

FCAT Science Glossary Grade 8

(Knowledge of the terms in the Grade 5 glossary is assumed.)

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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 |

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| 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 | the relative 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 |

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| 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 |

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| 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 |

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| 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 |