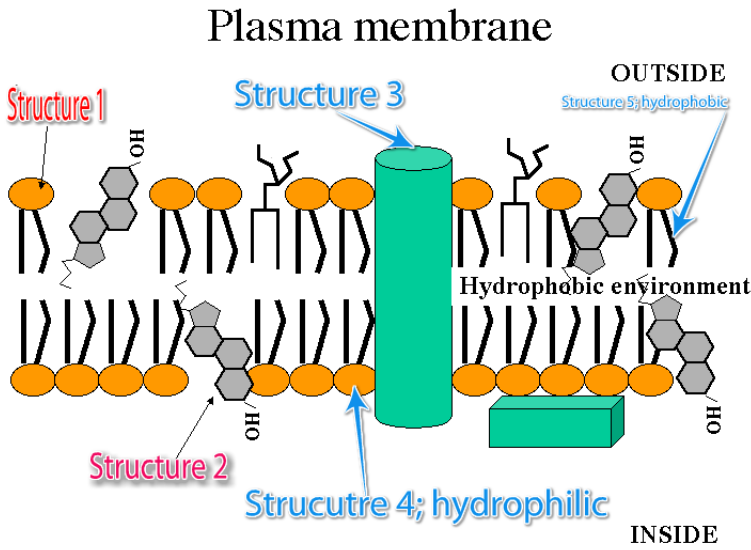


Cell Transport & Diffusion Study Guide

Describe the structure and behavior of the cell membrane.



The plasma or cell membrane is made of the following components:

1. _____
2. _____
3. _____
4. _____

Describe the following structures and what they do.

1. _____

Function of 1: _____

2. _____

Function of 2: _____

3. _____

Function of 3: _____

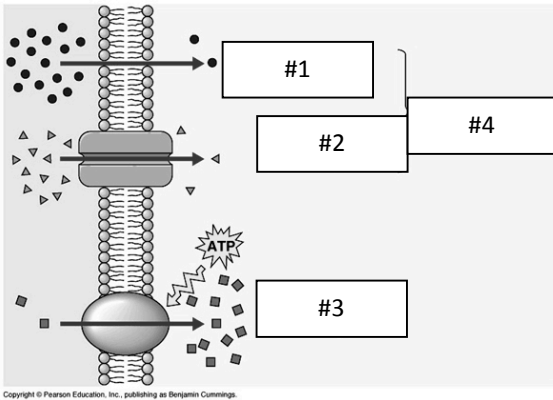
Function of 4: _____

Function of 5: _____

What does the **fluid mosaic model** mean? How does the term explain the **structure and behavior** of the cell/plasma membrane?

Describe and explain how passive transport maintains homeostasis and life.

Molecules move from areas where they are in _____ concentration to areas where they are in _____ concentration. This is called _____. When this occurs with only water molecules it is called _____. Molecules have _____ and are always _____. The random movement of molecules is called _____. When molecules balance out but are still moving this is called _____. When molecules move against the concentration gradient, they move from areas of _____ concentration to areas of _____ concentration. Energy is required to make this occur.

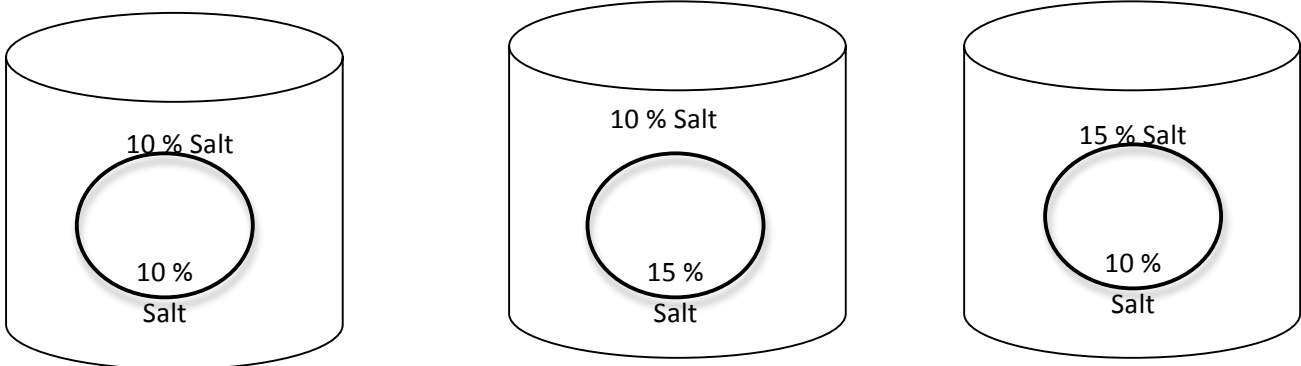


Describe the following types of transport

- _____
- _____
- _____
- _____

Diagrams #1 & #2 are types of #4. What is #4: _____

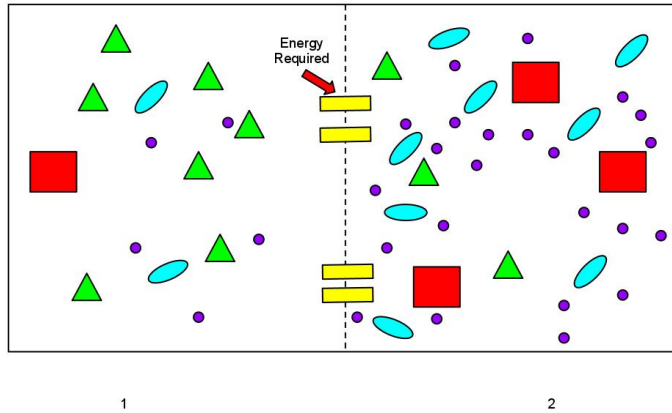
Draw a picture to illustrate the movement of water for the three diagrams below and identify the type of solutions: hypertonic, hypotonic, isotonic.



Diffusion diagrams

- In the figure below, draw arrows to show which way the square, triangle, and small circles would move across the membrane (dotted line).

- If the triangles move from area 1 to area 2 across a protein channel that does not require energy, what type of transport is this?
- If the square shapes move from area 1 to area 2 across a protein channel that does require energy, what type of transport is this?



In the body, red blood cells are in a 0.9% salt solution. What would happen to these cells if placed in a 10% salt solution? _____

(Hint: draw a pic).

	Energy Required (Y/N)	Protein Required (Y/N)	Movement (high to low or low to high)	Example(s)
Diffusion				
Osmosis				
Facilitated Diffusion				
Active Transport				

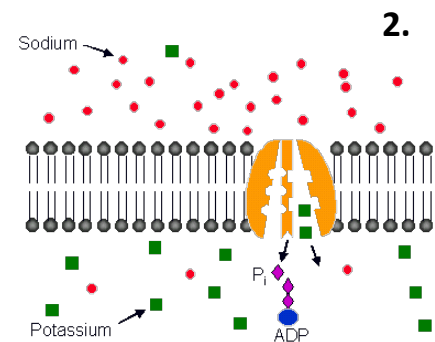
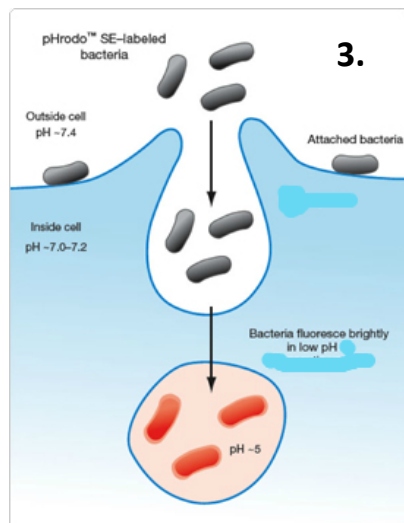
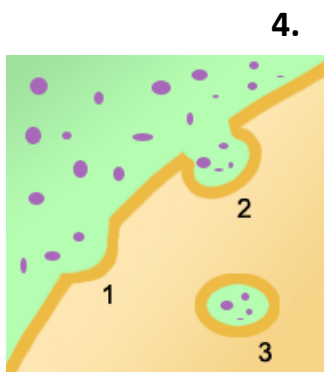
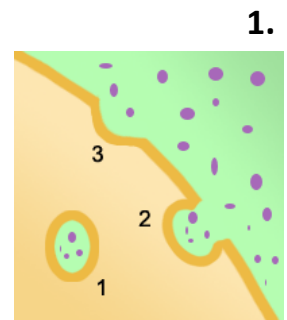
How is active transport similar but also different to facilitated diffusion?

Describe and explain how active transport maintains homeostasis and life.

Active transport is a process of particles moving from _____ concentration to _____ concentration. It requires _____ in the form of _____. In this process molecules/particles move _____ the concentration gradient.

Identify name the following pictures of active transport:

1. _____
2. _____
3. _____
4. _____



Explain how active transport maintains homeostasis through (by giving) a real example.