Stem cell	An undifferentiated cell that can divide over and over to make many cells of different types
Metabolism	The sum of all reactions that occur in an organism
Anabolism	The synthesis of complex molecules from simpler molecules
Catabolism	The breakdown of complex molecules into simpler molecules
Homeostasis	Keeping conditions inside a cell within tolerable limits
Nutrition	Obtaining food, to provide energy and materials for growth

Growth	An irreversible increase in size
Response	The ability to react to changes in the environment
Excretion	Getting rid of the waste products of metabolism
Reproduction	Producing offspring either sexually or asexually
Cholesterol	A component of animal cell membranes reducing membrane fluidity and permeability to some solutes
Facilitated Diffusion	The movement of ions/particles across a cell membrane down the concentration gradient with the aid of an integral protein

Active Transport	The movement of ions/particles across a cell membrane up the concentration gradient with the aid of an integral protein and ATP
Endocytosis	The process of bringing material into a cell by pinching off a small piece of plasma membrane forming a vesicle
Exocytosis	The process of releasing a material outside a cell by fusing a vesicle with the plasma membrane
Semi-conservative	The property of DNA after replication in which one of the strands is an original and the other a newly synthesized strand
Gene	A heritable factor that consists of a length of DNA and influences a specific characteristic
Allele	A specific form of a gene that differs from other alleles of that gene by only one or a few bases

Genome	The whole of the genetic information of an organism
Mutation	A change in the base sequence of a gene
Plasmid	Small, circular pieces of extra DNA found in prokaryotes
Diploid	A nucleus having two chromosome of each type as in gametes
Haploid	A nucleus having one chromosome of each type as in somatic (body) cells
Karyogram	A micrograph showing the chromosomes of an organism in homologous pairs of decreasing length

Crossing over	The random exchange of parts of the chromatids of homologous chromosomes during Prophase I of meiosis
Gamete	Haploid sex cells (sperm and egg) produced by meisosis
Mesocosm	An experimental tool that brings ecologically relevant components of the natural environment under controlled conditions
Clade	A group of organisms, both alive and now extinct, that have evolved from a common ancestor
Mineral	Chemical elements in ionic form needed in the diet in relatively small quantities
Vitamin	Organic compounds needed in the diet in very small amounts

Malnutrition	An outcome of the diet that can be caused by deficiency, imbalance or excess of nutrients
Ecology	The study of relationships between living organisms and between organisms and their environment
Population	A group of organisms of the same species who live in the same area at the same time
Ecosystem	A community and its abiotic environment
Cytoplasm	Interior of a prokaryotic cell, also the region between the nucleus and plasma membrane of eukaryotic cells
Rough Endoplasmic reticulum (rough E.R.)	Active in membrane synthesis and other synthetic and metabolic processes

Lysosome	Digestive organelle where macromolecules are hydrolyzed
Carrier	An individual that has a recessive allele of a gene that does not have an effect on the phenotype
Sex Linked	Allele carried on the X chromosome
Test Cross	Testing a suspected heterozygote by crossing it with a known homozygous recessive
Phenotype	Outward expression of characteristic in organism
Genotype	Alleles possesed by an organism

Organic Compound	Compounds containing carbon that are found in living organisms (except hydrogencarbonates, carbonates, and oxides of carbon)
Homozygous	Having two identical alleles of a gene
Heterozygous	Having two different alleles of a gene
Locus	The particular position on homologous chromosomes of a gene
Codominant Alleles	Alleles which have a particular effect on the phenotype when present in heterozygotes, but a greater effect in homozygotes
Dominant Allele	An allele which has the same effect on the phenotype whether present in the homozygous or heterozygous state

Recessive Allele	Allele which only has an effect on the phenotype when present in the homozygous state
Tidal Volume	Volume of air taken in or out with each normal inhalation or exhalation
Nutrient	A chemical substance found in foods that is used by the human body
Resting Potential	The electro-chemical gradient of a neuron when it is not stimulated (-70mV)
Action Potential	The electro-chemical gradient of a neuron when a signal travels along the neuron (+35mV)
Evolution	The cumulative change in the heritable characteristics of a population

Trophic level	A position in a food chain (ex. primary consumer)
Consumer	An organism that ingests other organic matter that is living or recently killed
Heart Rate	Number of contractions of the heart per minute
Ventilation Rate	Number of inhalations or exhalations per minute
Osmosis	The passive movement of water molecules, across a partially permeable membrane, from a region of lower solute concentration to a region of higher solute concentration
Pathogen	An organism or virus that causes a disease

Saprotrophs	An organism that lives on or in dead organic matter, secreting digestive enzymes into it and absorbing the products of digestion
Detritivores	An organism that ingests dead organic matter
Nucleus	Control center, protein synthesis begins here, initiates mitosis, contains nucleolus, which synthesizes ribosomes
Diffusion	Passive movement of particles from a region of high concentration to a region of low concentration across a cell membrane
Enzyme	A macromolecule serving as a catalyst, a chemical agent that changes the rate of a reaction without being consumed by the reaction
Denaturation	A structural change in a protein that results in the loss of its biological properties

Cell Respiration	The controlled release of energy from organic compounds in cells to form ATP
Active Site	Specific portion of an enzyme that binds the substrate
Homologous Chromosomes	A pair of chromosomes of the same length, centromere position, and staining pattern that possess genes for the same characters at corresponding loci. One is inherited from the organism's father, the other from the mother
Clone	A group of organisms of identical genotype OR a group of cells descended from a single parent cell
Species	Group of organisms that can interbreed and produce fertile offspring
Nucleoid	Where DNA is concentrated

Golgi Apparatus	Packages and modifies molecules, especially for secretion or storage
Mitochondrion	Where cellular respiration occurs and most ATP is generated
Plasma Membrane	Encloses cytoplasm. Selective barrier that allows passage of oxygen, nutrients, and wastes
Cell Wall	Maintains cell shape, protects cell from mechanical damage and excessive water uptake
Ribosomes	Completes protein synthesis
Flagella	Locomotion organelles of some bacteria

Pili	Attachment structure on the surface of some prokaryotes
Community	A group of populations living and interacting with each other in an area
Heterotroph	An organism that obtains organic molecules from other organisms
Autotroph	An organism that synthesizes its organic molecules from simple inorganic substances