

Cell Structure and Function ■ Guided Reading and Study

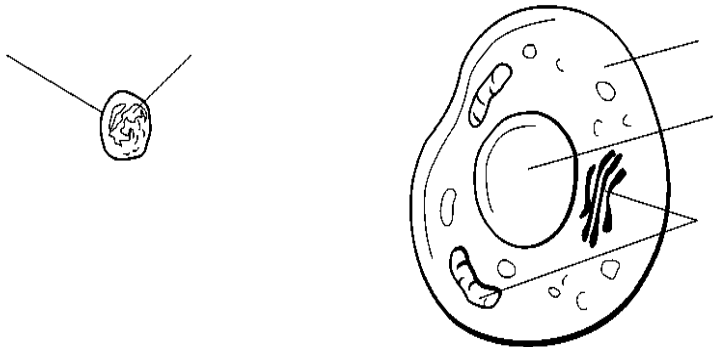
Domains and Kingdoms

1. Complete the table about the two categories of cells.

TWO CATEGORIES OF CELLS

Category	Definition	Examples
	Organisms whose cells lack nuclei	
	Organisms whose cells contain nuclei	

Classifying On the lines provided, label the parts of each cell. For 6 and 7 label the cells as either prokaryotic or eukaryotic.



6. _____ 7. _____

Looking Inside Cells

This section describes cell structure and function in plant cells, animal cells, and bacteria.

Introduction

1. What are organelles?

Enter the Cell

- The rigid layer of nonliving material that surrounds plant cells is the _____.
- Circle the letter of each sentence that is true about the cell wall.
 - Cell walls are made of cellulose.
 - Plant cells have cell walls.
 - Animal cells have cell walls.
 - Water and oxygen cannot pass through the cell wall.

4. What does the cell wall do?

5. Where is the cell membrane located in cells that have cell walls?

6. Where is the cell membrane located in cells that do NOT have cell walls?

7. Is the following sentence true or false? The main function of the cell membrane is to control what comes into and out of a cell.

Sail On to the Nucleus

- Circle the letter of each sentence that is true about the nucleus.
 - Materials pass in and out of the nucleus through pores in the nuclear envelope.
 - Chromatin contains the instructions that direct the functions of a cell.
 - The nucleolus is part of the nuclear envelope.
 - Ribosomes are made in the nucleolus.

Organelles in the Cytoplasm

9. Circle the letter of the part of the cell that is the region between the cell membrane and the nucleus.

- a. organelle
- b. nucleus
- c. cytoplasm
- d. chromatin

10. In the table below, describe the function of each organelle in the cytoplasm.

Organelles in Cytoplasm	
Organelle	Function
Mitochondria	
Endoplasmic reticulum	
Ribosomes	
Golgi bodies	
Chloroplasts	
Vacuoles	
Lysosomes	

Specialized Cells

11. The structure of each kind of body cell is suited to its _____.

Bacterial Cells

12. Circle the letter of each sentence that is true about bacterial cells.

- a. Bacterial cells are larger than plant or animal cells.
- b. Bacterial cells have a cell wall and a cell membrane.
- c. Bacterial cells do not have a nucleus.
- d. Bacterial cells do not have genetic material.

13. Label the structures on the illustrations of the plant and animal cells.

