Name:_____
Date:_____
Crew:_____

CELL TRANSPORT ACTIVITY

Situation #1: Arrange the molecules so that 7 NaCl molecules are outside of the cell membrane and 3 NaCl molecules are inside of the cell. Arrange the H_2O molecules so that 3 are on the outside of the cell and 7 are inside of the cell. Draw the situation below.

A. What percentage of the outside solution is salt (NaCl)?

B. What percentage of the inside solution is salt (NaCl)?

C. In which direction is the diffusion of salt going to occur in this situation?

Place the diffusion arrow in the direction the salt will travel and draw it in your diagram above.

D. In which direction will the osmosis of water occur?

Place the osmosis arrow in the direction the salt will travel and draw it in your diagram above.

E. What affect do you think this movement of salt and water will have on the cell?

F. Saltwater fish deal with this problem everyday. What transport mechanism do they use to remove the incoming salt from their cells?

Situation #2: Place 7 salt molecules inside of the cell and 3 salt molecules outside of the cell. Place 7 water molecules outside of the cell and 3 water molecules inside of the cell.
Draw the situation below.

A. Which way will the diffusion of salt molecules occur?

Place the diffusion arrow in that direction and draw it in the picture above.

B. Which way will the osmosis of water molecules occur?

Place the osmosis arrow in that direction and draw it in the picture above.

C. What affect could this movement of water have on the cell?

D. How do you think the cell will deal with the incoming water?

E. Based on the above 2 situations, explain why saltwater fish can't survive in freshwater.

Situation #3: Place 5 water molecules outside of the cell and 5 water molecules inside of the cell. Place 5 salt molecules outside of the cell and 5 salt molecules inside of the cell. Draw the situation below.

A. Which way will the diffusion of salt occur?

Place the diffusion arrow in the correct direction and draw it in the picture above.

B. Which way will the osmosis of water occur?

Place the osmosis arrow in the correct direction and draw it in the picture above.

C. What is state or condition is this situation in?