

# Vocabulary #1

# 7<sup>th</sup> Grade Science

Independent Variable	A variable that is <b>intentionally changed</b> to observe its effect on the dependent variable.
Dependent Variable	The event <b>expected to change</b> when the independent variable is changed. <b>Measurable</b> factor in experiment.
Control Group	The variables that are <b>not changed</b> .
Matter	Anything that takes up space and has mass.
Boiling Point	Temperature at which liquid changes state to gas.
Melting Point	Temperature at which a solid changes state to a liquid.
Freezing Point	Temperature at which a liquid changes state to solid.
Evaporation	Change of matter from a liquid to a gas.
Condensation	Change of matter from a gas to a liquid state.
Mass	The amount of matter in an object.

## Vocabulary #2

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Volume	Amount of space occupied by an object or a substance.
Density	Ratio of the mass of a substance to its volume, expressed in g/cm <sup>3</sup> .
Mixture	Two or more substances that are blended without combining chemically.
Physical Property	Characteristics that is observable or measureable in a substance without changing the chemical composition of the substance.
Physical Change	Change in which the form or appearance of matter changes, but not its composition.
Chemical Property	Characteristic that cannot be observed without altering the sample.
Chemical Change	Change in which the composition of a substance changes.
Element	Made up of only one kind of atom. Cannot be broken down into a simpler form by chemical reactions.
Compound	Two or more elements that are chemically combined.
Solution	Homogeneous mixture whose elements and/or compounds are evenly mixed at the molecular level but are not bonded together.

## Vocabulary #3

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Heterogeneous Mixture	Type of mixture where the substances are not evenly mixed. Different parts are visible.
Homogeneous Mixture	Type of mixture where two or more substances are evenly mixed on a molecular level but are not bonded together.
pH	Measure of how acidic or basic a solution is, ranging in a scale from 0 to 14.
Acid	Substance that releases H <sup>+</sup> ions and produces hydronium ions when dissolved in water.
Base	Substance that accepts H <sup>+</sup> ions and produces hydroxide ions when dissolved in water.
Electron	Negatively-charged particle that exists in an electron cloud formation around an atom's nucleus.
Proton	Positively-charged particle in the nucleus of an atom.
Neutron	Electrically-neutral particle that has the same mass as a proton and is found in an atom's nucleus.
Nucleus	Small region of space at the center of the atom; contains protons and neutrons.
Electron Cloud	Region surrounding the nucleus of an atom, where electrons are most likely to be found.

## Vocabulary #4

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Atomic Number	Number of protons in the nucleus of an atom of a given element.
Mass Number	The sum of neutrons and protons in the nucleus of an atom.
Isotope	Atoms of the same element that have different numbers of neutrons.
Periodic Table	Table of elements organized into groups and periods by increasing atomic number.
Period	Horizontal row of elements in the periodic table.
Group	Family of elements in the periodic table that have similar physical or chemical properties.
Gravity	Force of attraction between all objects in the universe.
Tides	Rise and fall of ocean water levels.
Energy	property of many substances that give the ability to do work; many forms of energy (i.e., light, heat, electricity, sound)
Kinetic Energy	Energy an object has due to its motion.

## Vocabulary #5

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Potential Energy	Energy stored in an object due to its position.
Thermal Energy	Energy that all objects have that increases as the object's temperature increases.
Chemical Energy	Energy stored in chemical bonds.
Radiant Energy	Energy carried by light.
Electrical Energy	Energy carried by electric current.
Nuclear Energy	Energy contained in atomic nuclei; splitting uranium nuclei by nuclear fission.
Convection	Transfer of heat by the flow of material. Heat rises and cool air sinks.
Conduction	Transfer of energy that occurs when molecules bump into each other.
Law of Conservation of Energy	States that energy can change its form but is never created or destroyed.
Lithosphere	The crust and the rigid part of Earth's mantle. Divided into tectonic plates.

## Vocabulary #6

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Inner Core	Inner most layer composed of solid iron and nickel. Stays solid due to the pressure of the layers above it.
Asthenosphere	Solid layer of the mantle beneath lithosphere; made of mantle rock that flows very slowly allowing tectonic plates to move on top of it.
Mantle	The layer of Earth beneath the crust.
Crust	Earth's solid, rocky surface.
Core	Made up of mostly molten (melted) iron and nickel.
Continental Drift	the movement of the Earth's continents relative to each other by appearing to drift across the ocean bed
Plate Tectonics	Scientific theory that describes the large-scale motions of Earth's lithosphere.
Water Cycle	Continuous movement of water from the air to the earth and back again.
Precipitation	Process of water falling from clouds to earth in the form of rain, sleet, show, or hail
Condensation	Process of water vapor changing to liquid water

## Vocabulary #7

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Evaporation	Process of liquid water changing to water vapor
Atmosphere	Thick blanket of gases (nitrogen, oxygen and trace gases) surrounding the earth
Troposphere	Atmospheric layer closest to earth; nearly all weather change occurs here
Stratosphere	Second atmospheric layer above the troposphere; nearly all ozone found here
Mesosphere	Third atmospheric layer above the stratosphere; coldest layer
Thermosphere	Highest layer of the earth's atmosphere; very thin air
Mechanical Weathering	Involves only physical changes, such as size and shape. The chemical makeup of the rocks does not change.
Chemical Weathering	Occurs when the chemical makeup of the rocks changes.
Erosion	Is the process that wears away surface materials and moves them from one place to another
Deposition	Dropping of sediments that occurs when a cause of erosion loses its energy and can no longer carry its load

## Vocabulary #8

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Oxidation	Oxygen combines with another substance; a new substance called oxide is formed.
Population	Group of organisms of the same species that live in the same area.
Abiotic Factor	Physical, or nonliving, thing that has an effect on the organisms in an ecosystem.
Biotic Factor	Living components that affect other organisms in an ecosystem.
Niche	All of the physical and biological conditions in which an organism lives and how it uses these conditions.
Limiting Factor	Any biotic or abiotic factor that limits the number of individuals in a population
Carrying Capacity	The maximum number of individuals in a population that a given environment can sustain indefinitely.
Food Web	Complex interactions formed by the feeding relationships among various organisms in an ecosystem.
Energy Pyramid	Compares the energy levels in an ecosystem.
Trophic Level	Each energy level in an energy pyramid.



## Vocabulary #9

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Ecosystem	Organisms and their physical environment, all interacting by a flow of energy and a cycling of materials.
Biodiversity	The wide variety of life on Earth.
Index Fossil	Remains of species that existed on Earth for a short period of time; used by geologists to assign ages to rock layers.
Trace Fossil	Fossilized tracks and other evidence of the activity of organisms. Can tell how organisms lived.
Adaptation	Inherited characteristic or trait that increases chance of survival.
Dominant	Describes a trait that covers over, or dominates, another form of that trait.
Recessive	Describes a trait that is covered over, or dominated, by another form of that trait and seems to disappear.
Heterozygous	Describes an organism with two different alleles for a trait.
Homozygous	Describes an organism with two alleles that are the same for a trait.
Phenotype	Outward physical appearance and behavior of an organism as a result of its genotype

## Vocabulary #10

## 7<sup>th</sup> Grade Science

Genotype	The genetic makeup of an organism.
Trait	specific characteristic that varies from one organism to another
Gene	small part of a chromosome that determines a specific trait for an organism
Asexual Reproduction	process by which a single organism can reproduce by itself
Sexual Reproduction	process by which sex cells from two organisms join to reproduce a new organism
Gamete	mature reproductive cell that unites with another to form a new organism
Mitosis	A method of cell division for body cells that results in two identical cells
Meiosis	A method of cell division for sex cells that results in four unique cells
DNA	A double helix structure containing an individual's genetic code
Chromosome	structure found in the nucleus that carries the genetic information for an organism