

Chapter 4: Cells

Cell Theory*

Importance of Surface Area/Volume Ratio

Prokaryotic vs. Eukaryotic Cells

- Similarities and Differences

Parts of the Prokaryote:

- Capsule, Cell Wall, Cell Membrane, Nucleoid, Ribosomes

Parts of the Eukaryotic Cell (Function, Appearance, General Location)

- Cytosol and Cytoplasm
- General Control
 - Nucleus, Nucleolus, Chromatin
- Manufacturing, Distribution, and Break Down
 - Ribosomes, Rough ER, Smooth ER, Golgi, Vesicles, Lysosomes, Peroxisomes, Vacuoles, Centrosomes
- Energy Processing
 - Mitochondria and Chloroplast
 - (Own DNA and Ribosomes, Double Membrane)
 - Endosymbiosis
- Structural Support, Movements, and Communication
 - Cell Wall, Cell Membrane
 - Junctions
 - Gap, Tight, Anchoring (Desmosomes)
 - Cytoskeleton
 - Microtubules, Microfilaments, Intermediate Filaments

Plant vs. Animal Cells

- Similarities and Differences

Chapter 5: Cell Membrane (Plasma Membrane)

Fluid Mosaic Model

- Semipermeable
- Components
 - Phospholipid Bilayer, Integral and Peripheral Proteins, Channel and Carrier Proteins, Cholesterol, and Glycoproteins

Diffusion and Osmosis

- Hypotonic, Hypertonic, Isotonic
- Turgor Pressure
- Plasmolysis
- Cytolysis

Transport

- Passive
 - Direct and Facilitated
- Active
 - Sodium Potassium Pump
 - Exocytosis
 - Endocytosis
 - Phagocytosis vs. Pinocytosis

Format:

Matching, Multiple Choice, Diagrams, Short Answer, Fill in the Blank (NO WORD BANKS)