

Grade 8 Science Vocabulary

The Florida Comprehensive Assessment Test Specifications for Science provides a glossary of vocabulary words identified by Florida educators as essential to assessing the Science Sunshine State Standards. The list of words that follow relate to the eighth grade CIA Science. It is important to note that the terms are not written in grade-appropriate language, nor do they include all science vocabulary words students in the eighth grade should know. The terms that appear in italics are science words that are introduced in elementary grades but are listed because they also relate to the eighth grade CIA Science. Teachers are encouraged to include all of these vocabulary words in science lessons throughout the year.

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
amplitude	in any periodic function (e.g., a wave) the maximum absolute variation of the function
<i>atom</i>	<i>the smallest unit of a chemical element that can still retain the properties of that element</i>
calorie	unit of energy; the amount of heat needed to raise one gram of water one degree Celsius at standard atmospheric pressure
<i>change of state</i>	<i>a physical change that occurs when matter changes to another state (i.e., liquid, gas, or solid)</i>
<i>chemical change</i>	<i>a reaction or a change in a substance produced by chemical means that results in producing a different chemical</i>
circuit	an interconnection of electrical elements forming a complete path for the flow of current

<i>compound</i>	<i>a substance made up of a combination of two or more elements held together by chemical bonds that cannot be separated by physical means</i>
<i>condensation</i>	<i>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</i>
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
<i>density</i>	<i>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</i>
dependent variable	factor being measured or observed in an experiment
diffraction	the change in direction of a wave caused by passing by an obstacle or traveling through an opening
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 the 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
<i>element</i>	<i>a substance that cannot be reduced to a simpler substance by chemical means</i>
<i>energy</i>	<i>a quantity that describes the capacity to do work; a source of usable power</i>
<i>energy transfer</i>	<i>a change of energy from one form to another (e.g., mechanical to electrical, solar to electrical)</i>
entropy	a measure of randomness or disorder of a closed system
<i>evaporation</i>	<i>the process in which a liquid is converted to its vapor phase by heating the liquid</i>
<i>experiment</i>	<i>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</i>
<i>force</i>	<i>a quality that tends to produce movement or acceleration of a body in the direction of its application; a push or a pull</i>
frequency	the number of cycles or waves per unit time
<i>friction</i>	<i>a force that opposes the relative motion of two material surfaces in contact with one another</i>
<i>fulcrum</i>	<i>the pivot point of a lever</i>
<i>gas</i>	<i>one of the fundamental states of matter in which molecules do not have fixed volume or shape</i>

<i>gravitation</i>	<i>a force of attraction between two masses</i>
<i>gravity</i>	<i>the observed effect of the force of gravitation</i>
<i>heat</i>	<i>a form of energy resulting from the temperature difference between a system and its surroundings</i>
<i>independent variable</i>	<i>the factor that is changed in an experiment in order to study changes in the dependent variable</i>
<i>inclined plane</i>	<i>a type of simple machine; a slanted surface that makes it easier to move a mass from a lower to a higher point</i>
<i>inertia</i>	<i>the property of an object, due to its mass, that causes it to resist any change in its motion unless overcome by a force</i>
<i>investigation</i>	<i>a procedure that is carried out in order to observe a response caused by a stimulus; not a complete experiment</i>
<i>kinetic energy</i>	<i>the energy possessed by a body because of its motion</i>
<i>lever</i>	<i>a type of simple machine; consists of a rigid bar that pivots about a fulcrum, used to transmit and enhance power or motion</i>
<i>light</i>	<i>electromagnetic radiation that lies within the visible range</i>
<i>liquid</i>	<i>one of the fundamental states of matter with a definite volume but no definite shape</i>
<i>magnetic</i>	<i>having the property of attracting iron and certain other materials by virtue of a surrounding field of force</i>

magnetic field	the region where magnetic force exist around magnets or electric currents
<i>mass</i>	<i>the amount of matter an object contains</i>
<i>matter</i>	<i>a solid, liquid, or gas that possesses inertia and is capable of occupying space</i>
<i>mixture</i>	<i>the product of a thorough blending of two or more substances, not chemically combined</i>
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
<i>physical change</i>	<i>a reaction; a change in matter from one form to another, without forming new substances</i>
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

<i>pulley</i>	<i>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</i>
radiation	emission of energy in the form of rays or waves
<i>reflection</i>	<i>the bouncing off or turning back of light, sound, or heat from a surface</i>
<i>refraction</i>	<i>a change in direction of a wave that occurs as it passes from one medium to another of different density</i>
<i>scientific method</i>	<i>a plan of inquiry that uses science process skills as a tool to gather, organize, analyze, and communicate information</i>
screw	a type of simple machine that consist of an inclined plane wrapped around a cylinder
<i>solid</i>	<i>having a definite shape and a definite volume; one of the fundamental states of matter</i>
<i>solution</i>	<i>a mixture of two or more substances uniformly dispersed throughout a single phase</i>
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
<i>system</i>	<i>a set of objects, organisms, or different parts acting to form a whole</i>
thermal energy	internal energy found by adding the kinetic energy of particles making up a substance

trough	the lowest point on a wave
variable	the 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
<i>volume</i>	<i>a measure of the amount of space an object takes up; also the loudness of a sound or signal</i>
wavelength	the distance between crest of a wave
wedge	a type of simple machine that consist 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