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

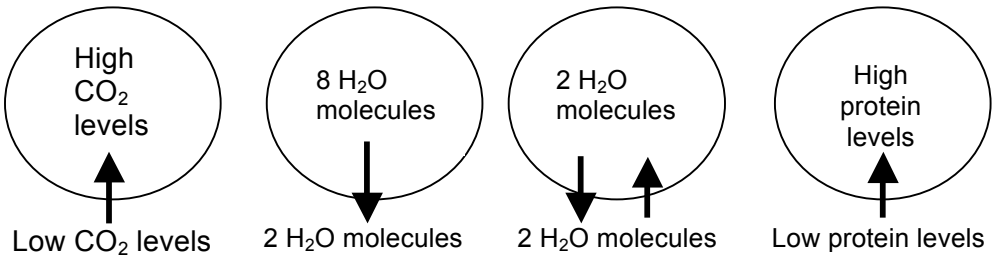
_____ Transport protein that provides a tube-like opening in the plasma membrane through which particles can diffuse
_____ Is used during active transport but not passive transport
_____ Process by which a cell takes in material by forming a vacuole around it
_____ Particle movement from an area of higher 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

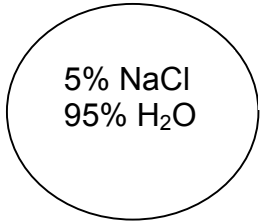
Label the diagrams of cells using the following terms: diffusion, active transport, osmosis, equilibrium. The arrows show the direction of transport. You may use the terms more than once!



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.

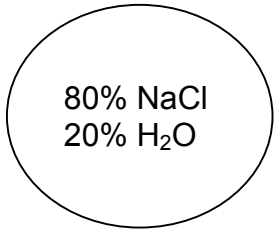


95% NaCl
5% H_2O

a. Water will flow _____
(into the cell, out of the cell, in both directions).

b. The cell will _____
(shrink, burst, stay the same).

2.

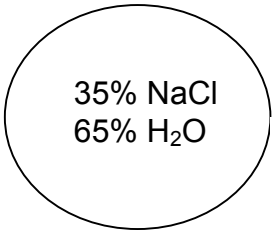


25% NaCl
75% H_2O

a. Water will flow _____
(into the cell, out of the cell, in both directions).

b. The cell will _____
(shrink, burst, stay the same).

3.

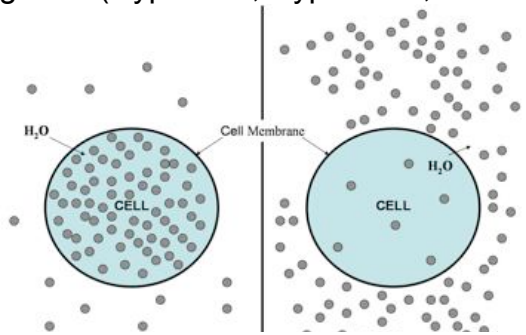


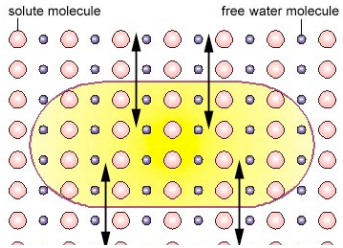
35% NaCl
65% H_2O

a. Water will flow _____
(into the cell, out of the cell, in both directions).

b. The cell will _____
(shrink, burst, stay the same).

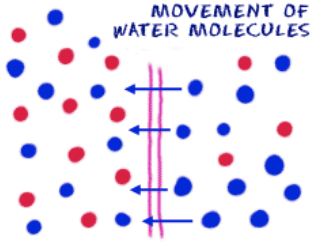
4. At which solution of concentration gradient is each cell diagram? (Hypotonic, Hypertonic, Isotonic)





_____ _____ _____

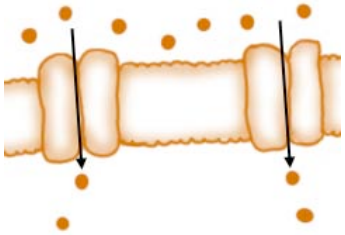
5. This diagram is moving from a high to a low concentration:



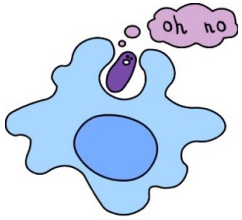
_____

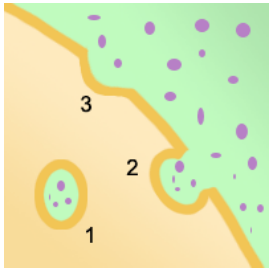
6. Using a transport protein to move particles across the membrane:

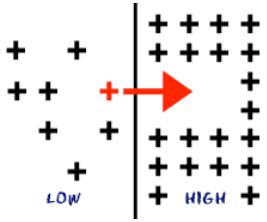
_____



7. Describe the processes occurring in the following pictures:







_____ _____ _____