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**Science**  
 See learning in a whole new light

## Grade Six Vocabulary

### Chapter 1: Classification

biosphere	Part of the Earth that can support living things.
Adaptation	A characteristic that enables an organism to survive and reproduce in its environment
Species	A group of very similar organisms whose members can mate with one another and produce offspring that are able to produce offspring
Classification	A grouping of things according to their similarities
Bacteria	Single-celled organisms that do not have a nucleus
Fungi	Members of a kingdom of mostly-celled organisms, some of which break down other organisms; includes mushrooms, yeasts, and molds
Vascular Plant	A plant that has tubes for carrying water and nutrients throughout the organism
Nonvascular Plant	A low-growing plant that does not have tubes to carry materials

### Chapter 2: Cells

Organelle	A structure that performs specific functions within a cell
Endoplasmic Reticulum	A network of folded membranes that serves as the cell's transportation system
Ribosome	A structure in the endoplasmic reticulum that begins the process of making proteins
Mitochondria	Parts of cells that convert chemical energy of food into a form that the cell can use
Diffusion	The movement of a substance from an area of higher concentration to an area of lower concentration
Osmosis	The diffusion of water across the cell membrane
Mitosis	The process in which a cell nucleus divides
DNA	A material in a cell's nucleus that stores coded information about how an organism will grow and develop
Chromosome	Coiled structure in a cell nucleus that carries information controlling the cell's activities

### Chapter 3: Reproduction

Heredity	The passing of traits from parents to their offspring
Asexual Reproduction	Production of offspring by a single parent
Gene	Sections of DNA that control the substances the cell makes and when it makes them
Sexual Reproduction	Reproduction by two parents
Egg cell	Sex cell of the female parent

Sperm cell	Sex cell of the male parent
Meiosis	The process of cell division by which sex cells are formed
Fertilization	The joining of male and female cells in asexual reproduction
Selective breeding	The process of selecting a few organisms with desired traits to serve as parents of offspring

#### Chapter 4: Body Systems

Neuron	Nerve cell that passes messages throughout the body
Impulse	A message that travels across a neuron and from one neuron to another
Gland	An organ in the endocrine system that produces a chemical
Endocrine gland	An organ that releases hormones directly into the blood
Hormone	A substance released by an endocrine gland that controls some of the body's functions
Enzyme	A chemical that helps break down food into nutrients during digestion
Alveoli	Tiny sacs in the lungs at the end of bronchioles
Pathogen	An organism that causes disease
Antibody	Chemicals produced by white blood cells that kill specific pathogens

#### Chapter 5: Plants

Epidermis	The thin outer layer of plant cells through which water and minerals from the soil enter the root
Xylem	A layer of plant cells that moves water and minerals from the roots to other parts of the plant
Phloem	Part of a plant's vascular system that carries sugars throughout the plant
Stoma	A small hole in the epidermis of a leaf through which water and gases pass in and out of the plant
Guard cell	One of a pair of cells that work together to open and close a leaf's stoma
Transpiration	The loss of water from a leaf
Photosynthesis	The process in which plants use energy from light to make glucose and release oxygen
Cellular Respiration	The process by which cells combine glucose with oxygen for the release of energy
Tropism	Plant behavior caused by growth toward or away from something in the environment

#### Chapter 6: Biomes

Environment	All the conditions that surround a living thing
Population	A group of individuals that belong to the same species and live in the same area
Community	A group of populations that interact with one another in a particular area
Ecosystem	An area in which living things and nonliving parts of the environment interact
Abiotic Factor	A nonliving part of an ecosystem
Biotic factor	A living organism in an ecosystem
Biome	A large group of ecosystems with similar climates and organisms

## Chapter 7: Ecosystems

Decomposer	An organism that breaks down dead organisms and returns materials to the environment
Energy Pyramid	A model that shows the amount of energy available at each level of an ecosystem
Competition	The struggle among organisms to survive in a habitat with limited resources
Symbiosis	A close, long-term relationship between organisms that benefits at least one of the organisms
Parasite	An organism that benefits from symbiosis
Host	An organism that is harmed in symbiosis
Succession	A series of predictable changes that occur in an ecosystem over time

## Chapter 8: Plate Tectonics

Crust	The outermost solid layer of Earth
Mantle	A thick layer of Earth just between the crust and the core that contains most of Earth's mass
Core	The innermost layer of Earth
Lithosphere	The Earth's crust and the solid part of the mantle
Continental drift	The theory stating that continents are continually moving
Plate tectonics	The theory that the Earth's lithosphere is broken into about 20 moving plates
Plate boundary	An area where plates meet
Fault	A break in the Earth's crust at the boundaries where plates slide past each other

## Chapter 9: Rocks and Minerals

Mineral	A natural, nonliving solid with a definite chemical structure
Crystal	A regular, repeating pattern in which particles of minerals are arranged
Rock	A solid, natural material made up of one or more minerals
Sedimentary rock	Rock formed from layers of sediment that have been cemented together
Igneous Rock	Rock formed from lava that has cooled and hardened
Metamorphic Rock	Rock formed when heat, pressure, or chemical reactions change one type of rock into another type of rock
Humus	The organic part of soil
Organic matter	Any substance that is made of living things or the remains of living things

## Chapter 10: Reshaping Earth's Surface

Sediment	Solid particles carried from one place and dropped onto another place
Weathering	The process of breaking down rock into smaller pieces
Mechanical Weathering	Breaking down of rock by wind, water, and ice

Chemical Weathering	A change in minerals as they react with substances in the environment, such as water or oxygen
Erosion	The process by which soil and sediments are transferred from one location to another, usually by wind, water, ice, and gravity
Deposition	The process of dropping sediments onto a new place after being carried away from another place

#### Chapter 11: Earth's Resources

Renewable Resource	A resource that can be replaced through natural processes almost as fast as it can be used
Nonrenewable Resource	A resource that cannot be replaced as fast as it is used
Fossil Fuel	Energy sources made from the remains of organisms
Geothermal energy	Energy of the heat inside the Earth
Coal	A solid fossil fuel
Petroleum	A liquid fossil fuel
Natural Gas	A fossil fuel that is a mixture of gases
Acid precipitation	Rain or snow that is more acidic than normal precipitation

#### Chapter 12: Climate and Weather

Atmosphere	The blanket of gases that surrounds a planet
Air pressure	The measure of forces with which air particles push on matter
Humidity	The amount of water vapor in the air
Relative humidity	The amount of water vapor the air actually contains compared with the amount it could hold at a given temperature
Weather	The condition of the atmosphere at a particular time and place
Air Mass	A very large body of air that has a similar temperature and humidity throughout
Front	The boundary that forms between air masses
Meteorologist	A scientist who studies weather
Climate	A pattern of weather that occurs in an area over a long period of time.

#### Chapter 13: Matter

Mass	The amount of matter in an object
Volume	The amount of space that something takes up
Weight	A measure of the pull of gravity on an object
Density	The amount of mass in a certain volume of matter
Physical Property	Properties of matter that can be seen or measured without changing the substance into something else
Chemical Property	A characteristic that determines how a substance reacts with other substances
Condensation	The change of state from a gas to a liquid
Physical Change	The change in the appearance of a substance while its properties stay the same
Chemical Change	The changing of a substance into a completely new substance with different properties

#### Chapter 14: Building Blocks of Matter

Element	A substance made of only one kind of atom
Periodic Table	A chart in which all the elements are arranged according to the repeating pattern of their properties
Compound	A substance composed of two or more elements that are chemically combined to form a new substance
Mixture	A combination of substances in which the atoms of the substances are not chemically combined
Solution	One substance dissolved in another
Solute	A substance that has been dissolved
Solvent	A substance in which a solute is dissolved
Concentration	A measure of the amount of solute dissolved in a solvent
Solubility	The maximum amount of solute that can be dissolved in a solvent at a particular temperature, usually expressed in grams of solute per milliliter of solvent

#### Chapter 15: Forces and Motion

Force	A push or pull
Friction	The force that resists the movement of one surface past another
Gravitational Force	The force of attraction between objects in the universe
Speed	A measure of how fast an object is moving
Velocity	The speed of an object in a particular direction
Acceleration	The rate at which velocity changes
Inertia	The tendency of an object to remain at rest or in constant motion unless a force acts on it
Momentum	A measure of the force needed to stop a moving object

#### Chapter 16: Machines

Work	To use force in order to move an object a certain distance
Machine	Any device that helps people do work
Simple Machine	A tool made up of one or two parts
Compound Machine	A machine made up of one or more simple machines
Fulcrum	A support on which a lever rests while moving or lifting an object
Load	Force of an object on a lever
Effort Force	A force applied to the end of a lever to lift a load

#### Chapter 17: Changing Energy Forms

Energy	The ability to cause change or to do work
Kinetic Energy	The energy of a moving object
Potential Energy	The energy an object has due to its position
Electric current	A flow of electric charge in a material
Electric Circuit	A closed path along which current can flow
Magnetic domain	A large number of atoms with their magnetic fields pointing in the same direction
Electric Motor	A device that changes electrical energy to kinetic energy
Generator	A device that changes mechanical energy into electrical energy

#### Chapter 18: Thermal and Light Energy

Thermal Energy	The total kinetic and potential energy of the particles in a substance
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Heat	Thermal energy that moves from one substance to another
Conduction	Heat transfer between two objects that touch
Convection	The transfer of thermal energy by the movement of a liquid or a gas
Radiation	The transfer of energy in the form of waves
Insulator	A material through which heat or electricity is not easily transferred
Conductor	A material through which electricity or heat is easily transferred
Refraction	The bending of light as it passes from one material to another
Reflection	The bouncing of light rays off the surface of a material

#### Chapter 19: Earth, Sun and Moon

Rotate	To spin around an axis
Revolve	To move on a path around an object
Orbit	The path of an object that revolves around another object
Solar Eclipse	An alignment of the Sun, Moon, and Earth in which the Moon blocks the Sun from Earth's view
Lunar Eclipse	The movement of the Moon into Earth's shadow

#### Chapter 20: The Universe

Galaxy	A huge grouping of stars
Solar System	The Sun and the cluster of bodies that travel around it
Astronomical Unit	Average distance of Earth from the Sun, about 149.6 million kilometers
Star	A huge, hot, glowing ball of gas in the sky
Nuclear fusion	The process in which the nuclei of two or more atoms join to form a single, larger nucleus
Light-year	The distance light travels in one year: 9 trillion, 460 billion kilometers
Magnitude	The brightness of a star
Constellation	A part of the sky containing a certain group of stars

#### Chapter 21: Technology

Robot	A machine that is able to get information from its surroundings and do work
Robotics	The technology dealing with the design, construction, and operation of robots
Industrial robot	Automatically controlled robot that can handle several products or items at a time and be programmed to complete several tasks
Autonomous robot	A type of robot that acts without direct supervision
Nanotechnology	Technology that deals with materials and processes on a very small scale
Carbon nanotube	Carbon atoms in six-sided rings that are arranged in the shape of a tube