

Name _____ Period _____ Date _____

Home Work 3.5: active Transport, Endocytosis & Exocytosis

KEY CONCEPT

Cells use energy to transport materials that cannot diffuse across a membrane.

VOCABULARY

active transport	phagocytosis
endocytosis	exocytosis

MAIN IDEA: Proteins can transport materials against a concentration gradient.

For each of the following statements, place a check mark in the appropriate box if it is true for simple diffusion, facilitated diffusion, or active transport. Each statement may be true for one or more of the three types of transportation.

Statement	Simple Diffusion	Facilitated Diffusion	Active Transport
1. The movement of molecules against a concentration gradient.			
2. The movement of molecules down a concentration gradient.			
3. The movement of molecules through selective membrane proteins.			

- All transport proteins span the _____. Most transport proteins change shape when they _____ to a target molecule or molecules.
- Active transport proteins have one key distinguishing feature, which is that they use _____ to move a substance against its concentration gradient.
- Refer to Figure 5.1 to draw a picture in the box below to represent active transport.



7. Most active transport proteins use energy from the breakdown of _____.

MAIN IDEA: Endocytosis and exocytosis transport materials across the membrane in vesicles.

Circle the word or phrase that best completes the statement.

8. A cell may transport a substance in *lysosomes / vesicles* if the substance is too large to cross the membrane.

9. During endocytosis, the vesicle membrane fuses with a lysosome, and the membrane and its contents are broken down by lysosomal *enzymes / gradients*.

10. Complete the table below to compare and contrast the processes of endocytosis and exocytosis. Place a check mark in the appropriate box to indicate whether it is a characteristic of endocytosis, a characteristic of exocytosis, or a characteristic that both processes have in common.

Characteristic	Endocytosis	Exocytosis	Both
Uses energy			
Takes substances into a cell			
Releases substances outside a cell			
Moves substances in vesicles			

Vocabulary Check

Circle the word or phrase that best completes the statement.

11. *Active transport / Phagocytosis* is a term that means “cell eating.” It describes a type of endocytosis.

12. The prefix *exo-* means “out of,” and the prefix *endo-* means “taking in.” Therefore, *exocytosis / endocytosis* is a process that releases substances outside a cell, and *exocytosis / endocytosis* is a process that takes substances into a cell.

13. *Active transport / Facilitated diffusion* drives molecules across a membrane against a concentration gradient.