Unit 2 Vocabulary List

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| Nucleus | Control center of the cell; keeps genetic material safe |
| Plasma Membrane | Controls what enters and leaves the cell to maintain homeostasis |
| Cell Wall | Rigid structure located outside the plasma membrane that is responsible for protect and support |
| Mitochondria | Powerhouse of the cell; Cellular respiration happens here |
| Vacuole | Organelle responsible for water and nutrient storage |
| Chloroplast | Food factory; photosynthesis happens here |
| Ribosome | Protein factory |
| Prokaryotic Cell | A simple cell that does not have a true nucleus or membrane bound organelles |
| Eukaryotic cell | Type of cell that has a true nucleus and membrane bound organelles |
| Cell differentiation | Changes a cell goes through structurally to become a specialized cell |
| Unicellular | composed of only one cell |
| Multicellular | composed of more than one cell |
| plant cell | type of cell that is rectangular in shape that has a cell way and chloroplasts |
| Animal cell | type of cell that is rounded in shape that does NOT have a cell wall or chloroplast |
| DNA | biological molecule that stores genetic information |
| RNA | Biological molecule that aids in protein synthesis |
| Stem Cell | Unprogrammed cells |
| Embryonic Stem Cell | Unspecialized cell found in the Early stages of life |
| Adult Stem Cell | Unspecialized cell found in the body throughout one’s life |
| Specialized Cell | Cells whose DNA has been programmed to do a certain job |
| Total Magnification | objective lens X ocular lens |
| Objective Lens | Lens on the microscope that is closest to the object you are viewing |
| Ocular Lens | Lens on the microscope that you look through |
| Coarse Adjustment Knob | Part of the microscope that changes the size of the field of view |
| Fine Adjustment Knob | Part of the microscope that clears up a blurry image |
| Diaphragm | Part of the microscope responsible for allowing different amounts of light |
| Stage | Part of the microscope where the microscope slide is placed |
| Microscope Slide | Rectangular piece of glass that specimens are placed on to view under the microscope |
| Cover Slip | Square piece of plastic or glass that is placed over a specimen on a microscope slide |
| Organelle | Specialized structures within the cell |
| Chromosomes | Condensed structures within the cell that carry genetic information |
| Chromatin | Thin, threadlike structures that condense to form chromosomes during mitosis |
| Genes | Segment of a chromosome; functional unit of heredity |
| Homeostasis | An organism’s regulation of its internal environment |
| Hydrophilic | “Love of water;" having the ability to combine with water |
| Hydrophobic | "Fear of water;" may not combine with water |
| Permeability | The quality of a membrane to allow liquids and gases to pass through it |
| Exocytosis | The movement of a substance out of a cell within a vesicle |
| Endocytosis | The movement of a substance into a cell using a portion of the plasma membrane to form a vesicle |
| Diffusion | Movement of particles from an area of high concentration to an area of low concentration until balanced |
| Buffers | A substance used to neutralize an acid or base without changing the pH of the original solution |
| Concentration Gradient | The difference in concentration between two regions |
| Osmosis | Diffusion of water across a semi-permeable membrane |
| Solute | The substance that is dissolved in a solution |
| Hypertonic | Having a higher solute concentration when compared to another solution |
| Hypotonic | Having a lower solute concentration when compared to another solution |
| Isotonic | Having the same solute concentration as another solution |
| Plasmids | Small circular pieces of DNA that can replicate themselves, usually in bacteria or protists |
| Chemotaxis | The movement of a cell or organism due to the concentration of a particular substance |
| Phototaxis | The movement of a cell or organism due to the presence or absence of light |
| Flagella | A taillike structure that allows a cell to swim |
| Cilia | Tiny hairlike structures that allow a cell to move |
| Psuedopod | An extension of the plasma membrane and cytoplasm of a cell used to for movement and feeding |
| Active Transport | Movement of substances into or out of the cell that does require the use of energy |
| Passive Transport | Movement of substances into or out of the cell that does NOT require the use of energy |
| Facilitated Diffusion | Occurs when large molecules are helped in and out of the cell by proteins located in the plasma membrane |