

Virus	infective agent consisting of a nucleic acid molecule in a protein coat. Replicates only by "hijacking" another cell
Vesicles	Membrane Bound Organelles used for transporting things in/out of the cell
Unsaturated Fat	Liquid @ room temperature, found in plants, contain a C=C or C≡C (double/triple bond)
tRNA	transfer ribonucleic acid helps decode (translate) the mRNA into a protein, this occurs @ a ribosome
Triglycerides	Fats, saturated (solid) unsaturated (liquid) made of 3 fatty acids and a glycerol molecule.
Translation of mRNA	Taking mRNA and making Amino Acid Sequencing
Synthesis vs lysis	Synthesis is to make & lysis is to split/burst
Stages of Cell Replication	Prophase(coil up), Metaphase(line up), Anaphase(split up), Telophase(break up)
Species Fitness	Ability to survive to maturity and successfully pass on genes (mate/reproduce)
Somatic Cells	All the cells of the body excluding gametes
Sister Chromatids	Two identical copies of a chromosome joined at centromere (the 2 together make X shape)
Sexual Reproduction Advantages	Genetic Diversity.
Saturated Fat	Solid @ room temperature, found in animal products. Straight C-C chain full of Hydrogens
RNA Base Pairs	A=U, G=C Adenine, Uracil, Guanine, Cytosine
Ribosomes	hey bind messenger RNA and transfer RNA to synthesize polypeptides and proteins
Recessive Traits	An inherited trait that is only expressed in homozygous allele pairings: hh
Punnett Square	A method of predicting the outcome of crossing two species
Proteins	Made from amino acids chains (polypeptides) 4 levels of folding to achieve final structure.
Prokaryotes	a microscopic single-celled organism, no nucleus nor specialized organelles. include bacteria cyanobacteria.
Polypeptide	A polymer made of amino acids bonded together via peptide bonds
Photosynthesis	Uses to light energy (photons) to synthesize sugar from carbon dioxide and water
Phospholipids	Have hydrophobic tails and hydrophilic heads, make up cell membrane.
Passive Transport	Happens naturally, no energy needed, HIGH to low
Oxidative Phosphorylation	Electron Transport Chain drives chemiosmosis of ATP synthesis.
Nucleus	Houses DNA, the Nucleolus can also be found here.
Nucleotides	Monomers of Nucleic acids made from a Sugar, Phosphate and a Base (A, T, C, G, U)
Nucleolus	A structure located inside the nucleus best known for ribosome synthesis
Nucleic Acids	A polymer of nucleotides, specifically DNA & RNA
Nitrogenous Bases	Adenine, Thymine, Cytosine, Guanine, Uracil
Natural Selection	organisms better adapted to their environment tend to survive and produce more offspring.
mRNA	DNA is transcribed into messenger ribonucleic acid to carry genetic instruction out of the nucleus.
Mitochondria	Site of ATP synthesis, also referred to as the powerhouse of the cell
Lysosomes	Membrane bound organelle in cytoplasm of eukaryotes, contains enzymes for recycle & cell defense.
Lipids	Macromolecules consisting of Triglycerides, Wax, Cholesterol, Phospholipids
Light Reactions (photosynthesis)	use the energy from photons to generate high-energy electrons: NAD ⁺ → NADPH
Lactic Acid	The byproduct of Fermentation, similar to CO ₂ in cell respiration, or O ₂ in photosynthesis
Krebs Cycle	Produces high energy molecules (NADH, FADH, ATP) needed for Oxidative phosphorylation from Glucose.
Karyotype	the number and visual appearance of the chromosomes in the cell nuclei of an organism
Independent Assortment	The assortment of ♂ & ♀ homologous chromosomes during metaphase I of Meiosis.
Incomplete Dominance	The dominant allele does not completely mask the recessive: Red + White = Pink
Hypotonic	A solution that contains lower % solute
Hypertonic	A solution that contains higher % solute
Homozygous	Having two identical alleles of a particular gene: HH or hh
Heterozygous	Having a mix of alleles of a particular gene: Hh
Haploid vs Diploid	Haploid = 1 set of chromosomes, Diploid = 2 sets of chromosomes.
Gregor Mendel	The Father of Genetics, developed the Punnett square
Genotype vs Phenotype	Phenotype is appearance genotype is genetic makeup (alleles)

Genetic Diversity	The diversity of alleles makes for a more fit population increasing likely hood of species survival
Gamete & Zygote	Gametes are haploid reproductive cells (sperm/egg), Zygote is formed via fertilization.
Fermentation	anaerobic (non-oxygen-requiring) pathway for breaking down glucose for energy: ATP
Facilitated Diffusion	Uses a membrane protein to diffuse. (cannot diffuse through membrane alone due to size).
Evolution	the gradual development of something, especially from a simple to a more complex form.
Eukaryotes	All Living Organisms except bacteria. Contain nuclei and specialized membrane bound organelles.
Enzyme Lock and Key theory	Enzymes are specific to one thing and are reusable like a lock and key
Enzyme	A biological catalyst that lowers the activation energy of chemical reactions (increasing rate/speed reaction)
Endoplasmic Reticulum	Organelle responsible for making proteins (rough) or lipids (smooth) for export
Endo/Exocytosis	Both involves vesicles interacting with cell membrane. Endo = entering; Exo = exiting.
Electron Transport Chain	Passes electrons from molecule to molecule creating an electrochemical gradient.
Ecological Succession	process of change in the species structure of an ecological community over time
Dominant Traits	An inherited allele that is expressed in the phenotype over the recessive trait: HH or Hh
DNA Transcription	The process of making RNA from DNA
DNA Base Pairs	A=T, G=C Adenine, Thymine, Guanine, Cytosine
DNA	Deoxyribonucleic Acid: this is the genetic material or prokaryotes, eukaryotes and some Viruses.
Diffusion	Diffusion is the net movement of anything from a region of higher concentration to a region of lower concentration
Dark Reactions (photosynthesis)	This is the Calving Cycle: Chemical Reactions that make glucose: $C_6H_{12}O_6$
Cytokinesis vs Telophase	Telophase splits the nucleus (makes 2 nuclei) & Cytokinesis splits the cytoplasm (makes 2 cells)
Crossing Over	During prophase 1 of meiosis, homologous chromosomes randomly swap alleles.
Codominant Traits	Neither allele of a gene can mask the other, both are expressed: Red + White = Red & White
$CO_2 + H_2O \rightarrow C_6H_{12}O_6 + O_2$	Chemical Equations for Photosynthesis
Cladogram	A flow chart branching off to show relation among organisms ancestry
Citric Acid Cycle	Another name for the Krebs Cycle, see Krebs cycle for more info.
Chromosomes	DNA coiled up (<i>around a histone protein</i>) or compact form of specific DNA, form in preparation for cell division.
Chloroplasts	Site of photosynthesis, contains chlorophyll that absorbs/reflect light giving it a green color
Charles Darwin	Father of Evolution, figured out natural selection
Centrioles	Only in Eukaryotes, they are involved in developing spindle fibers for Cell Division.
Cell Wall	Rigid layer surrounding cell membrane in Plants, Fungi & Bacteria
Cell Respiration	Uses oxygen to convert chemical energy in food to cell energy = ATP
Cell Membrane	A semipermeable phospholipid bilayer surrounding the cell allowing what enters/exits.
Cell Cycle (G₁, S, G₂)	G ₁ : Normal Growth, S: Synthesis(copy) DNA, G ₂ : rapid growth/protein synthesis. Prep for division
Cell Capsule	Protective layer found outside the cell wall of prokaryotes
Carbohydrates	Compounds made of carbon and water (H & O) simple and complex sugars.
Calvin Cycle	The cycle in plants in which inorganic carbon compounds are converted into the organic compound Glucose.
$C_6H_{12}O_6 + O_2 \rightarrow CO_2 + H_2O$	Chemical Equation for Cell Respiration
Asexual Reproduction Advantages	it is more time and energy efficient as you don't need a mate. faster than sexual rep.
Animal Adaptation	A physical/behavioral change that increases chances of surviving and can be passed on (heritable)
Anaerobic	Environment with NO Oxygen, or does not require oxygen
Amino Acids	Monomers of proteins, typically end with -ase
Allele	one of two or more alternative forms of a gene, located @ the same spot on a chromosome
Aerobic	Environment with Oxygen, or Require Oxygen
Active Transport	Uses Energy, Typically moving compounds from low to HIGH
Active Site	The spot on an enzyme where it binds the substrate
Activation Energy	The amount of energy it takes for a chemical reaction to start.
8 Properties of Life	Cells, growth & development, heredity, homeostasis, evolution, reproduction, metabolism, response to stimuli
6 Kingdoms of Life	Plants, Animals, Protists, Fungi, Archaeobacteria, Eubacteria