



7.3 Cell Transport

Lesson Objectives

 Describe passive transport.

 Describe active transport.

BUILD Vocabulary

A. The chart below shows key terms from the lesson with their definitions. Complete the chart by writing a strategy to help you remember the meaning of each term. One has been done for you.

Term	Definition	How I'm Going to Remember the Meaning
Diffusion	Movement of particles from an area of higher concentration to an area of lower concentration	<i>Diffusion happens when the concentrations of particles are <u>different</u>.</i>
Facilitated diffusion	Diffusion of molecules through a protein channel	
Hypertonic	Solution with more solute than another solution	
Hypotonic	Solution with less solute than another solution	
Isotonic	Two solutions that have the same amount of solute	
Osmosis	Diffusion of water through a selectively permeable membrane	

B. As you work through this lesson, you may find these terms in the activities. When you need to write a key term or a definition, **highlight** the term or the definition.

BUILD Understanding

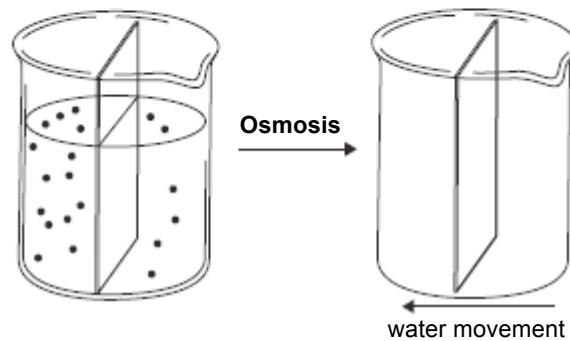
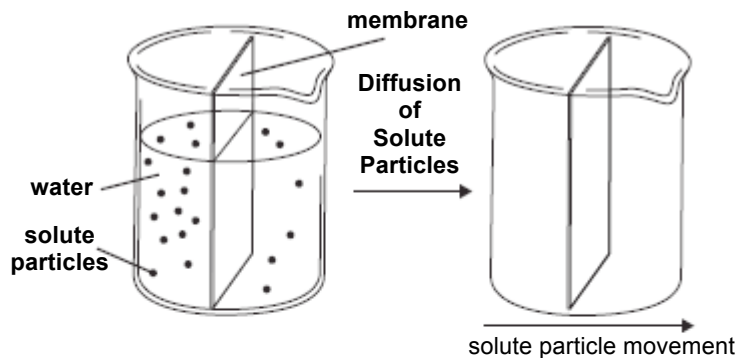
Compare/Contrast Table Use a compare/contrast table when you want to see the similarities and differences between two or more objects or processes. Select words or phrases from the box to complete the table comparing passive and active transport.

diffusion	energy required	exocytosis	osmosis
endocytosis	energy not required	facilitated diffusion	protein pumps

Passive Transport	Active Transport

Passive Transport

Diffusion is the movement of particles from an area of high concentration to an area of low concentration. Osmosis is the diffusion of water through a selectively permeable membrane. Study the beakers at the right. The arrows between beakers tell you what process is occurring.



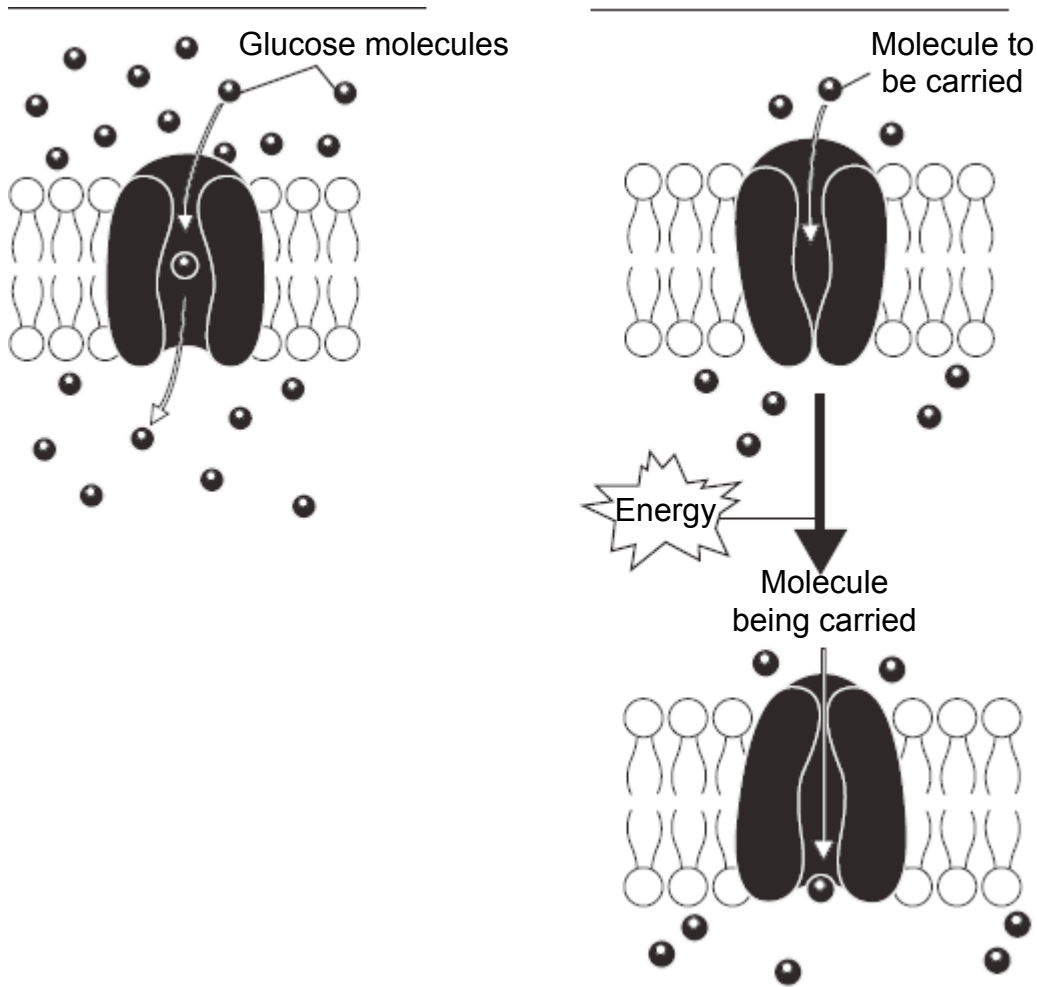
- In the beakers on the right, draw the result of the described process. Draw changes in water levels. Draw changes in the number of solute particles. Remember to draw on both sides of the membrane.
- Look at the top left beaker. What would happen if the membrane did not allow water or solute particles to pass through it?

Active Transport

Facilitated diffusion takes place when a substance diffuses across the cell membrane through a protein channel. Active transport takes place when the cell uses energy to carry a substance across the cell membrane against a concentration difference.

Follow the directions.

1. Label each diagram as either facilitated diffusion or active transport.



Answer the questions. Circle the correct answer.

2. Which process can move molecules from a lower concentration solution on one side of the membrane to a higher concentration solution on the other side?
 active transport facilitated diffusion
3. Which process does not require energy?
 active transport facilitated diffusion
4. What does the word *facilitated* mean in *facilitated diffusion* ?
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