

Name: _____ Date _____ Period _____

Cell Transport Review Worksheet

Complete the table by checking the correct column for each statement:

Statement	Isotonic solution	Hypotonic solution	Hypertonic solution
Causes a cell to swell			
Doesn't change the shape of a cell			
Causes osmosis			
Causes a cell to shrink			

Match the term with its correct description:

- a. energy
- b. facilitated diffusion
- c. endocytosis
- d. passive transport
- e. active transport
- f. exocytosis
- g. carrier protein
- h. channel protein

_____ Transport protein that provides a tube-like opening in the plasma membrane through which particles can diffuse.

_____ Is used during active transport but not passive transport

_____ Process by which a cell takes in material by forming a vacuole around it

_____ Particle movement from an area of higher concentration to an area of lower concentration.

_____ Process by which a cell expels wastes from a vacuole

_____ A form of passive transport that uses transport proteins

_____ Particle movement from an area of lower concentration to an area of higher concentration.

_____ Transport protein that changes shape when a particle binds with it

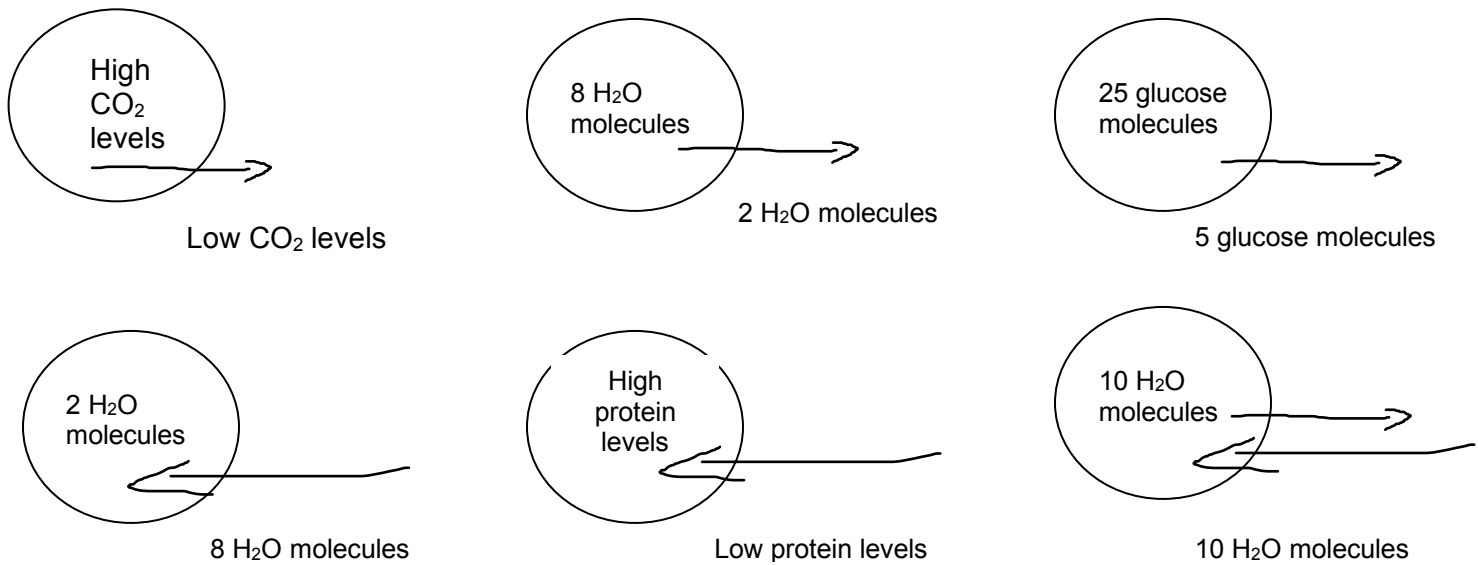
Match the term with its correct description:

- a. Transport protein
- b. active transport
- c. diffusion
- d. passive transport
- e. osmosis
- f. endocytosis
- g. exocytosis
- h. equilibrium

_____ The diffusion of water through a cell membrane

- _____ The movement of substances through the cell membrane without the use of cellular energy.
- _____ Used to help substances enter or exit the cell membrane
- _____ When energy is required to move materials through a cell membrane
- _____ When the molecules of one substance are spread evenly throughout another substance to become balanced.
- _____ A vacuole membrane fuses (becomes a part of) the cell membrane and the contents are released.
- _____ The cell membrane forms around another substance, for example, how the amoeba gets its food.
- _____ When molecules move from areas of high concentration to areas of low concentration.

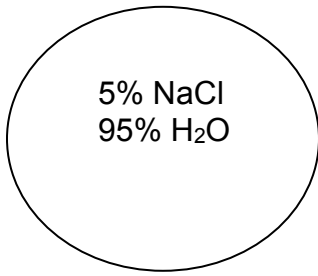
Label the diagrams of cells using the following terms: diffusion, active transport, osmosis, facilitated diffusion, or equilibrium. The arrows show the direction of transport. You may use the terms more than once!



Osmosis Practice Activity

Osmosis is the diffusion of water from an area of high concentration to an area of low concentration. Only water moves in osmosis! The diagrams below show the concentration of water and salt inside the cell and the concentration of water and salt surrounding the cell. Complete the sentences below by comparing the concentration of the water inside the cell and the concentration outside the cell.

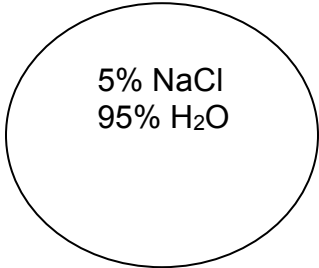
1.



95% NaCl
5% H₂O

- a. Water will flow _____ (into the cell, out of the cell, in both directions).
 b. The cell will _____ (shrink, burst, stay the same).

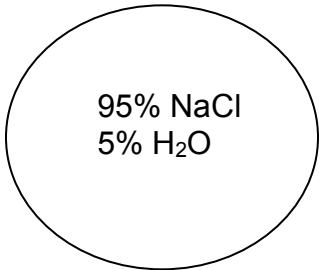
2.



5% NaCl
95% H₂O

- a. Water will flow _____ (into the cell, out of the cell, in both directions).
 b. The cell will _____ (shrink, burst, stay the same).

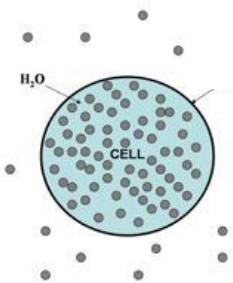
3.



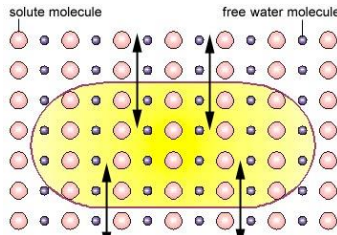
5% NaCl
95% H₂O

- a. Water will flow _____ (into the cell, out of the cell, in both directions).
 b. The cell will _____ (shrink, burst, stay the same).

4. At which solution of concentration gradient is each cell diagram? (Hypotonic, Hypertonic, Isotonic)

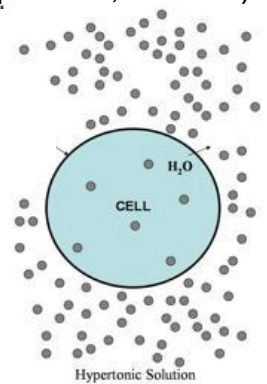


a. _____



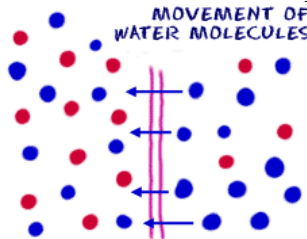
concentration are the same inside and outside the cell.
Water flows in and out of the cell at an equal rate.

b. _____

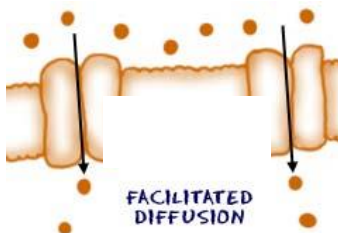


c. _____

5. This diagram is moving from a high to a low concentration: _____

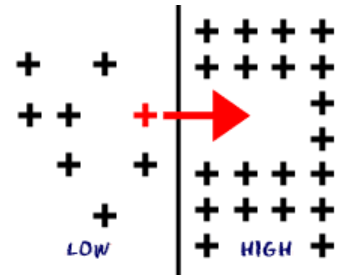
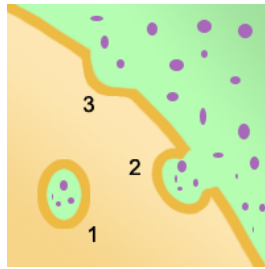
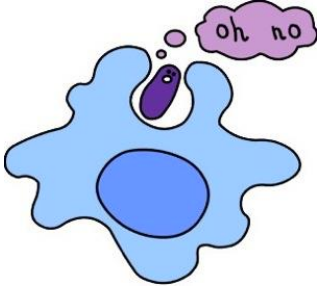


6. Using a transport protein to move _____



particles across the membrane:

7. Describe the processes occurring in the following pictures:



8. Define homeostasis.

9. What role does the cell membrane play in maintaining homeostasis?

10. How is facilitated diffusion different from diffusion? How are they similar?

11. List two ways that active transport is different than passive transport.

1) _____

2) _____

12. Why is the sodium-potassium pump considered an active transport? Which direction are the sodium and potassium being pumped? How many sodium are being pumped? How many potassium are being pumped?

13. What are the 5 functions of the cell membrane?

1)

2)

3)

4)

5)

14. Label the Phospholipid. Include the terms: Phosphate Head, Fatty Acid Tail, Hydrophilic, Hydrophobic.

