

Chapter 7

A View of the Cell

Reinforcement and Study Guide

Section 7.1 The Discovery of Cells

In your textbook, read about the history of the cell theory.

For each statement in Column A, write the letter of the matching item in Column B.

Column A	Column B
_____ 1. The first scientist to describe living cells as seen through a simple microscope	a. Schleiden
_____ 2. Uses two or more glass lenses to magnify either living cells or prepared slides	b. compound light microscope
_____ 3. A scientist who observed that cork was composed of tiny, hollow boxes that he called cells	c. electron microscope
_____ 4. A scientist who concluded that all plants are composed of cells	d. Schwann
_____ 5. A scientist who concluded that all animals are composed of cells	e. Hooke
_____ 6. The microscope that allowed scientists to view molecules	f. Leeuwenhoek

In your textbook, read about the two basic cell types.

Complete the table by checking the correct column for each statement.

Statement	Prokaryotes	Eukaryotes
7. Organisms that have cells lacking internal membrane-bound structures		
8. Do not have a nucleus		
9. Are either single-celled or made up of many cells		
10. Generally are single-celled organisms		
11. Organisms that have cells containing organelles		

Chapter

7

A View of the Cell, *continued*

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Section 7.2 The Plasma Membrane

In your textbook, read about maintaining a balance.

Use each of the terms below just once to complete the passage.

glucose

plasma membrane

homeostasis

organism

balance

selective permeability

Living cells maintain a **(1)** _____ by controlling materials that enter and leave. Without this ability, the cell cannot maintain **(2)** _____ and will die. The cell must regulate internal concentrations of water, **(3)** _____, and other nutrients and must eliminate waste products. Homeostasis in a cell is maintained by the **(4)** _____, which allows only certain particles to pass through and keeps other particles out. This property of a membrane is known as **(5)** _____. It allows different cells to carry on different activities within the same **(6)** _____.

In your textbook, read about the structure of the plasma membrane.

For each statement below, write **true** or **false**.

- _____ 7. The structure and properties of the cell wall allow it to be selective and maintain homeostasis.
- _____ 8. The plasma membrane is a bilayer of lipid molecules with protein molecules embedded in it.
- _____ 9. A phospholipid molecule has a nonpolar, water-insoluble head attached to a long polar, soluble tail.
- _____ 10. The fluid mosaic model describes the plasma membrane as a structure that is liquid and very rigid.
- _____ 11. Eukaryotic plasma membranes can contain cholesterol, which tends to make the membrane more stable.
- _____ 12. Transport proteins span the cell membrane, creating the selectively permeable membrane that regulates which molecules enter and leave a cell.
- _____ 13. Proteins at the inner surface of the plasma membrane attach the membrane to the cell's support structure, making the cell rigid.