AP Biology-Unit 2 – The Cell - Study Guide Outline

* Difference and advantages/disadvantages of different types of microscopes
* What is the endosymbiont theory, how did it effect the history of the eukaryotic cell and what organelles does it involve
* Know the basic function of the organelles as well label their location within a cell
* Differences between prokaryotic and eukaryotic cells
* Differences between plant and animal cells
* Components of the cell membrane
  + Fluid Mosaic Model
  + Amphipathic nature
  + Membrane proteins, carbs, lipids
  + Membrane receptors
  + Membrane molecules
  + Fluidity of membrane and how it applies to different types of organisms
* Different junctions, attachments, and connections between adjacent cells
* How microtubules and microfilaments create intercellular movement and structure
* Components of different organisms cell walls
* Basic structure and function of the cell membrane
* How do the different modes of travel across plasma membrane work and what types of molecules would be involved in each
  + Pinocytosis
  + Phagocytosis
  + Exocytosis
  + Endocytosis
  + Diffusion
  + Osmosis
  + Active transport
  + Passive transport
  + Facilitated diffusion
  + Countercurrent Exchange
  + Cotransport
  + Receptor mediated Transport
* Structure and function of cilia and flagella as well as their uses
  + How do they move
  + Dynein movement
* What potential and how it applies to osmosis
  + Calculations
  + General cause of transport due to difference in pressure
  + How that movement affects the appearance of model cell
* The following terms and their application to water movement or level
  + Hypertonic
  + Hypotonic
  + Isotonic
  + Flaccid
  + Turgid
  + Selectively permeable
  + Plasmolysis