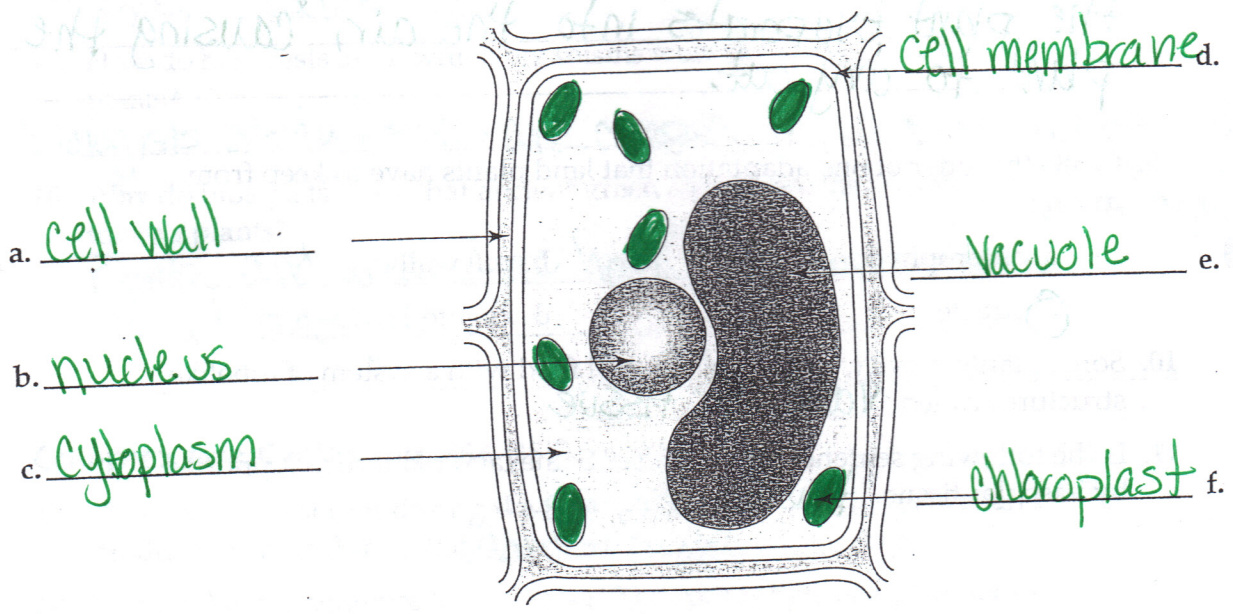


Plants ▪ Guided Reading and Study

The Plant Kingdom (continued)

What Is a Plant? (pp. 250-251)

1. Circle the letter of each characteristic that plants share.
 - a. heterotroph
 - b. autotroph
 - c. prokaryote
 - d. eukaryote
2. Is the following sentence true or false? Plants make their own food in the process of photosynthesis. true
3. Plant cells are enclosed by a cell wall.
4. Label the diagram of the plant cell below.



5. Is the following sentence true or false? Only some plants are multicellular. false

Plants ▪ Guided Reading and Study

Adaptations for Living on Land (pp. 251–252)

6. List five things that plants must do to survive on land.
- a. have ways to obtain water and other nutrients
 - b. retain water
 - c. transport materials within their bodies
 - d. support their bodies
 - e. reproduce
7. Plants living on land get water and nutrients from the soil.
8. Why can a plant on land lose water and dry out?
Plants on land can dry out because there is more water in plant cells than in the air, water from the plant evaporates into the air, causing the plant to dry out.
9. Circle the letter of one adaptation that land plants have to keep from drying out.
- | | |
|-------------------|--------------|
| a. chlorophyll | b. cell wall |
| <u>c.</u> cuticle | d. zygote |
10. Some plants move water, minerals, and food with a system of tubelike structures called vascular tissue.
11. Is the following sentence true or false? Some land plants are supported by vascular tissue. true

Plants • Guided Reading and Study

The Plant Kingdom (continued)

12. What occurs during fertilization?

During fertilization, a sperm cell unites with an egg cell.

13. Circle the letter of the name of a fertilized egg.

- a. sporophyte
- b. gamete
- c. gametophyte
- d. zygote

Classifying Plants (pp. 253–254)

14. Is the following statement true or false? Nonvascular plants can grow very tall. false

15. How do biologists learn which organisms were the ancestors of today's plants?

Biologists study fossils and compare the chemicals in modern plants

16. Why do biologists think that ancient green algae were the ancestors of today's plants? to those in other organisms

Plants and green algae have the same form of chlorophyll.

Complex Life Cycles (pp. 254–255)

17. Plants produce spores during the sporophyte stage and produce sex cells during the gametophyte stage.

18. Is the following sentence true or false? The sporophyte of a plant looks the same as the gametophyte. false

19. What are two kinds of sex cells that a gametophyte produces?

- a. sperm cell
- b. egg cell

Plants ▪ Review and Reinforce

The Plant Kingdom

Understanding Main Ideas

Answer the following questions.

1. What characteristics do all plants share?

Plants are eukaryotes, multicellular, and autotrophic.

2. What do plants need to live successfully on land?

They need to get water and other materials from their surroundings, retain water, transport materials within their bodies, support their bodies, and reproduce.

Building Vocabulary

From the list below, choose the term that best completes each sentence and write it in the blank.

vascular tissue

gametophyte

nonvascular plant

zygote

vascular plant

sporophyte

cuticle

- The internal transporting system through which water, minerals, and food move inside the plant is called vascular tissue.
- In the gametophyte stage, the plant produces two kinds of sex cells.
- A plant that does not have a well-developed system of tubes for transporting water and other materials is called a(n) nonvascular plant.
- A(n) cuticle is a waxy, waterproof layer that covers the leaves and stems of most plants.
- In the sporophyte stage, the plant produces spores.
- A plant with true vascular tissue is called a(n) vascular plants.
- A fertilized egg is called a(n) zygote.

Plants • Connecting Concepts

Connecting Concepts

Develop a concept map that uses the Key Concepts and Key Terms from this chapter. Keep in mind the big idea of this chapter. The concept map shown is one way to organize how the information in this chapter is related. You may use an extra sheet of paper.

