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Broward Schools Student | Florida Science Fusion | Electronic Teacher Editio

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Broward Enterprise Education Portal

FCAT Explorer Atomic Learning Research Podcasts

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The Digital Doorways to Learning for Broward County Students

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The Doorway to Online Resources

Enter this doorway for access to textbooks, Atomic Learning, netTrekker, and more great resources for learning .

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Tips for Using Personal Math Trainer

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FCAT Explorer Atomic Learning Research Podcasts

Online Resources for Students

Textbooks NOTE: Some textbooks will require additional log in information which you can obtain from your teacher

Grades K-5	Grades 6-8	Grades 9-12
Go Math New! Online Resources	Developmental Language Arts new	Developmental Language Arts new
Math GR 5 ADVANCED	Health Education	Industrial Arts (Automotive)
Florida Science Fusion	Intensive Reading	Intensive Reading
Journeys NEW!	Language Arts	Language Arts
Florida Social Studies	Mathematics	Mathematics
	FL Science Fusion	Science
	Social Studies	Social Studies
	World Languages	World Languages



[Online Resources](#)

Harcourt Learning Links

Social Studies	Science	Trophies
Grade 1	Grade K	Grade 3
Grade 2	Grade 1	Grade 4
Grade 3	Grade 2	Grade 5
Grade 4	Grade 3	More

Grades 6-12
 Online Student Modules

[Access Modules](#)



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Florida Science Fusion

Think Central

Instructions: How To Log In to ThinkCentral

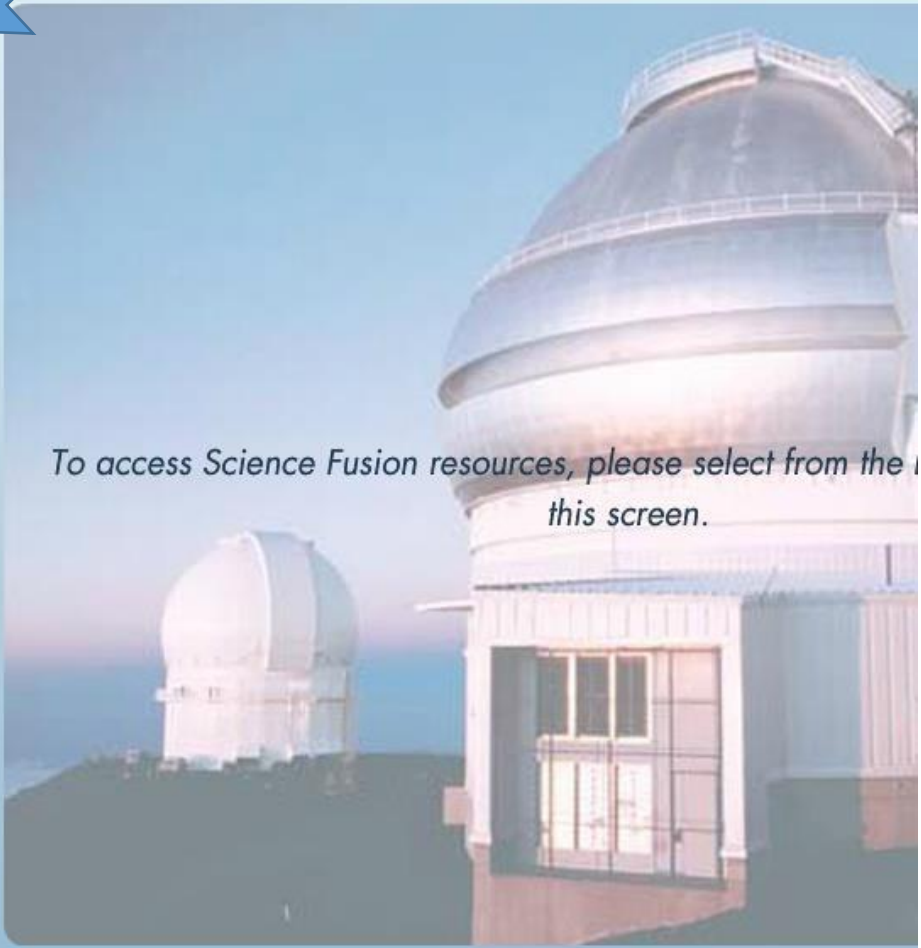


Elementary		Middle	
<i>English</i>	<i>Español</i>	<i>English</i>	<i>Español</i>
Kindergarten	Kindergarten	Earth	Earth
Grade 1	Grade 1	Life	Life
Grade 2	Grade 2	Physical	Physical
Grade 3	Grade 3		
Grade 4	Grade 4		
Grade 5	Grade 5		

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sciencefusion



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- eSE Audio Downloads
- Video Based Projects (SE)
- Lab Manual (SE)
- Multi-Language Glossary
- History Channel Videos
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Earth Space Science Annually Assessed Benchmarks.

Big Ideas	Annually Assessed Benchmarks	WATCH AND REVIEW THESE DIGITAL LESSONS FOR EARTH SCIENCE REVIEW
<p>Big Idea: 1 - The Practice of Science 2 - The Characteristics of Scientific Knowledge 3 - The Roles of Theories, Laws, Hypotheses, and Models</p>	<p>SC.6.N.1.1: Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.</p> <p>SC.6.N.1.2: Explain why scientific investigations should be replicable. SC.6.N.1.3: Explain the difference between an experiment and other types of scientific investigation, and explain the relative benefits and limitations of each.</p> <p>SC.6.N.1.4: Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation. SC.6.N.1.5: Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.</p> <p>SC.6.N.2.2: Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered. SC.6.N.3.1: Recognize and explain that a scientific theory is a well-supported and widely accepted explanation of nature and is not simply a claim posed by an individual. Thus, the use of the term theory in science is very different than how it is used in everyday life.</p>	<p>Unit 1: Lessons 1, 2, 3 Unit 3: Lesson 1</p>

<p>Big Idea: 5 - Earth in Space and Time</p>	<p>SC.8.E.5.3: Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.</p> <p>SC.8.E.5.5: Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).</p> <p>SC.8.E.5.7: Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.</p> <p>SC.8.E.5.9: Explain the impact of objects in space on each other including: the Sun on the Earth including seasons and gravitational attraction the Moon on the Earth including phases, tides, and eclipses and the relative position of each body.</p>	<p>Unit 2: Lesson 1, 2</p> <p>Unit 3: Lesson 3, 4, 5, 6</p> <p>Unit 4: Lesson 1, 2, 3</p>
<p>Big Idea: 6 - Earth's Structures</p>	<p>SC.7.E.6.2: Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).</p> <p>SC.7.E.6.4: Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.</p> <p>SC.7.E.6.5: Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.</p>	<p>Unit 6: Lesson 1, 2, 4, 5, 6, 7</p> <p>Unit 7: Lesson 1</p> <p>Unit 8: Lesson 2, 3, 4</p>
<p>Big Ideas: 7 – Earth Systems and Patterns</p>	<p>SC.6.E.7.4: Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere.</p> <p>SC.6.E.7.5: Explain how energy provided by the sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land.</p>	<p>Unit 10: Lesson 1, 3, 4</p> <p>Unit 11: Lesson 1, 6</p>

Life Science Annually Assessed Benchmarks.

Big Ideas	Annually Assessed Benchmarks	WATCH AND REVIEW THESE DIGITAL LESSONS FOR LIFE SCIENCE REVIEW
<p>Big Idea: 1 - The Practice of Science 2 - The Characteristics of Scientific Knowledge 3 - The Roles of Theories, Laws, Hypotheses, and Models</p>	<p>SC.7.N.1.1: Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.</p> <p>SC.7.N.1.2: Differentiate replication (by others) from repetition (multiple trials).</p> <p>SC.7.N.1.5: Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.</p>	<p>Unit 1: Lesson 1, 2, 3, 4</p>
	<p>SC.7.N.1.6: Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.</p> <p>SC.7.N.2.1: Distinguish between scientific and pseudoscientific ideas.</p> <p>SC.7.N.3.1: Recognize and explain the difference between theories and laws and give several examples of scientific of scientific theories and the evidence that supports them.</p>	

<p>Big Idea: 14 – Organization and Development of Living Organisms</p>	<p>SC.6.L.14.1: Describe and identify patterns in the hierarchical organization of organisms from atoms to molecules and cells to tissues to organs to organ systems to organisms.</p> <p>SC.6.L.14.2: Investigate and explain the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multicellular), all cells come from pre-existing cells, and cells are the basic unit of life.</p> <p>SC.6.L.14.3: Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing.</p> <p>SC.6.L.14.4: Compare and contrast the structure and function of major organelles of plant and animal cells, including cell wall, cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria, and vacuoles</p> <p>SC.6.L.14.5: Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulator, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis.</p>	<p>Unit 2: Lesson 1, 2, 3, 4, 5 Unit 3: Lesson 1</p>
<p>Big Idea: 15 – Diversity and Evolution of Living Organisms</p>	<p>SC.6.L.15.1 – Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.</p> <p>SC.7.L.15.1 – Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.</p> <p>SC.7.L.15.2 – Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.</p> <p>SC.7.L.15.3 – Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.</p>	<p>Unit 2: Lesson 6 Unit 5: Lesson 1, 2</p>

<p>Big Ideas: 16 - Heredity and Reproduction</p>	<p>SC.7.L.16.1: Understand and explain that every organism requires a set of instruction that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.</p> <p>SC.7.L.16.2: Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.</p> <p>SC.7.L.16.3: Compare and contrast the general processes of sexual reproduction require meiosis and asexual reproduction requiring mitosis.</p>	<p>Unit 6: Lesson 1, 2, 3, 4, 5 Unit 7: Lesson 1</p>
<p>Big Ideas: 17 - Interdependence</p>	<p>SC.7.L.17.1: Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.</p> <p>SC.7.L.17.2: Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.</p> <p>SC.7.L.17.3: Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.</p>	<p>Unit 8: Lessons 1, 2, 3, 4</p>
<p>Big Idea: 18 – Matter and Energy Transformations</p>	<p>SC.8.L.18.1: Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.</p> <p>SC.8.L.18.2: Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.</p> <p>SC.8.L.18.3: Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.</p> <p>SC.8.L.18.4: Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.</p>	<p>Unit 9: Lessons 1, 2</p>

If you have time, you can also review some of the key concepts you learned in Elementary School....

[YOU ARE **NOT** EXPECTED TO MEMORIZE ALL OF THE TERMS. SIMPLY **REVIEW** A LITTLE AT A TIME DURING THE SUMMER!]

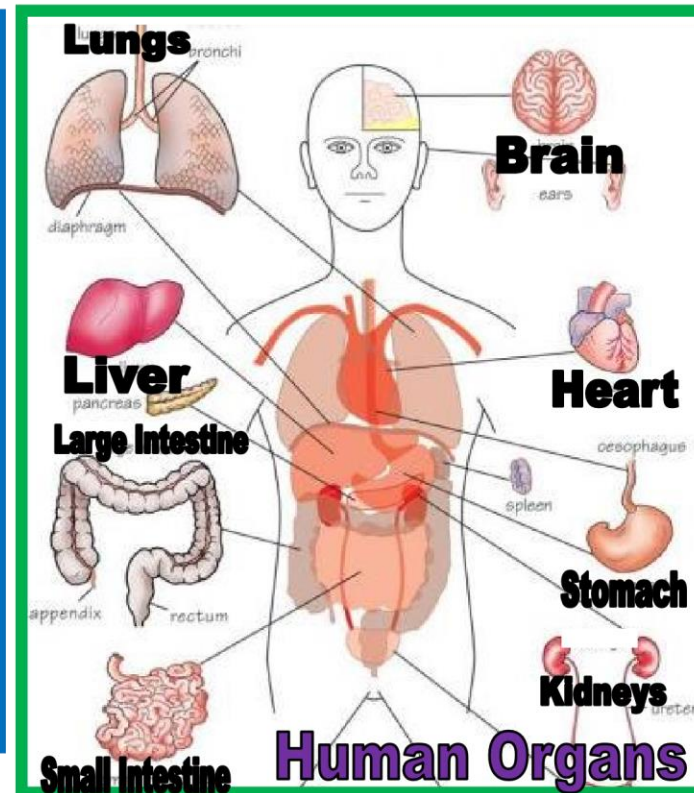
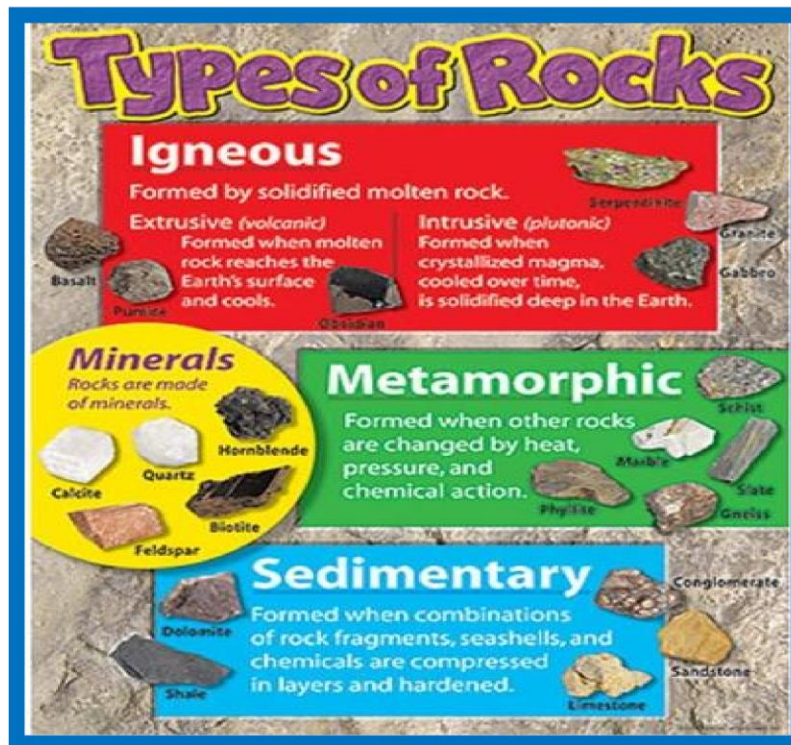
As you complete your 3 years of Middle School at Silver Trail Middle School you will build on what you have already learned.

The terms and definitions in this glossary are **specific to the Florida NGSSS in science for grades 3 through 5** and the content assessed on FSSA 2.0 Science. The information is provided in no particular order. Have FUN REVIEWING!

3rd grade

4th grade

5th grade



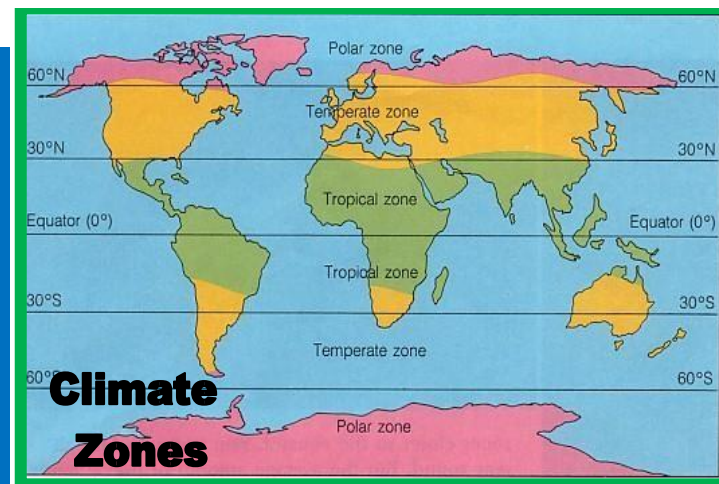
1. Food chain—A diagram representing the transfer of energy from the Sun through producers and a series of consumers.
2. Force—A push or a pull that one object exerts on another object with or without direct contact (e.g., friction, gravity). See also balanced forces and unbalanced forces.
3. Friction—A force that opposes motion through direct contact.

4. Germination—The process by which plants begin to grow from a seed or a spore.
5. Hardness—A property of a mineral that describes how easily it can be scratched.
6. Hemisphere—Half of Earth (i.e., Northern, Southern, Eastern, Western).
7. Herbivore—An animal that obtains nutrients only from plants.
8. Humidity—A measure of the amount of water vapor in the air.
9. Igneous rock—A type of rock that forms from cooled magma or lava.
10. Inference—An explanation based on evidence that is not directly observed.
11. Inherited trait—A trait or characteristic that is passed from parent to offspring.
12. Absorb—To take up and store energy without reflecting or transmitting that energy.
13. Adaptation—A characteristic of an organism that increases its chances of survival in its environment.



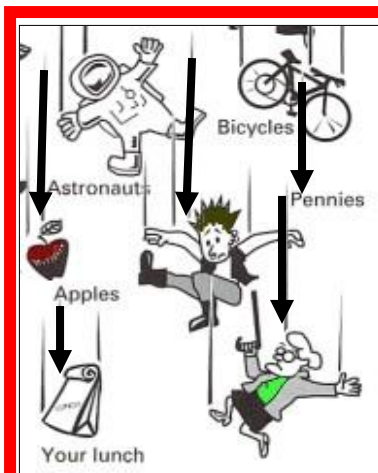
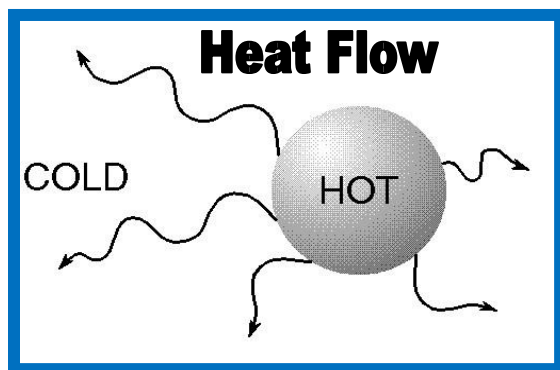
Physical Properties of Matter:

mass,
shape,
volume,
color,
hardness,
texture,
odor, taste,
attraction to magnets



1. Analyze—To examine methodically by separating into parts and studying their interrelatedness.
2. Asteroid—A rocky or metallic object that orbits the Sun and is much smaller than a planet.
3. 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.
4. Balanced forces—Forces that are equal in size but opposite in direction. See also force and unbalanced forces.
5. Behavior—A plant or animal action, reaction, or activity that occurs in response to stimuli (e.g., gravity, light, temperature).

6. Carnivore—An animal that obtains nutrients from eating other animals.
7. Characteristic—A feature, quality, property, or trait of an object or organism.
8. Chemical change—Process by which substances are changed into different substances with different properties.
9. Classify—To arrange in a specific order or group by categories based on similarities.
10. Cleavage—A property used to describe how a mineral breaks apart along smooth surfaces.
11. Climate—The average pattern of weather that occurs in a certain location over many years.
12. Comet—An object made of rock, ice, dust, and gas that revolves around the Sun.
13. Community—Populations of different species of organisms living together in the same geographic area.
14. Conclusion—A statement that tells what an investigation showed, based on observations and data.
15. Condensation—The process by which water is changed from a gas (water vapor) to a liquid; a stage of the water cycle.
16. Conduct—To transmit heat, sound, or electricity through a medium.
17. Consumer—An organism in a food chain that obtains nutrients from producers or other consumers; consumers may be herbivores or carnivores.
18. 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.
19. Data—Measurements or observations collected and recorded in an experiment or investigation.
20. Ecosystem—All the living and nonliving things that interact with each other in an environment.
21. Endangered species—A species whose population is so small that it is in danger of extinction.
22. Environment—An area that includes all living organisms and the surrounding physical features such as air, water, soil, weather, and landforms.
23. Erosion—The process by which rock, soil, and other weathered earth materials are moved from one place to another.
24. Evaporation—The process by which water is changed from a liquid to a gas (water vapor); a stage of the water cycle.



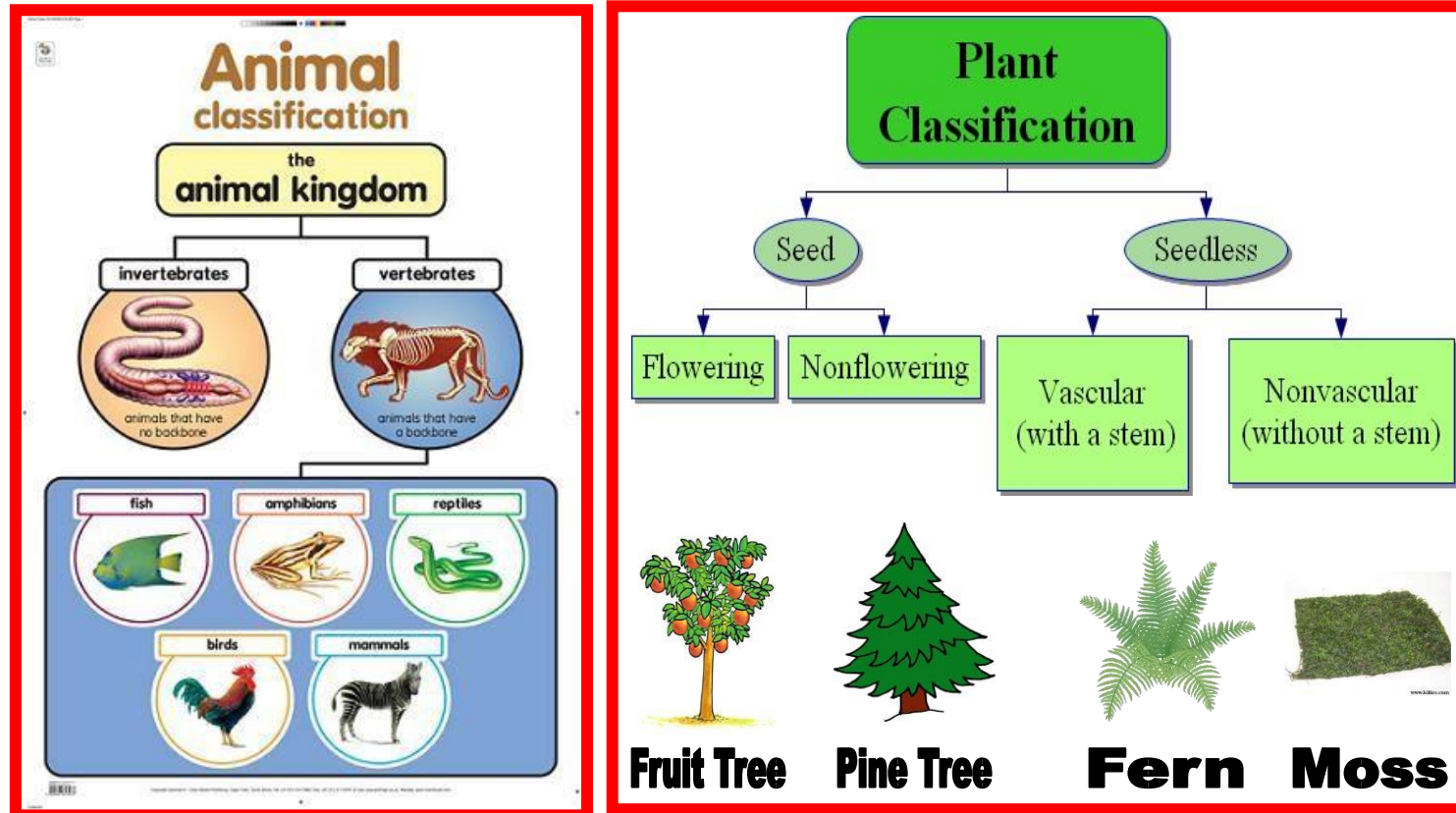
Gravity

- non-contact force that causes objects to fall
- with enough force, objects like rockets can overcome gravity



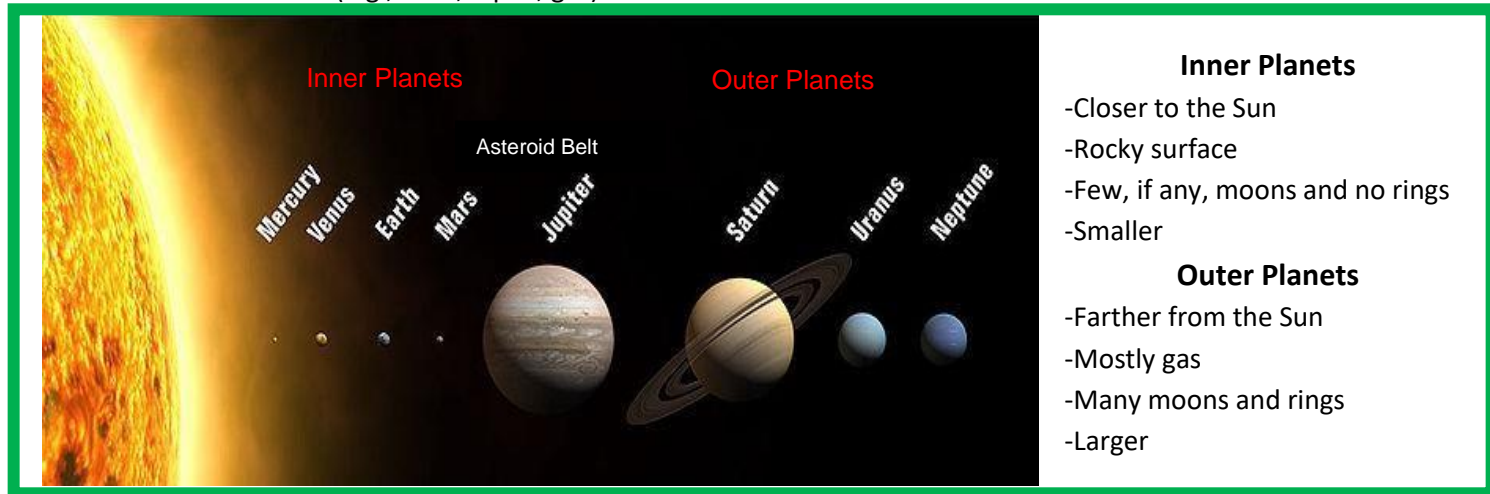
14. Experiment—A scientific test or procedure that is carried out under controlled conditions to answer a scientific question.
15. Extinct species—A species that no longer exists.
16. Insulator—A material used to reduce or prevent the transfer of electricity, heat, or sound.
17. Invertebrate—An animal that lacks a backbone.
18. 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.
19. Life cycle—The stages of an organism's growth and development.
20. Luster—A property of a mineral that describes how it appears when it reflects light.
21. Mass—The amount of matter a substance or object has.
22. Matter—Anything that takes up space and has mass.
23. Mechanical energy—A type of energy an object has due to its motion or position.
24. Metamorphic rock—A type of rock that is formed over time from existing rock due to extreme pressure and/or heat.
25. Mineral—A naturally occurring inorganic solid with a distinct chemical composition and crystalline structure.
26. Moon—A natural object that orbits a planet.
27. Nutrient—A substance that an organism needs to survive and grow.
28. Observation—Information about the natural world gathered through the senses and/or scientific instruments.
29. Omnivore—An organism that obtains nutrients from both plants and animals.
30. Organism—A living thing.
31. Ovary—The female reproductive organ that produces and contains egg cells.
32. Physical change—A change of a substance from one form to another without a change in its chemical properties.
33. Pistil—The female reproductive structure of a flowering plant.
34. Planet—A large body in space that orbits a star and does not produce its own light.
35. Polar zone—A climate zone characterized by very little precipitation and extremely cold temperatures.
36. Pollen—The fine dust-like powder that contains the male reproductive cells of seed-bearing plants.
1. Sedimentary rock—A type of rock formed from layers of sediment.
2. Soil—The loose top layer of Earth's surface made of weathered rock and organic matter.
3. Solar system—A system of planets and other bodies that orbits a star.
4. Species—A group of the same kind of organisms that can mate and produce offspring that can reproduce.
5. Streak—The color of the powder of a mineral when it is rubbed on a streak plate.
6. Technology—The use of scientific knowledge and processes to solve practical problems.

7. 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.
8. Repel—To force away or apart.
9. Reproduction—The process of making more organisms of the same kind.
10. Revolution—The motion of one object around another object.
37. Rotation—The turning of an object on its axis. Population—All members of the same species living together at the same time in the same area.



1. Testable (scientifically testable)—A term used to describe a question that can be answered through an experiment or observation.
2. Texture—A physical property of a solid used to describe its surface.
3. Trials—Multiple sets of measurements or observations in a scientific investigation.
4. Tropical zone—A climate zone near the equator characterized by warm temperatures.
5. Unbalanced forces—Forces that are unequal in size and may or may not be opposite in direction. See also balanced forces and force.

6. Valid—A term used to describe the certainty of data or results of an investigation or experiment.
7. Variable—An event, condition, or factor that can be changed or controlled in order to study or test a hypothesis in a scientific experiment.
8. Vertebrate—An animal that has a backbone.
9. Volume—The amount of space an object or substance occupies.
10. Water cycle—The continuous movement of water through the environment by evaporation, condensation, precipitation, and runoff.
11. Water vapor—The gas state of water.
12. Weather—The condition of the atmosphere at a given time and place.
13. Weathering—The process by which rocks and other surfaces are broken down.
14. Weight—A measure of the force of gravity on an object.
15. Speed—The distance traveled by an object in a given amount of time.
16. Spore—A seed-like structure that produces a new plant (e.g., ferns or mosses).
17. Stamen—The male reproductive structure of a flowering plant.
18. Star—A large object in space that is made of gas and produces its own light.
19. State of matter—The form matter can take (e.g., solid, liquid, gas).



Inner Planets

- Closer to the Sun
- Rocky surface
- Few, if any, moons and no rings
- Smaller

Outer Planets

- Farther from the Sun
- Mostly gas
- Many moons and rings
- Larger

38. Precipitation—A form of water (e.g., hail, rain, sleet, snow) that condenses in the atmosphere and falls to Earth's surface.
39. Predator—An organism that kills and eats other organisms (prey).
40. Predict—To state what one thinks will happen under certain conditions based on data or observation.
41. Prey—An organism that is killed and/or eaten by another organism (predator).
42. Producer—An organism that produces its own food.