

Name: _____ Date: _____ Period: _____

Evidence 3: Cell Transport

Option 3: Video

Go to www.biologybynapiet.com, Cell Unit page and scroll down to "Cell Transport Video" on the left side under Evidence 3. Answer the questions below.

Cellular Transport

1. What organelle is transport occurring through?

Membranes

2. What two characteristics may prevent a molecule from passing through the membrane?
3. What characteristic of the cell membrane allows small molecules to pass through?

Diffusion/Osmosis

4. What type of molecules, polar or nonpolar, can pass easily through the membrane?
5. Molecules move (diffuse) across a membrane from a _____ concentration to a _____ concentration until _____ is reached.
6. What is the diffusion of water across a membrane called?
7. Given that the balloons are elastic, will the final concentrations on the two sides be equal? (Look at the image).
8. Which balloon will have the higher concentration?

Passive Transport

9. In passive transport what structure facilitates the movement of larger molecules across the membrane?
10. List the 3 steps involved in moving a particle through a protein during facilitated diffusion.
11. What is the difference between a passive transporter and an active transporter?

12. In passive transport, what direction do molecules move across the gradient (high to low or low to high)?
13. How does the model with glucose permease in the membrane behave?
14. Which direction did the sugar move across the concentration gradient (membrane)?

Active Transport

15. In which direction across the concentration gradient do active transporters move molecules?
16. What is consumed in order to do this?
17. Why must the NaK (Sodium Potassium) pump work continuously at the membrane?
18. What does ATP release (watch video) to create energy?