

Cells Vocabulary – Unit 2

- Prokaryote - has nuclear material in the center of the cell, but is not enclosed by a nuclear membrane; no membrane-bound organelles; bacteria and blue-green bacteria.
- Eukaryote - contain a clearly defined nucleus enclosed by a nuclear membrane and membrane-bound organelles; plants, animals, fungi, and protists.
- Unicellular - single-celled organism; an organism that consists of only one cell.
- Multicellular - consisting of many cells.
- Mitochondria - organelle that converts sugar (glucose) into energy (ATP) through the process of cellular respiration.
- Cristae - folds in the inner membrane of a mitochondrion.
- Ribosome - site of protein synthesis.
- Chloroplast - organelle that captures solar energy for photosynthesis (plant cells, some algae).
- Thylakoid - membrane-bound compartment inside chloroplasts and cyanobacteria.
- Granum(a) - A stacked membranous structure within a chloroplast that contains the chlorophyll and is the site of the light reactions of photosynthesis.
- Stroma - Enzyme fluid within a chloroplast. Location of light independent reaction of photosynthesis.
- Cell Wall - rigid outside layer that protects and encloses some cells (plant cells and some bacteria).
- Cell Membrane / Plasma Membrane - phospholipid bilayer that protects and encloses the cell; controls transport; maintains homeostasis.
- Phospholipid bilayer - structural component of a cell membrane consisting of a phosphate hydrophilic head and hydrophobic lipid tail.
- Membrane Proteins: Structural component of a cell membrane that functions in transport (channel), recognition, and as a receptor for other molecules.
- Vacuole - organelle that stores substances.
- Nucleus - organelle that contains DNA which controls cellular activities.
- Nucleoid - irregularly-shaped region within the cell of a prokaryote that contains all or most of the genetic material.
- Plasmid - DNA found in a bacterial cell that is independent from bacterial chromosome, circular, and contains a small number of genes.
- Chromosome - Condensed and coiled DNA molecule that consists of genes.
- Chromatin - complex of DNA and proteins that forms chromosomes. Unwound and uncoiled chromosome.
- Golgi Complex - organelle that packages, distribute products produced by the cell..
- Cellular Respiration - process of oxidizing food molecules, like glucose, to carbon dioxide and water.
- Photosynthesis - process of converting light energy to chemical energy and storing it in the bonds of sugar; takes place in the chloroplast.
- Lysosomes - organelle digests excess products and food particles; contains enzymes.
- Cytoplasm - fluid-like substance that contains various membrane-bound structures (organelles) that perform various functions; fluid that fills the free space within the cell.
- Endoplasmic Reticulum - organelle that is a series of membranous sacs; site of chemical reactions.
- Anaerobic respiration / Fermentation - process of producing energy without the use of oxygen.
- Aerobic cellular respiration - process in which cells break down food and turn it into energy that cells need to perform their life functions; **REQUIRES OXYGEN.**