**Cell Transport**

**Watch It! Semipermeable Membrane**

Go to <https://www.youtube.com/watch?v=yU4otyMhjHU>, watch the video, and answer the questions below.

1. What does semipermeable or selectively permeable mean?

2. What is an example of a semipermeable membrane?

3. Draw a picture of the semipermeable membrane and label the hydrophobic and hydrophilic parts.

4. Give two examples of molecules that can cross the membrane without energy being required to move them?

5. What is the process of moving without energy across the cell membrane called?

6. What direction do these particles move in?

7. What is used to move ions or charged particles across the membrane?

8. What direction do these particles move in?

**Watch It! Osmosis: A Solute and a Love Story**

Go to <https://www.youtube.com/watch?v=IaZ8MtF3C6M>, watch the video, and answer the questions below.

1. What is osmosis?

2. What kinds of things can pass through the cell membrane?

3. What kinds of things cannot pass through the cell membrane?

4. What does passive transport mean?

5. What direction do particles move in osmosis?

6. What is a solute?

7. What is a solvent?

8. Water tends to move to areas of high \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentration.

9. Once equilibrium is moved, what happens to net movement of the water?

10. What does hypertonic mean?

11. What does hypotonic mean?

12. In the example of pure water and the red blood cell, where does water travel?

13. What does isotonic mean?

14. Where will water travel if you place a saltwater fish in a freshwater environment?

15. Are saltwater and freshwater fish isotonic to their environment? Why or why not?

16. What type of fish can switch from fresh to saltwater?

17. Where does water move in a plant?

18. What happens when you place salt on slugs?

**Watch It! Types of Transport**

Go to https://www.youtube.com/watch?v=Ptmlvtei8hw, watch the video, and answer the questions below.

1. What word describes keeping a stable environment?

2. What is the cell membrane made of?

3. What gases can pass through the membrane without energy?

4. How do substances move in simple diffusion?

5. What does “move with the concentration gradient” mean?

6. What happens in facilitated diffusion?

7. Is facilitated diffusion active or passive transport? Why?

8. What kinds of molecules need help (from proteins) to pass through the membrane?

9. What direction to molecules move in passive transport?

10. What happens in active transport?

11. What is an example of active transport?

12. What happens during endocytosis?

13. What happens during exocytosis?

14. Aside from expelling waste, when else would the cell need to use exocytosis?

**Watch It! Osmosis and Tonicity**

Go to <https://www.youtube.com/watch?v=Y_w07A7chnk&feature=youtu.be>, watch the video, and answer the questions below.

1. What is osmosis?

2. What is tonicity?

3. What direction does water move in a solution of red blood cells in a pure water solution?

4. What could happen over time if water continues to move in this direction?

5. What direction does water move in a solution of red blood cells in a salt water solution?

6. What could happen over time if water continues to move in this direction?

7. What happens to the shape of the cell if the concentration outside the cell is equal to the concentration inside the cell?

8. What term is used to describe the conditions of number 7?

9. Water always move from what type of environment to what type of environment?