown and alteration of rocks at or near Earth’s surface as a result of chemical processes  |
| circuit  | an interconnection of electrical elements forming a complete path for the flow of current  |
| conduction  | the transmission of heat through a medium and without the motion of the medium  |
| conservation of energy  | a fundamental principle stating energy cannot be created nor destroyed but only changed from one form to another  |
| convection  | heat transfer in a gas or liquid by the circulation of currents from one region to another  |
| crest  | the peak or highest point on a wave  |
| crust  | outermost layer of Earth covering the mantle  |
| dependent variable  | factor being measured or observed in an experiment  |
| deposition  | the process by which sediment is carried by forces (e.g., wind, rain, or water currents) and left in a certain area  |
| diffraction  | the change in direction of a wave caused by passing by an obstacle or traveling through an opening  |
| dominance  | tendency of certain (dominant) alleles to mask the expression of their corresponding (recessive) alleles  |
| ecosystem  | an ecological community, together with its environment, functioning as a unit  |
| efficiency  | therelative effectiveness of a system or device determined by comparing input and output  |
| electromagnetic radiation  | the emission and propagation of the entire range of electromagnetic spectrum including: gamma rays, x-rays, ultraviolet radiation, visible light, microwaves, and radio waves  |
| electron  | a stable elementary particle that is negatively charged and orbits the nucleus of an atom  |
| entropy  | a measure of randomness or disorder of a closed system  |
| erosion  | a combination of natural processes in which materials from Earth’s surface are loosened, dissolved, or worn away and transported from one place to another  |
| fossil fuels  | the remains of animal or plant life from past geologic ages that are now in a form suitable for use as a fuel (e.g., oil, coal, or natural gas)  |
| frequency  | the number of cycles or waves per unit time  |
| gene  | a specific part of a chromosome or sequence of DNA that determines a particular feature or characteristic in an organism  |
| heterozygous  | cell or organism that has two different alleles for a particular trait  |
| homozygous  | cell or organism that has identical rather than different alleles for a particular trait  |
| independent variable  | the factor that is changed in an experiment in order to study changes in the dependent variable  |
| inertia  | the property of an object, due to its mass, by which it resists any change in its position unless overcome by force  |
| magnetic field  | the region where magnetic force exists around magnets or electric currents  |
| mass  | the amount of matter an object contains  |
| meiosis  | the process of nuclear division in cells during which the number of chromosomes is reduced by half  |
| mitosis  | a process of nuclear division in eukaryotic cells during which the nucleus of a cell divides into two nuclei, each with the same number of chromosomes  |
| neap tide  | a twice-monthly tide of minimal range that occurs when the Sun, Moon, and Earth are at right angles to each other, thus decreasing the total tidal force exerted on Earth  |
| neutral  | a particle, object, or system that lacks a net charge  |
| neutron  | a subatomic particle having zero charge, found in the nucleus of an atom  |
| nucleus  | the center region of an atom where protons and neutrons are located; also a cell structure that contains the cell’s genetic material  |
| ocean basin  | a depression on the surface of Earth occupied by water  |
| plate tectonics  | theory of global dynamics in which Earth’s crust is divided into a smaller number of large, rigid plates whose movements cause seismic activity along their borders  |
| potential energy  | energy stored in an object due to the object’s configuration and position  |
| pressure  | the force exerted per unit area  |
| prism  | a piece of glass with polished plane surfaces that disperses a beam of white light into its component colors  |
| proton  | a subatomic particle having a positive charge and which is found in the nucleus of an atom  |
| Punnett square  | a graphic checkboard used to determine results from a particular genetic cross  |
| radiation  | emission of energy in the form of rays or waves  |
| recessive  | an allele for a trait that will be masked unless the organism is homozygous for this trait  |
| screw  | a type of simple machine that consists of an inclined plane wrapped around a cylinder  |
| sexual reproduction  | reproduction involving the union of gametes producing an offspring with traits from both parents  |
| spectroscope  | an instrument that uses a prism to separate and catalog light wavelengths  |
| speed  | amount of distance traveled divided by time taken; the time-rate at which any physical process takes place  |
| spring tide  | the tide of increased range that occurs twice monthly at the new and full phases of the Moon  |
| thermal energy  | internal energy found by adding the kinetic energy of particles making up a substance  |
| tropism  | the motion of an organism or part of an organism toward or away from an external stimulus  |
| trough  | the lowest point on a wave  |
| variable  | an event, condition, or factor that can be changed or controlled in order to study or test a hypothesis in a scientific experiment  |
| velocity  | the time-rate at which a body changes its position; defined as displacement divided by the time of travel  |
| vibration  | a repetitive movement around an equilibrium point  |
| virus  | a noncellular, disease-causing particle that uses the genetic material from its host to reproduce  |
| wavelength  | the distance between crests of a wave  |
| wedge  | a type of simple machine that consists of an inclined plane used to separate two objects  |
| wheel and axle  | a type of simple machine that consists of a rod driven through the center of a cylinder that is allowed to rotate freely, yielding a mechanical advantage equal to the cylinder’s diameter  |

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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  |
| chemical weathering  | the breakdown and alteration of rocks at or near Earth’s surface as a result of chemical processes  |
| circuit  | an interconnection of electrical elements forming a complete path for the flow of current (SERIES AND PARALLEL) |
| community  | all the populations of organisms belonging to different species and sharing the same geographical area 19 |
| 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  | theprocess of changing from a gas (i.e., water vapor) to a liquid (i.e., dew); the act of making more dense or compact  |
| conduction  | the transmission of heat through a medium and without the motion of the medium  |
| 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  | concentrationof 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  | the process by which sediment is carried by forces (e.g., wind, rain, or water currents) and left in a certain area  |
| diffraction  | the change in direction of a wave caused by passing by an obstacle or traveling through an opening  |
| dominance  | tendency of certain (dominant) alleles to mask the expression of their corresponding (recessive) alleles  |
| earthquake  | the shaking of the ground caused by a sudden release of energy in Earth’s crust  |
| electromagnetic radiation  | The emission and propagation of the entire range of electromagnetic spectrum including: gamma rays, x-rays, ultraviolet radiation, visible light, microwaves, and radio waves  |
| electron  | a stable elementary particle that is negatively charged and orbits the nucleus of an atom  |
| 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  |
| erosion  | a combination of natural processes in which materials from Earth’s surface are loosened, dissolved, or worn away and transported from one place to another  |
| 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 55 |
| 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  |
| investigation  | aprocedure 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  |
| magnetic field  | the region where magnetic force exists around magnets or electric currents  |
| 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 92 |
| neutral  | a particle, object, or system that lacks a net charge  |
| nonrenewable resource  | a resource that can only be replenished over millions of years  |
| ocean basin  | a depression on the surface of Earth occupied by water  |
| 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  |
| plate tectonics  | theory of global dynamics in which Earth’s crust is divided into a smaller number of large, rigid plates whose movements cause seismic activity along their borders  |
| 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 109 |
| pressure  | the force exerted per unit area  |
| prey  | an organism caught or hunted for food by another organism  |
| prism  | a piece of glass with polished plane surfaces that disperses a beam of white light into its component colors  |
| producer  | an organism that makes its own food from the environment; usually a green plant  |
| protist  | unicellular organisms belonging to the kingdom Protista  |
| 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  |
| radiation  | emission of energy in the form of rays or waves  |
| recessive  | an allele for a trait that will be masked unless the organism is homozygous for this trait  |
| reflection  | the bouncing off or turning back of light, sound, or heat from a surface  |
| refraction  | a change in the direction of a wave that occurs as it passes from one medium to another of different density  |
| 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  |
| sexual reproduction  | reproduction involving the union of gametes producing an offspring with traits from both parents  |
| 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 130 |
| solution  | a mixture of two or more substances uniformly dispersed throughout a single phase  |
| spring tide  | the tide of increased range that occurs twice monthly at the new and full phases of the Moon  |
| 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  |
| thermal energy  | internal energy found by adding the kinetic energy of particles making up a substance  |
| 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  |
| variable  | an event, condition, or factor that can be changed or controlled in order to study or test a hypothesis in a scientific experiment  |
| vibration  | a repetitive movement around an equilibrium point  |
| 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  |

Scientific Method – steps to solving scientific questions - KNOW ALL STEPSIndependent variable – The variable that is manipulated or changed by an experimentor (what YOU control or change)
Dependent Variable – The outcome variable that depends on the other variables/what is measured (like growth of plants, speed through a maze, etc.)