Name_____ Class_____ Date_____

7.3 Cell Transport

Passive Transport

For Questions 1–4, write the letter of the correct answer on the line at the left.

_____ **1.** Which of the following must be true for diffusion to occur?

A. Molecules or particles must have different sizes.

B. Special protein channels must always be available.

C. There must be areas of different concentrations.

D. Energy must be available.

_____ **2.** Which term refers to the condition that exists when *no* net change in concentration results from diffusion?

A. concentration

B. equilibrium

C. osmosis

D. randomness

_____ **3.** Air has a higher concentration of oxygen molecules than does the cytoplasm of your lung cells. Where in your lungs will there be a net increase of oxygen?

A. in the air breathed in

B. in the air breathed out

C. outside of the lung cells

D. inside of the lung cells

_____ **4.** Which of the following statements tells how facilitated diffusion differs from simple diffusion?

A. Particles move through cell membranes without the use of energy by cells.

B. Particles tend to move from high concentration to lower concentration.

C. Particles move within channel proteins that pass through cell membranes.

D. Particles tend to move more slowly than they would be expected to move.

For Questions 5–7, match the situation with the result. Write the letter of the correct answer on the line at the left.

Situation	Result
_____ **5.** Cells are in an isotonic solution.	**A.** The cells lose water.
_____ **6.** Cells are in a hypertonic solution.	**B.** The cells gain water.
_____ **7.** Cells are in a hypotonic solution.	**C.** The cells stay the same.

8. **THINK VISUALLY** In the table below, draw how each type of cell will look after being placed in a hypertonic solution.

Appearance of Cells in a Hypertonic Solution	
Animal Cells	**Plant Cells**

Active Transport

9. What is the function of active transport in moving small molecules and ions across cell membranes? Give an example.

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10. How does ATP enable transport proteins to move ions across a cell membrane?

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11. What are the proteins used in active transport called?_____

Apply the Big idea

12. Most sports drinks are isotonic in relation to human body fluids. Explain why athletes should drink solutions that are isotonic to body fluids when they exercise rather than ones that are hypotonic to body fluids (contain a greater proportion of water in comparison to the fluids in and around human body cells).

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