

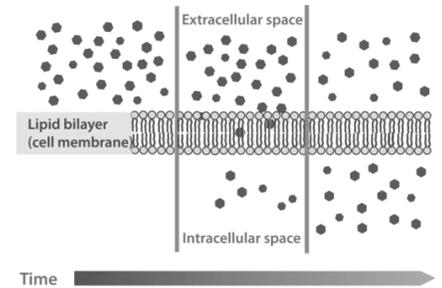
Cell Membrane & Transport

facilitated Diffusion & active Transport

Name: _____ Date: _____ Block: _____

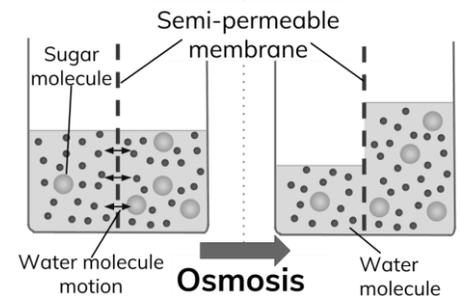
Recap: Diffusion:

- _____ is the net passive movement of particles. What do these particles include? _____
- Does this type of transport require energy? _____
- How does this transport move across the concentration gradient? from _____ concentration to _____ concentration.



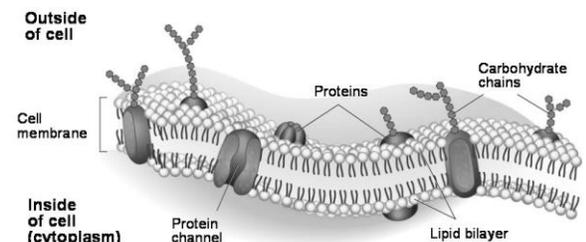
Recap: Osmosis

- _____ is the movement of _____ through a what kind of membrane?
- Does this type of transport require energy? _____
- How does this transport move across the concentration gradient? from _____ concentration to _____ concentration.



Large & Charged Particles:

- Cells need what to function? _____
- The main source of energy for plants and animals come in the form or what? _____ (sugar-glucose)
 - Unfortunately, **glucose** is **too big** to cross the membrane through diffusion.



Passive Transport: *Facilitated diffusion*

- Passive transport is also known as what? _____
- Cell membranes have what that act as **carriers**, making it easy for certain molecules to cross?
- Molecules such as _____ that **CANNOT** diffuse across the membrane on their own use what instead?

12. This means to **make things easier or less difficult**.

13. What is doing the facilitating?

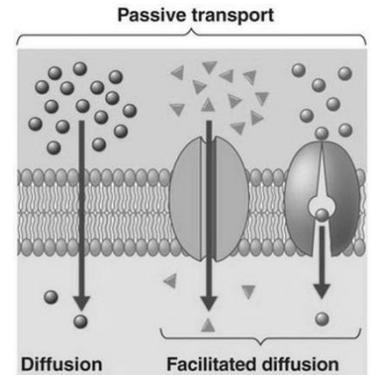
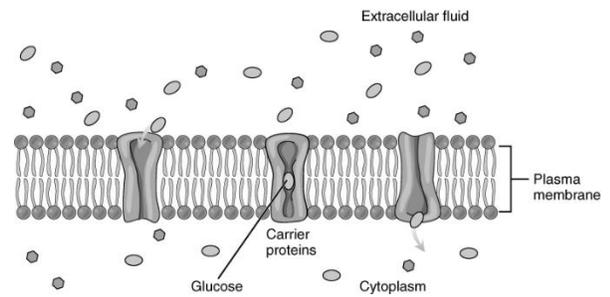
14. Protein channels are very what? _____

- *There are hundreds of different **protein channels** that allow particular substances to pass through them across the membrane.*

15. **Facilitated diffusion** is what, but is still DIFFUSION? _____ &

16. Is energy required for this type of transport? _____

17. How does this transport move across the concentration gradient?
from _____ concentration to _____ concentration.



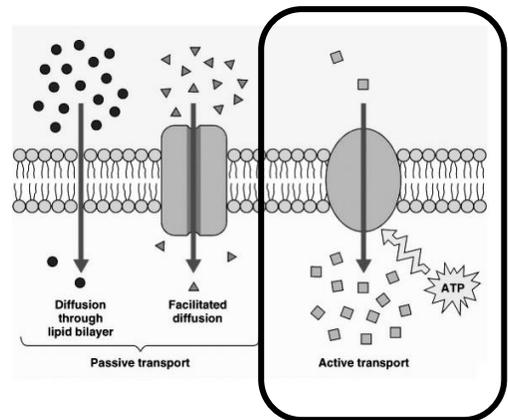
Active Transport: *Going against the concentration gradient*

- **Diffusion** and **facilitated diffusion** require **NO ENERGY** because molecules are moving from high to low concentration.

18. Sometimes, a cell must move material how?

19. **How** does this transport move materials?

From an area of _____ **to an area of** _____
concentration  **concentration**



20. Is energy required for this type of transport? _____

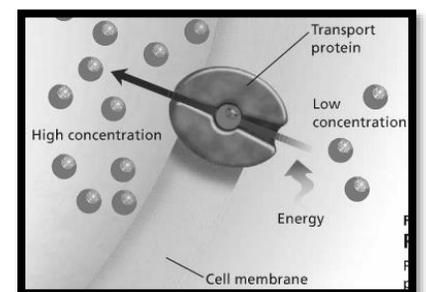
21. The key word for **active transport** is what? _____

Active Transport: Moving the SMALL Stuff

22. This type of transport moves **small, charged molecules**, and **ions** across the membrane.

23. What gets those molecules across the membrane? _____

- *A considerable portion of the cell's energy is devoted to providing the energy to keep this transport working.*



24. What is an example of **molecular transport**? _____/_____ [found in neurons]
- *The use of energy in these systems enables cells to concentrate substances in a particular location, even when the forces of diffusion might tend to move these substances in the opposite direction.*

Active Transport: Moving the **BIG** Stuff

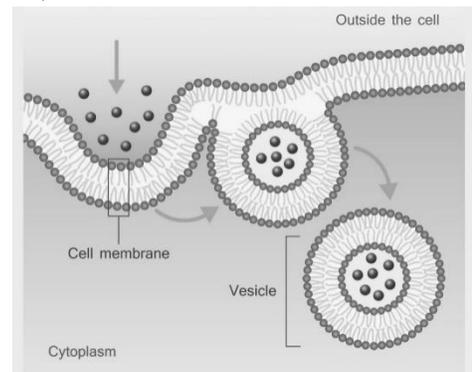
- **Larger molecules**, even solid clumps of material may also be transported across the membrane.

25. If the molecule is too big, it **CAN'T DO WHAT?**

26. A movement of the **cell membrane** is called _____. *This is the process of taking material into the cell by means of infolding, or pockets, of the cell membrane.*

27. What are the **two types** of endocytosis?

- _____ "Cell eating"
- _____ "Cell drinking"

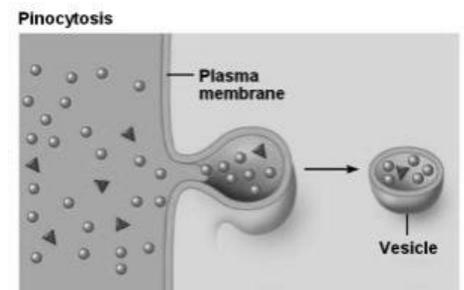
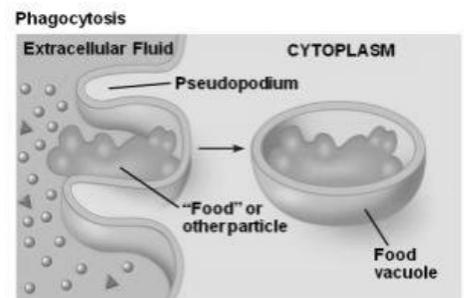


Phagocytosis vs Pinocytosis:

28. **Phagocytosis** is when the cell takes in what?

29. **Pinocytosis** is when the cell takes in what?

30. Do both require energy? _____



Exocytosis:

31. **Excocytosis** is the process of doing what?

