B.A.T. Review
Cells

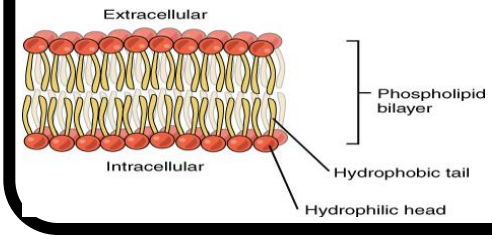
NAME: _____

PERIOD _____

VOCABULARY

- Turgor Pressure
- Synthesis
- Solvent
- Solute
- Passive Transport
- Active Transport
- Osmosis
- Diffusion
- Facilitated Diffusion
- Hypotonic
- Hypertonic
- Isotonic
- Equilibrium
- Concentration Gradient
- Cell Membrane
- Ribosome
- Endoplasmic Reticulum
- Golgi Body
- Mitochondria
- Chloroplast
- Lysosome
- Vacuole
- Cell Membrane
- Flagella
- Cytoplasm
- Cell Wall
- Nucleus
- DNA
- ATP

CELLULAR MEMBRANE



- Is **Semi-Permeable** (it only lets certain molecules through the membrane)
- Maintains **Homeostasis** (internal balance. Ex body temp.)
- Helps with **structure** and **support** along with **eliminating waste** and **taking in food** for the cell.
- Is made up of a **LIPID BILAYER and PROTEINS**

CELLULAR TRANSPORT TYPES

2 Types of Cellular Transport

PASSIVE TRANSPORT

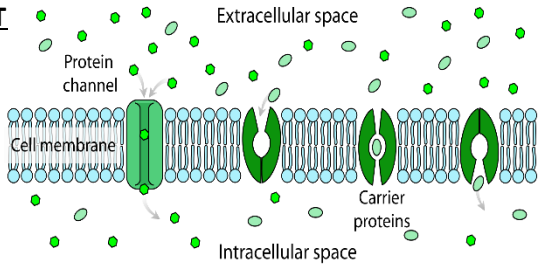
- **No Energy** Required
- Molecule Movement From **HIGH to LOW** concentration
- Goes **WITH** the **concentration gradient**

ACTIVE TRANSPORT

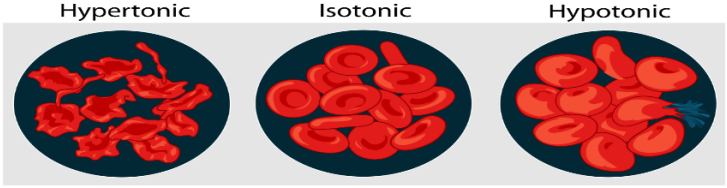
- **Energy** Required called **ATP**
- Molecule Movement From **LOW to HIGH** concentration
- Goes **AGAINST** the **concentration gradient**

THREE TYPES OF PASSIVE TRANPORT

1. Diffusion
2. Osmosis
   Diffusion only for **water**
3. Facilitated Diffusion
   Diffusion with **protein channels** to help move molecules across the membrane



SOLUTION TYPES



Decrease in weight **MORE Solute** on the outside of cell

No Weight Change **EQUAL** amount of **Solute** on both sides of cell

Increase in weight **LESS Solute** on the outside of cell

WHAT IS IN A SOLUTION

SOLUTE + *SOLVENT* = *SOLUTION*

Getting Dissolved

The "Dissolver"

CELL TYPES

PROKARYOTIC CELLS

Only One Celled Organism
NO NUCLEUS
NO MEMBRANE-BOUND ORGANELLES

Bacteria

LIVING
Ribosomes
Cell Walls
Cytoplasm
Biomolecules

Made of at least one Cell

EUKARYOTIC CELLS

One to Many Celled Organisms
********NUCLEUS*******
HAS MEMBRANE-BOUND ORGANELLES

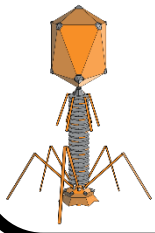
Plants
Animals
Protists & Fungus

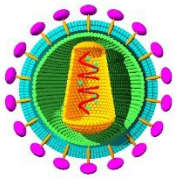
VIRUSES

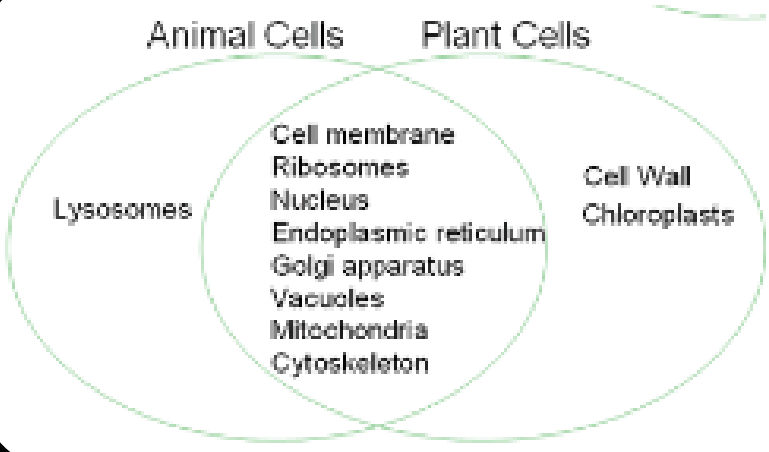
Not Considered Living

Do not classify as a Eukaryotic or a Prokaryotic Cell

Virus Structures Look Like:







PROTEINS

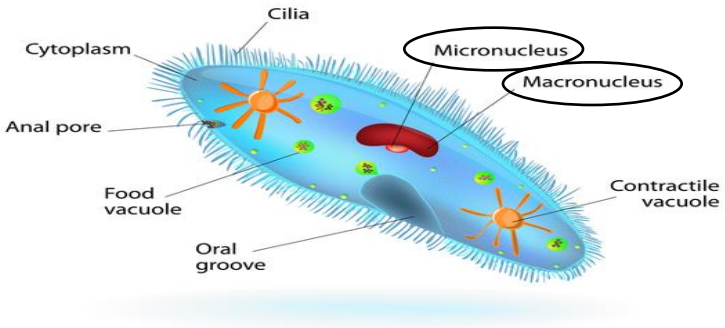
MAKE IT → DELIVER IT → PACKAGE IT

RIBOSOMES **ER** **GOLGI**

ENERGY FOR CELLS

	PLANTS	ANIMALS
CHLOROPLAST Makes Glucose	✓	
MITOCHONDRIA Makes ATP	✓	✓

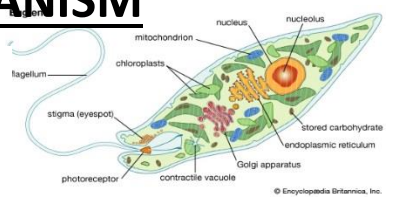
PARAMECIUM ORGANISM



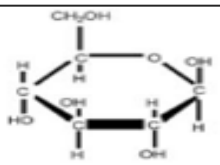
Paramecium Organisms live in the water. They are considered one of the few single celled Eukaryotic organisms. It contains two nucleuses (Nuclei). One big one and one small one.

EUGLENA ORGANISM

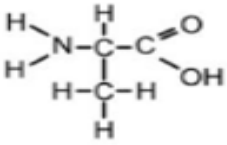
Euglena is a single celled eukaryotic organism meaning it has a NUCLEUS.



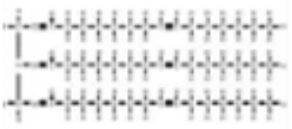
BIOMOLECULES



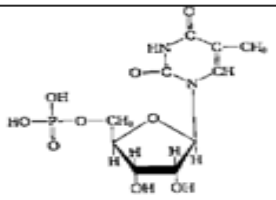
Carbohydrates
Monomer: Monosaccharide
Function: Quick Energy



Proteins
Monomer: Amino Acids
Function: Makes hair, nails, muscles and enzymes



Lipids
Monomer: Fatty Acids
Function: Long term energy storage, insulation, fats, oils and waxes.
ALSO MAKES UP THE CELLULAR MEMBRANE



Nucleic Acids
Monomer: Nucleotides
Function: Makes DNA and Genetic Information.
CAN BE FOUND IN THE NUCLEUS

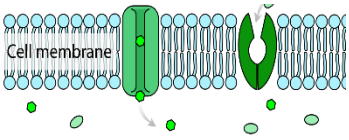
NAME: _____ PERIOD: _____

B.A.T. Review Questions

1. What type of solution causes a cell to expand? _____
2. What type of solution causes a cell to shrink? _____
3. What types of solution causes a cell to be in a homeostatic state (meaning no change)? _____
4. (Circle one) In a **HYPOTONIC** solution the solute is **MORE / LESS / EQUAL** concentrated in the cell.
5. (Circle one) In a **HYPERTONIC** solution the solute is **MORE / LESS / EQUAL** concentrated in the cell.
6. What will happen to the cell if continues to expand or shrinks? _____.
7. **Solutes** are substances _____.
8. **Solvents** are _____.
9. **Solutions** = _____ + _____.
10. What happens to the cell if it places in a **hypotonic** solution? _____.
11. What happens to the cell if it places in a **hypertonic** solution? _____.

12. The cell structure that allows substances in and out of the cell. _____.
13. What biomolecule makes up majority of the cellular membrane? _____.
14. What does Semi-Permeable mean? _____
15. How does a cell's membrane help the cell to survive? _____
    _____

16. The **two types of cellular transport** are _____ and _____.
17. _____ transport requires energy and _____ does not require energy to move molecules through the cell's membrane.
18. The **three types of passive transport** are _____, _____ and _____.
19. _____ is only to describe diffusion for water.
20. **Facilitated Diffusion** needs the help of _____ to help push molecules through the cellular membrane.
21. **Active Transport** requires what type of energy? _____
22. **Passive transport** are when molecules moving from _____ to _____ concentration.
23. **Active transport** are when molecules moving from _____ to _____ concentration.



24. Name the structure that is embedded into the cellular membrane in the diagram. _____

25. (Circle one) Passive Transport goes **WITH / AGAINST** the concentration gradient while active transport **WITH / AGAINST** the concentration gradient.
26. If you are living you are made up of _____.
27. Two types of cell are called _____ and _____.

28. What kind of organisms are prokaryotic cells?
29. What kind of organisms are eukaryotic cells?
30. Explain what similarities all cells have in common? _____
_____
_____
31. _____ cells have a nucleus while _____ do not have a nucleus.
32. Are prokaryotes living? _____
33. What type of cells have membrane-bound organelles? _____
34. Explain what similarities all Eukaryotic cells have in common?
_____
_____
35. What are some difference between plants and animals cells?
_____
_____
36. Are you considered a eukaryote or prokaryote? _____
37. Are you an animal? _____

38. Viruses are considered _____ and do not classify as _____.

39. What type of energy is produced by a mitochondria? _____
40. What types of energy is produced by a chloroplast? _____
41. Animals have **MITOCHONDRIA / CHOLORPLAST / BOTH** organelles to give them energy.
42. Plants have **MITOCHONDRIA / CHOLORPLAST / BOTH** organelles to give them energy.

43. Proteins are made by _____ shipped by _____ and packaged by _____.
44. Do both cell types have ribosomes? _____
45. Do both cell types need proteins to survive? _____

46. Which biomolecule helps form a cell membrane? _____
47. What is another name for a cell membrane? _____
48. Which monomer helps ribosomes in the production of hair, nails and enzymes? _____

49. Are paramecium single or multi-celled? _____
50. What type of cell do paramecium classify as? _____. Do they have a nucleus? _____
51. Would paramecium be effected if you placed them in a hypotonic or hypertonic solution? _____

52. What type of cell do Euglena classify as? _____
53. Would Euglena be effected if you placed them in a hypotonic or hypertonic solution? _____
54. Do they have a nucleus? _____