Abiotic resources: Type of natural resource derived from non-living things as opposed to biotic resource derived from living things

Adaptive characteristic: Traits that have evolved in response to the environment to increase the animal's chances of survival

AIDS: Disease in which there is a severe loss of the body's cellular immunity, lowering the resistance to infection and malignancy

Algae: Simple nonflowering plant of a large group that includes the seaweeds and many single-celled forms. Contain chlorophyll, lack true stems, roots, leaves, and vascular tissue

Allele: 1 pair of genes that exist at the same location on a pair of homologous chromosomes and exert parallel contrail over the same genetic trait

Albinism: Condition, controlled by a single mutant gene, in which the skin lacks the ability to produce skin pigments

Alcoholic Fermentation: Type of anaerobic respiration in which glucose is converted to ethyl alcohol and carbon dioxide.

Allergic reaction: Overreaction of the immune system to an antigen

Altered gene: Change of DNA sequence within a gene or chromosome of an organism resulting in the creation of a new character or trait not found in the parental type

Amino acid: Organic compound, the component unit of proteins

Amylase: Enzyme specific for the hydrolysis of starch

Aquatic Biome: Ecological biome composed of many different water environments

Atom: Basic unit of a chemical element

ATP : (Adenosine triphosphate) nucleotide that contains a large amount of chemical energy stored in its high energy phosphate bonds.It releases energy when it is broken down into ADP, energy is used for many metabolic processes

Bacteria: Domain of unicellular prokaryotes that have cell walls containing peptideoglycan; corresponds to the kingdom eubacteria

Bases: Chemical that releases hydroxylion (OH-) in solution with water

Behavior: Manner in which an organism reacts to changes in its internal condition or external environment

Bile: Secretion of liver in humans that is stored in the gallbladder and that emulsifies fats

Biochemical process: Chemical reactions that occur within a living organism (enzymes that breakdown or build up biological molecules)

Biological catalyst: Substance capable of initiating or speeding up a chemical reaction

Biological evolution: Change in genetic composition of a population over successive generations, can be caused by natural selection, inbreeding,hybridization, or mutation

Biome: Major geographical grouping of similar ecosystems

Biotechnological methods: Use of microorganisms, such as bacteria or yeasts, or biological substances, such as enzymes, to perform specific industrial or manufacturing processes. Applications include production of certain drugs, synthetic hormones, and bulk foodstuffs as

well as the bio conversion of organic waste and use of genetically altered bacteria in cleanup of oil spills

Biotic resources: Type of natural resource derived from the biosphere as opposed to abiotic resource from non-living things.EX: forests,birds, fish, and marine organisms.

Bowman's Capsule: Cup-shaped portion of the nephron responsible for filtering of soluble blood components

Capillary: Small, thin walled blood vessel that connects an artery to a vein and through which all absorption into the blood fluid occurs

Carbon dioxide: Chemical compound composed of 2 oxygen atoms linked to 1 carbon atom by covalent bond, essential to many biochemical/biological processes.In animals, CO_2 is a chemical compound that accumulates in the tissues and removed from the body when an animal exhales. It is an ametabolic byproduct of carbohydrate metabolism

Cardiovascular Disease: Disease of the circulatory organs for humans

Carrier Proteins: Specialized molecule embedded in the cell membrane that aids the movement of materials across the membrane

Cell Plate: Structure that forms during cytoplasmic division in plant cells and separates the cytoplasm into 2 equal parts

Chemical element: Any of the more than 100 known substances that cannot be separated into simpler substances and singly or in combination constitute all matter

Chemical energy: Potential energy of a chemical substance to undergo a transformation through a chemical reaction or to transform other chemical substances

Chemical property: Property or characteristic of a substance that is observed during a reaction in which the chemical composition or identity of the substance is changed

Chemical reaction: Process that involves rearrangement of molecular or ionic structure of a substance, as opposed to a change in physical form or a nuclear reaction

Chemical signal: Hormones that's excreted by animals and circulate through body fluids like the blood. Excreted by the endocrine system and affect distant target cells

Chromosomes: Threadlike structure of nucleic acids and protein found in the nucleus of most living cells, carrying genetic information in the form of genes

Circulation: Movement of blood around the body

Cloning: Technique of genetic investigation which undifferentiated cells of an organism are used to produce new organism with the same set of traits as the original cell

Control Mechanism: Any mechanism that regulates a biological process, such as a metabolic pathway or enzyme-controlled reaction, or that helps to maintain the internal environment

Coordination: Harmonious functioning of interrelated organs and parts, applied especially to the process of the motor apparatus of the brain which provides for the co-working of particular groups of muscles for the performance of definite adaptive useful responses

Cultivation: Process of trying to acquire or develop a quality or skill

Cyclic Changes: Any change in the environment that occur in some orderly fashion in which the events constantly repeat. Some cyclic changes can be the movement of celestial objects

Development: Series of changes which animal and vegetable organisms undergo in their passage from the embryonic state to maturity, from lower to higher state of organization

Deviation: Act of deviating; a wandering from the way; variation from the common way, from an established rule, ; departure, as from the right course or the path of duty

Disease: Abnormal condition of an organism which interrupts the normal bodily functions that often leads to feeling of pain and weakness, and usually associated with symptoms and signs

Diversity: Number and variety of species present in an area and their spatial distribution

Ecosystem: Basic unit of study in ecology, including the plant and animal community in interactions with the nonliving environment

Egg: Structure which the females of certain animal species lay as a means of reproduction, it contains a fertilized zygote and nutrition in the form of yolk for the developing offspring, sometimes contains other substances sometimes surrounded by a protective outer shell

Embryo: Organism in the early stages of development following fertilization

Embryonic development: Series of complex processes by which animal and plant embryos develop into adult organisms

Environment: External surroundings including all of the biotic and abiotic factors that surround and affect the survival and development of an organism or population

Equilibrium: Condition in which all acting influences are balanced or canceled by equal opposing forces, resulting in a stable system

Estrogen: Hormone a female produces at puberty, female sex hormone

Fat: Triglyceride (lipid) that is usually solid at room temperature

Fetus- Developed embryo within mothers womb

Fossil record: Totality of fossilized artifacts and their placement within the earth's rock strata. It provides information about the history of life on earth

Function: Special, normal or proper physiologic activity of an organ or part.

Fungi: 1 of the biological kingdoms;includes organisms unable to make their own organic foods

Gene: Unit of heredity; discrete portion of a chromosome thought to be responsible for production of a single type of polypeptide; responsible for inheritance of a genetic trait

Gene Manipulation: Scientific alteration of the structure of genetic material in a living organism using recombinant DNA

Gene Mutation: Alteration of the chemical nature of a gene that changes its ability to control the production of a polypeptide chain

Generation: Aggregate of the functions and phenomenon which attend reproduction

Genetic Information: Heritable biological information coded in the nucleotide sequences of DNA or RNA (certain viruses), such as in the chromosomes or in plasmids

Genetic Material: Genetic material of a cell or organism refers to materials found in the nucleus, mitochondria and cytoplasm, plays a fundamental role in determining the structure and nature of cell substances, and capable of self-propagating and variation

Genetic Recombination: Process of forming new allelic combination in offspring by exchanges of genetic materials (exchange of DNA sequences between DNA molecules)

Geologic Time: Period of time covering the physical formation and development of Earth, especially the period prior to human history

Glucose: Monosaccharide produced commonly in photosynthesis and used by both plants and animals as a fuel in the process of respiration

Guard cells: Plant cells occurring in pairs in the epidermis, flanking each stoma. Changes in turgor in the guard cells cause the stoma to open and close

Harvesting: Collecting of cells, organisms, or growth medium upon which an experimental population (of cells or microorganisms) had grown, so that the collection can be analysed or so biochemicals can be extracted from it

Heterotrophic: 1 utilizing organic compound to obtain carbon that is essential for growth and development. EX: Animals, which are not capable of manufacturing food by inorganic sources, hence, must consume organic substrates for sustenance

Homeostasis: Regulation of internal conditions using feedback controls to stabilize health. In humans, homeostasis happens when the body regulates body temperature in an effort to maintain an internal temperature around 98.6 degrees Fahrenheit

Homeostatic Feedback Mechanism: Occurs when the level of one substance influences the level of another substance or activity of another organ

Hormone: Naturally occurring substance secreted by specialised cells that affects the metabolism or behaviour of other cells possessing functional receptors for the hormone.

Immune System: Body system, made up of many organs and cells, that defends the body against infection, disease and foreign substances

Inherit: Receive from genetic transmission

Inheritance: Acquisition of traits genetically transmitted from parents to offspring

Inherited Trait: Trait genetically inherited from generation to generation

Inorganic: Of or pertaining to substances that are not of organic origin

Inorganic Molecule: Molecule not consisting of carbon atoms

Insulin: Polypeptide hormone secreted by the beta cells of the pancreas to regulate the concentration of carbohydrates in blood by promoting metabolism of glucose

Interdependence: When living things rely on others for their existence

Interrelationship: There are direct or indirect relationships among all of the living organisms in this universe. EX: Food Chain

Kingdom: Taxonomic rank, composed of smaller groups,phyla (or divisions, in plants).

Living Things: Living things display the following characteristics

Organized structure, being made up of cells : Requires energy to survive or sustain existence Ability to reproduce : To grow : To metabolize : To respond to stimuli : To adapt to the environment : To move : To respire

Membrane: Thin layer of tissue covering a surface or lining a cavity, space or organ

Metabolic Processes Organic processes (in a cell or organism) that are necessary for life

Microbe: Any of the microorganisms, especially those causing diseases or infections

Milk: White fluid secreted by the mammary glands of female mammals for the nourishment of their young, consisting of minute globules of fat suspended in a solution of casein, albumin, milk sugar, and inorganic salts.

Molecule: Extremely small particle or substance, especially at cellular or structural level

Mutation: Permanent, heritable change in the nucleotide sequence in a gene or a chromosome; the process in which such a change occurs in a gene or in a chromosome

Natural Selection: Process in nature in which organisms possessing certain genotype characteristics that make them better adjusted to an environment tend to survive, reproduce, increase in number or frequency, and therefore, are able to transmit and perpetuate their essential genotype qualities to succeeding generations

Nutrient: Food, or any nourishing substance assimilated by an organism, and required for growth, repair, and normal metabolism

Nutrition: Study of food and nourishment, examining the nutritional content of different foods, the amount of nutrients required for healthy growth and function and how this varies for different people.

Organ system: Group of organs that work together to carry out a particular task

Organelle: Membrane-bound compartments or structures of a cell

Organic: Of, pertaining to, derived from, or similar to an organ of the body

Organic compound: Always contains carbon. Exceptions :carbon monoxide, carbon dioxide, carbonates, cyanides, cyanates, carbides, and thyocyanates, which are considered inorganic

Pancreas: Secretes the hormones insulin and glucagon, in addition to pancreatic enzymes involved in the digestion of fats and proteins in the small intestine. Large elongated exocrine gland located behind the stomach; secretes pancreatic Juice and insulin

Pathogen: Agent causing disease or illness to its host, such as an organism or infectious particle capable of producing a disease in another organism

PH: Measure to determine the acidity or alkalinity of a solution or a substance

Progesterone: Produced in the corpus luteum, as an antagonist of oestrogen's. Promotes proliferation of uterine mucosa and the implantation of the blastocyst, prevents further follicular development. A steroid hormone (trade name Lipo-Lutin) produced in the ovary; prepares and maintains the uterus for pregnancy.A type of hormone in female mammals with the function of maintaining pregnancy. It is secreted by the corpus luteum and placenta, and its production is stimulated by the presence of other hormones, LH and LTH

Protein: Molecule composed of polymers of amino acids joined together by peptide bonds. It can be distinguished from fats and carbohydrates by containing nitrogen. Other components include carbon, hydrogen, oxygen, sulphur, and sometimes phosphorus

Punnets Square: A tool that helps to show all possible allelic combinations of gametes in a cross of parents with known genotypes in order to predict the probability of their offspring possessing certain sets of alleles

Receptor Molecule: Specialized cell or group of nerve endings that responds to sensory stimuli. A molecular structure or site on the surface or interior of a cell that binds with substances such as hormones, antigens, drugs, or neurotransmitters

Recombination: Process or act of exchanges of genes between chromosomes, resulting in a different genetic combination and ultimately to the formation of unique gametes with chromosomes that are different from those in parents

Respiration: Exchange of gasses

- breathing, which is the process of inhaling and exhaling gases from and into the external environment – a function of the lungs and other structures with similar function (e.g. gills)
- cellular respiration, which is the process utilized by cells to obtain energy from the oxidation of organic compounds accompanied by the consumption of oxygen (when available) and the release of carbon dioxide

Respiratory Rate: frequency of breathing, recorded as the number of breaths per minute

Simple Sugar: A sugar (like sucrose or fructose) that does not hydrolyse to give other sugars; the simplest group of carbohydrates

Solar energy: Energy transmitted from the sun in the form of electromagnetic radiation.

Starch: Polysaccharide carbohydrate ($C_6H_{10}O_5$)consisting of large number of glucose monosaccharide units joined by glycosidic bonds found in seeds, bulbs, and tubers

Steady State: dynamic equilibrium.

System: group of related natural objects or forces within a defined zone, a regularly interacting or interdependent group of items forming a unified whole, a more general and less rigorous term than ecosystem

Tissue: aggregate of cells in an organism that have similar structure and function.

White Blood Cell: Any of the blood cells that lack hemoglobin, colourless and with nucleus. Its primary role involves the body's immune system, protecting the body against invading microorganisms and foreign particles