**Basic Cell Review**

l. Cell

* Smallest basic unit of life

ll. Organelles

* What does the word Organelle mean?
	+ Small organs.
* Examples of organelles: Structure and Function
	+ Nucleus
		- Brain of cell
		- Stores genetic material (DNA)
	+ Mitochondria
		- Cellular respiration take place using carbohydrates (sugars)
		- Provides energy for the cell (ATP)
	+ Cell membrane
		- Made of phospholipids: non polar
		- Surrounds and protects cell
		- Semi permeable: controls what goes in and out of a cell
	+ Cell Wall
		- Surrounds plant cells
		- Gives structure and support
		- Made of cellulose
	+ Ribosomes
		- Make Proteins
		- Puts together amino acids to make proteins
* Cytoplasm
	+ Fluid or liquid in the cell
	+ Organelles float in cytoplasm

lll. Prokaryotic and Eukaryotic Cells

* Prokaryotic
	+ Does not have a nucleus
	+ Does not have membrane bound organelles
	+ Example: Bacteria
* Eukaryotic
	+ Contains a nucleus
	+ Contains membrane bound organelles
	+ All other cells are eukaryotic

lV. Unicellular cells

* 1 cell (bacteria)

V. Multicellular Cells

* Many cells : animals
	+ Know levels of organization
	+ Heart cells, heart tissue, heart, circulatory system and respiratory system, human.

Vl. Cell movement

* Cilia or cilium
	+ Small microscopic hairs around the cell
		- Paramecium
* Flagella or flagellum
	+ Whip like tail on the cell
	+ Larger and longer than cilium

Vl. Chloroplasts (another organelle)

* Found in plants
* Function? What do they do?
* Photosynthesis: Helps to make food.
* Sugar, carbohydrates, glucose
* Chloroplasts catches sunlight to light energy
* The sun is the ultimate source of energy, “no sun, no life”

Vll. Photosynthesis and Respiration: Know the differences

* Photosynthesis
	+ Reactants
		- Sunlight
		- Carbon Dioxide
		- Water
		- Chloroplasts
	+ Product
		- Sugar (C6 H12 06)
		- Oxygen
* Respiration
	+ Reactants
		- Oxygen
		- Sugar, carbs, glucose
		- Mitochondria
	+ Products
		- Carbon dioxide
		- Water
		- ATP: energy molecule

Vlll. Two types of Respiration

* Aerobic
	+ With oxygen or using oxygen
	+ Humans are aerobic organisms
* Anaerobic
	+ Without oxygen