

# Cell Structure and Function Review

1. Three parts of the cell theory
2. Difference between prokaryotes and eukaryotes  
DNA; Size; Organization; Metabolism; Organelles
3. Cell membrane functions
4. Phospholipid bilayer (arrangement)—>Fluid Mosaic model
5. Functions of the proteins (structural, recognition, communication, transport)
6. Cell Wall
7. Organelles and their Functions:  
(Vacuole, vesicle, endoplasmic reticulum, ribosomes, golgi complex, lysosomes, cytoskeleton, cilia and flagella, chloroplast, mitochondria, nucleus, nucleolus, cytoplasm)
8. Label Diagrams of Plant and Animal Cell
9. Proteins are Produced—packaged—distributed  
(Made by ER ribosomes—>packaged in vesicles—>transported to golgi—>modified and repackaged for transport to exterior/interior of cell)
10. Unique plant cell organelles (Cell wall, Central vacuole, Chloroplast)
11. Cell Membrane is selectively permeable  
- allows some substances to enter (small, hydrophobic) , and prevents others (large, uncharged, and ions)
12. Diffusion
13. Passive Transport - does not require energy
14. Osmosis (Hypertonic, Hypotonic, and isotonic)
15. Facilitated Diffusion - no energy with a transport protein
16. Active Transport - uses energy and a protein
17. Transport with Vesicles (a form of active transport)  
(Endocytosis, Exocytosis, Receptor Mediated Endocytosis)
18. Carbon dioxide and Oxygen gas exchange (Diffusion)
19. Understanding Osmosis and IVs (Intravenous)
20. Human Disease and role of faulty membrane transport systems  
(Type 2 diabetes and Cystic Fibrosis)
21. Magnification of drawings
22. Respiration  
- Glycolosis  
- Krebs Cycle  
- Absence of Oxygen (Lactic Acid and Alcoholic Fermentation)
23. Photosynthesis  
- occurs in chloroplasts  
- 3 Stages—> Light absorvbed—>Light converted to chemical—>Dark Reactions (Calvin Cycle)