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