

The following glossary is a reference list provided for the item writers and is **not** intended to comprise a comprehensive vocabulary list for students.

8th Grade Summer Science Activity

Directions:

Review the attached vocabulary terms. *Over the summer create vocabulary index flash cards to help prepare for the Science FCAT given in 8th grade. Include vocabulary word, definition, and a picture or sentence using the word.*

FCAT 2.0 SCIENCE ITEM WRITER GLOSSARY Part 1

1. Absorb —To take up and store energy without reflecting or transmitting that energy.
2. Adaptation —A characteristic of an organism that increases its chances of survival in its environment.
3. Analyze —To examine methodically by separating into parts and studying their interrelatedness.
4. Asteroid —A rocky or metallic object that orbits the Sun and is much smaller than a planet.
5. Attraction —A term used to describe the electric or magnetic force exerted by oppositely charged objects or to describe the gravitational force that pulls objects toward each other.
6. Balanced forces —Forces that are equal in size but opposite in direction. See also force and unbalanced forces.
7. Behavior —A plant or animal action, reaction, or activity that occurs in response to stimuli (e.g., gravity, light, temperature).
8. Carnivore —An animal that obtains nutrients from eating other animals.
9. Characteristic —A feature, quality, property, or trait of an object or organism.
10. Chemical change —Process by which substances are changed into different substances with different properties.
11. Classify —To arrange in a specific order or group by categories based on similarities.
12. Cleavage —A property used to describe how a mineral breaks apart along smooth surfaces.
13. Climate —The average pattern of weather that occurs in a certain location over many years.
14. Comet —An object made of rock, ice, dust, and gas that revolves around the Sun.
15. Community —Populations of different species of organisms living together in the same geographic area.
16. Complete metamorphosis —Type of insect development characterized by the presence of a larval stage with different feeding habits.
17. Conclusion —A statement that tells what an investigation showed, based on observations and data.
18. Condensation —The process by which water is changed from a gas (water vapor) to a liquid; a stage of the water cycle.

19. Conduct —To transmit heat, sound, or electricity through a medium.
20. Consumer —An organism in a food chain that obtains nutrients from producers or other consumers; consumers may be herbivores or carnivores.
21. Control group —A group in a scientific experiment that serves as a reference for comparison to the experimental group; a group that is untreated by the factor being tested.
22. Data —Measurements or observations collected and recorded in an experiment or investigation.
23. Ecosystem —All the living and nonliving things that interact with each other in an environment.
24. Endangered species —A species whose population is so small that it is in danger of extinction.
25. Environment —An area that includes all living organisms and the surrounding physical features such as air, water, soil, weather, and landforms.
26. Erosion —The process by which rock, soil, and other weathered earth materials are moved from one place to another.
27. Evaporation —The process by which water is changed from a liquid to a gas (water vapor); a stage of the water cycle.
28. Experiment —A scientific test or procedure that is carried out under controlled conditions to answer a scientific question.
29. Extinct species —A species that no longer exists.
30. Fertilization —The process by which the female reproductive cell (egg) is united with the male reproductive cell (sperm).
31. Food chain —A diagram representing the transfer of energy from the Sun through producers and a series of consumers.
32. Force —A push or a pull that one object exerts on another object with or without direct contact (e.g., friction, gravity). See also balanced forces and unbalanced forces.
33. Friction —A force that opposes motion through direct contact.
34. Germination —The process by which plants begin to grow from a seed or a spore.
35. Hardness —A property of a mineral that describes how easily it can be scratched.
36. Hemisphere —Half of Earth (i.e., Northern, Southern, Eastern, Western).
37. Herbivore —An animal that obtains nutrients only from plants.
38. Humidity —A measure of the amount of water vapor in the air.
39. Igneous rock —A type of rock that forms from cooled magma or lava.
40. Incomplete metamorphosis —Type of insect development characterized by the similar appearance of pre-adults and adults.
41. Inference —An explanation based on evidence that is not directly observed.
42. Inherited trait —A trait or characteristic that is passed from parent to offspring.
43. Insulator —A material used to reduce or prevent the transfer of electricity, heat, or sound.
44. Invertebrate —An animal that lacks a backbone.

45. Investigation —An organized scientific study of the natural world that may include making systematic observations, asking questions, gathering information, analyzing data, summarizing results, drawing conclusions, and/or communicating results.
46. Larva —An early stage in the life cycle of an organism that will undergo complete metamorphosis.
47. Life cycle —The stages of an organism’s growth and development.
48. Luster —A property of a mineral that describes how it appears when it reflects light.
49. Mass —The amount of matter a substance or object has.
50. Matter —Anything that takes up space and has mass.
51. Mechanical energy —A type of energy an object has due to its motion or position.
52. Metamorphic rock —A type of rock that is formed over time from existing rock due to extreme pressure and/or heat.
53. Mineral —A naturally occurring inorganic solid with a distinct chemical composition and crystalline structure.
54. Moon —A natural object that orbits a planet.
55. Nutrient —A substance that an organism needs to survive and grow.
56. Nymph —A pre-adult insect undergoing incomplete metamorphosis.
57. Observation —Information about the natural world gathered through the senses and/or scientific instruments.
58. Omnivore —An organism that obtains nutrients from both plants and animals.
59. Organism —A living thing.
60. Ovary —The female reproductive organ that produces and contains egg cells.
61. Physical change —A change of a substance from one form to another without a change in its chemical properties.
62. Pistil —The female reproductive structure of a flowering plant.
63. Pitch —The relative frequency (high or low) of a sound as perceived by a listener.
64. Planet —A large body in space that orbits a star and does not produce its own light.
65. Polar zone —A climate zone characterized by very little precipitation and extremely cold temperatures.
66. Pollen —The fine dustlike powder that contains the male reproductive cells of seed-bearing plants.
67. Pollinate —To transfer the pollen from the male reproductive structure to the female reproductive structure to fertilize flowering plants.
68. Population —All members of the same species living together at the same time in the same area.
69. Precipitation —A form of water (e.g., hail, rain, sleet, snow) that condenses in the atmosphere and falls to Earth’s surface.
70. Predator —An organism that kills and eats other organisms (prey).
71. Predict —To state what one thinks will happen under certain conditions based on data or observation.
72. Prey —An organism that is killed and/or eaten by another organism (predator).
73. Producer —An organism that produces its own food.

74. Pupa —A stage in the life cycle of an insect that occurs between larva and adult.
75. Reflect —To bounce light, sound, or heat off of a surface.
76. Repel —To force away or apart.
77. Reproduction —The process of making more organisms of the same kind.
78. Revolution —The motion of one object around another object.
79. Rotation —The turning of an object on its axis.
80. Sedimentary rock —A type of rock formed from layers of sediment.
81. Soil —The loose top layer of Earth’s surface made of weathered rock and organic matter.
82. Solar system —A system of planets and other bodies that orbits a star.
83. Species —A group of the same kind of organisms that can mate and produce offspring that can reproduce.
84. Speed —The distance traveled by an object in a given amount of time.
85. Spore —A seedlike structure that produces a new plant (e.g., ferns or mosses).
86. Stamen —The male reproductive structure of a flowering plant.
87. Star —A large object in space that is made of gas and produces its own light.
88. State of matter —The form matter can take (e.g., solid, liquid, gas).
89. Streak —The color of the powder of a mineral when it is rubbed on a streak plate.
90. Technology —The use of scientific knowledge and processes to solve practical problems.
91. Temperate zone —A climate zone located between the tropics and the polar circles generally characterized by moderate temperatures rather than extremely hot or cold temperatures.
92. Testable (scientifically testable) —A term used to describe a question that can be answered through an experiment or observation.
93. Texture —A physical property of a solid used to describe its surface.
94. Trials —Multiple sets of measurements or observations in a scientific investigation.
95. Tropical zone —A climate zone near the equator characterized by warm temperatures.
96. Unbalanced forces —Forces that are unequal in size and may or may not be opposite in direction. See also balanced forces and force.
97. Valid —A term used to describe the certainty of data or results of an investigation or experiment.
98. Variable —An event, condition, or factor that can be changed or controlled in order to study or test a hypothesis in a scientific experiment.
99. Vertebrate —An animal that has a backbone.
100. Volume —The amount of space an object or substance occupies.
101. Water cycle —The continuous movement of water through the environment by evaporation, condensation, precipitation, and runoff.
102. Water vapor —The gas state of water.
103. Weather —The condition of the atmosphere at a given time and place.
104. Weathering —The process by which rocks and other surfaces are broken down.

105. **Weight**—A measure of the force of gravity on an object.

FCAT 2.0 SCIENCE ITEM WRITER GLOSSARY Part 2

1. Acceleration —The rate at which velocity is changing. The change may involve an increase or decrease in speed and/or a change in direction. The change may be positive or negative.
2. Allele —Any of two or more alternate forms of a gene that an organism may have for a particular trait.
3. Amplitude —The maximum absolute variation of any periodic function (e.g., a wave).
4. Astronomical unit —A unit used to measure distances in the Solar System equal to the average distance between the Sun and Earth, approximately 150 million kilometers, and abbreviated AU.
5. Autotroph —An organism that can produce food from inorganic materials (e.g., carbon dioxide, sunlight, water).
6. Binary fission —An asexual reproductive process in which a single cell divides into two cells.
7. Binomial nomenclature —A system used to name organisms using two words: the genus name and the species name.
8. Boiling point —The temperature at which a liquid changes to a gas. The boiling point of water at sea level is . 100°C (212°F)
9. Budding —An asexual reproductive process in which an outgrowth of a parent organism detaches and forms a new individual of the same species.
10. Chemical properties —Characteristics of substances that describe their composition, reactivity, and how the substance changes into different substances.
11. Controlled variable —A factor or condition in a scientific experiment that is purposefully kept the same.
12. Dominant —The form of a trait that is expressed or shown when the combination of alleles for this trait is heterozygous.
13. Dwarf planet —A celestial body similar to a planet but orbiting in a zone that has many other objects in it (e.g., Ceres, Pluto).
14. Empirical evidence —Evidence based on observations or experiments rather than theory.
15. Eukaryote —An organism whose cells contain a nucleus surrounded by a membrane.
16. Evolution (scientific theory of evolution) —A cumulative change in the characteristics of organisms or populations over time from generation to generation.
17. generation —The first generation of offspring from the mating of parental organisms (P generation).
18. Fault —A crack in Earth’s crust along which movement has occurred.
19. Fold —A bend in a layer or several layers of rock.
20. Heterogeneous —A type of mixture in which different parts can be easily distinguished.
21. Heterotroph —An organism that cannot produce its own food.

22. Heterozygous —A cell or organism that has two different alleles for a particular trait.
23. Homeostasis —The tendency of a cell, organism, or population to maintain internal stability.
24. Homogeneous —A type of mixture in which the different parts are blended evenly so that the mixture is the same throughout.
25. Homozygous —A type of cell or organism that has identical rather than different alleles for a particular trait.
26. Hypothesis —A statement that can be tested scientifically through experiments and/or other scientific investigations.
27. Infiltration —A process in which water soaks into the soil.
28. Kingdom —The highest Linnaean classification into which organisms are grouped; above phylum.
29. Law (scientific law) —A scientific principle based on many observations of naturally occurring events that demonstrate it to be without exception under certain stated conditions. See also theory.
30. Light-year —The distance a ray of light travels in a vacuum in one year.
31. Melting point —The temperature at which a solid changes to a liquid. The melting point of ice at sea level is . 0°C (32°F)
32. Model (scientific model) —A replica or description designed to show the workings or structure of an object or system.
33. Molecule —The smallest unit of matter of a substance that retains all the physical and chemical properties of that substance; consists of a single atom or a group of atoms bonded together.
34. Nebula —A large cloudlike mass of gas and dust in space that may lead to the formation of a star.
35. Net force —The sum of all the forces acting on an object. When forces are balanced, the net force is zero and the object's motion will remain the same. When forces are unbalanced, the net force is nonzero and the object's motion will change.
36. Niche —The unique position occupied by a particular species in terms of the area it inhabits and the function it performs within the community.
37. Nucleus —The center region of an atom where protons and neutrons are located; also, the cell structure that contains a cell's genetic material.
38. Opaque —A term used to describe a material that absorbs and/or reflects light and does not allow light to pass through.
39. Outcome variable (dependent variable) —A factor, usually being measured or observed, that responds to, or depends on, another factor (test variable).
40. P generation —The parental generation in a genetic cross.
41. Percolation —The movement of water through rock or soil.
42. pH —A measure of the acidity or alkalinity of a solution based on a scale from zero to fourteen.
43. Pressure —The force exerted per unit area.

44. Prokaryote —An organism whose cells are characterized by the lack of a defined nucleus.
45. Recessive —The form of a trait that will be masked unless the organism is homozygous for this trait.
46. Regeneration —The growth of new tissues or organs to replace those lost or damaged by injury.
47. Repetition —Making multiple sets of measurements or observations in a scientific investigation. Replication —The reproduction of a scientific investigation by another person to ensure accuracy.
48. Saturation —A condition of a solution whereby it has reached a maximum amount of solute under the given conditions.
49. Solute —A substance that is being dissolved by another substance.
50. Solvent —A substance that dissolves another substance.
51. Systematic observations —Observations obtained by following a preplanned method of observation.
52. Temperature —A measure of how hot or cold a substance is; a measure of the average kinetic energy of the particles of a substance.
53. Test variable (independent variable) —The variable manipulated by the experimenter in order to study changes in the outcome variable.
54. Theory (scientific theory) —An explanation for some naturally occurring event developed from extensive observations, experimentation, and reasoning. See also law.
55. Translucent —A term used to describe a material that cannot be clearly seen through but that allows some light to pass through it.
56. Transparent —A term used to describe a material that can be clearly seen through because it allows light waves to pass through in straight lines.