



Name \_\_\_\_\_

Period \_\_\_\_\_

Date \_\_\_\_\_

**SECTION**  
**3.5**

ACTIVE TRANSPORT, ENDOCYTOSIS, AND EXOCYTOSIS

**Study Guide**

**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.

1. How is active transport different than simple diffusion and facilitated diffusion?

\_\_\_\_\_

2. How is active transport similar to facilitated diffusion?

\_\_\_\_\_

3. List two characteristics that almost all transport proteins share.

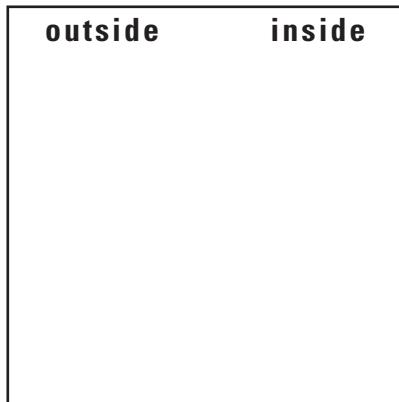
\_\_\_\_\_

\_\_\_\_\_

4. List the key distinguishing feature of active transport proteins.

\_\_\_\_\_

5. Refer to Figure 3.25 to draw a picture in the box below to represent active transport.



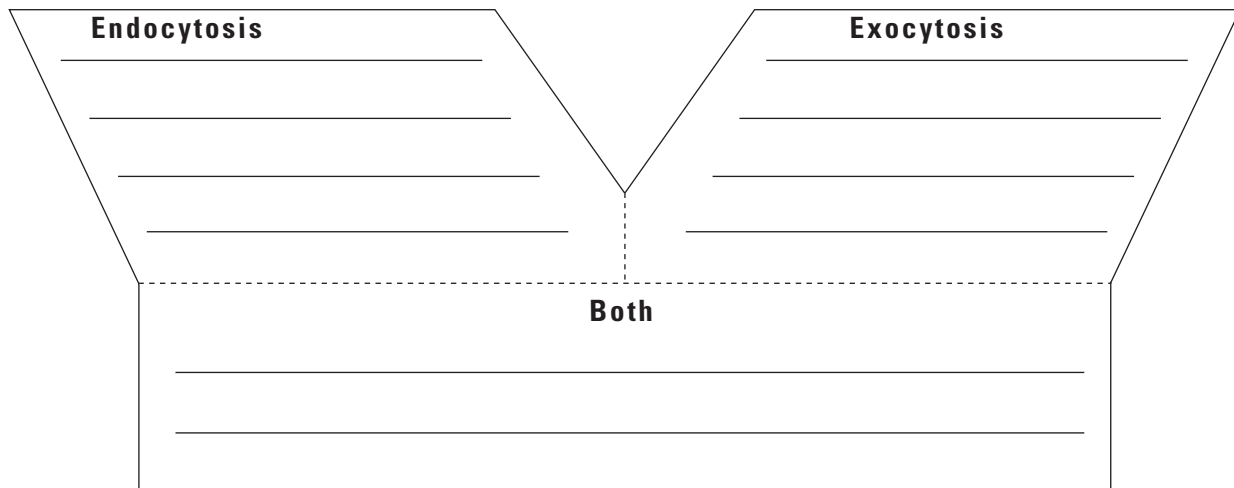
6. Most active transport proteins use energy from the breakdown of \_\_\_\_\_.

## Section 3.5 STUDY GUIDE CONTINUED

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

7. A cell may transport a substance in \_\_\_\_\_ if the substance is too large to cross the membrane.
8. During endocytosis, the vesicle membrane fuses with a lysosome, and the membrane and its contents are broken down by \_\_\_\_\_.

Complete the Y diagram below to compare and contrast the processes of endocytosis and exocytosis. Under the heading “endocytosis,” list the characteristics of endocytosis. Under the heading “exocytosis,” list the characteristics of exocytosis. At the bottom of the Y, write the characteristics that both processes have in common. Then lightly cross out those characteristics at the top of the Y.



### Vocabulary Check

9. What term means “cell eating” and describes a type of endocytosis?  
\_\_\_\_\_
10. The prefix *exo-* means “out of,” and the prefix *endo-* means “taking in.” How do these meanings relate to the meaning of exocytosis and endocytosis?  
\_\_\_\_\_  
\_\_\_\_\_
11. What process drives molecules across a membrane against a concentration gradient?  
\_\_\_\_\_