

Name _____
Hour _____

Cells and Their Environment
Active Transport

Read the passage below. Answer the questions that follow.

The movement of a substance into a cell by a vesicle is called **endocytosis**. During endocytosis, the cell membrane forms a pouch around a substance outside the cell. The pouch then closes up and pinches off from the membrane to form a vesicle. Vesicles formed by endocytosis may fuse with lysosomes or other organelles. The movement of a substance by a vesicle to the outside of a cell is called **exocytosis**. During exocytosis, vesicles in the cell fuse with the cell membrane, releasing their contents. Cells use exocytosis to export proteins that are modified by the Golgi apparatus. Nerve cells and cells of various glands, for example, release proteins by exocytosis.

Read each question and write your answer in the space provided.

1. Complete the table below. In the first column, write two characteristics of cells in endocytosis. In the second column, write two characteristics of cells in exocytosis.

Endocytosis	Exocytosis
a.	b.
c.	d.

2. The prefix *endo-* means "inside or within." How would knowing this prefix meaning help you define the Key Term *endocytosis*?

- ____ 3. Through the process of exocytosis, nerve cells
- a. form vesicles.
 - b. release proteins.
 - c. fuse with lysosomes.
 - d. Both (a) and (b).

Endocytosis and Exocytosis

- ____ 4. The process by which the plasma membrane engulfs and then takes in substances from the cell's environment is known as
- a. endocytosis
 - b. exocytosis
 - c. passive transport
 - d. osmosis
- ____ 5. Endocytosis is common in
- a. nerve cells.
 - b. plants.
 - c. unicellular organisms.
 - d. algae.
- ____ 6. Which of the following is **NOT** endocytosis?
- a. phagocytosis
 - b. pinocytosis
 - c. passive transport
 - d. the process by which cholesterol enters a cell
- ____ 7. The reverse process of endocytosis is
- a. phagocytosis
 - b. pinocytosis
 - c. osmosis
 - d. exocytosis
- ____ 8. Undigested particles can be eliminated by
- a. exocytosis
 - b. endocytosis
 - c. pinocytosis
 - d. phagocytosis

Complete the table by writing YES or NO in each column to answer questions 9 and 10. To answer question 11, write the correct word(s) in each column.

		Endocytosis		
		Phagocytosis	Pinocytosis	Exocytosis
9.	Are substances taken into the cell?			
10.	Are substances being expelled from the cell?			
11.	What types of substance(s) are taken into or expelled from the cell?			

12. What types of organisms have a cell wall? What is a plant cell wall mostly composed of?

13. What are two functions of the cell wall?