Name _____ Date _____ Class _____

CHAPTER 11 DIRECTED READING WORKSHEET

Introduction to Plants

As you read Chapter 11, which begins on page 248 of your textbook, answer the following questions.

This Really Happened . . . (p. 248)

1. What did David Noble discover in 1994?

_____

_____

_____

What Do You Think? (p. 249)

Answer these questions in your ScienceLog now. Then later, you'll have a chance to revise your answers based on what you've learned.

Investigate! (p. 249)

2. What is the purpose of this activity?

_____

_____

_____

Section 1: What Makes a Plant a Plant? (p. 250)

3. Which of the following come from plants? (Circle all that apply.)

a. paper
b. cotton
c. a lot of food
d. wood

Plant Characteristics (p. 250)

4. _____ are organelles that give plants their green color.

5. Chlorophyll is a _____ found in organelles called _____ that allows plants to use energy from the _____ to make food.

6. What does the cuticle do? (Circle all that apply.)

a. It coats the surface of stems and leaves.
b. It provides structural support.
c. It helps plants retain moisture.
d. It is an adaptation that helps plants live on dry land.

7. The cell walls of plant cells help support the plant.

True or False? (Circle one.)

Choose the word in Column B that best matches the definition in Column A, and write the corresponding letter in the space provided.

Column A	Column B
____ **8.** tiny reproductive cells that can grow into new plants	**a.** sporophyte
____ **9.** tiny male and female reproductive cells that join together to make a fertilized egg before they can grow into a new plant	**b.** spores
____ **10.** stage of a plant's life during which it produces eggs and sperm cells	**c.** sex cells
____ **11.** stage of a plant's life during which it produces spores	**d.** gametophyte

The Origin of Plants (p. 252)

12. Scientists think modern green algae and plants are descended from ancient green algae that lived in the oceans. What are two similarities between modern green algae and plants?

_____

_____

_____

_____

_____

How Are Plants Classified? (p. 252)

13. _____ plants must rely on _____ and _____ to move substances to and from their cells because they have no pipelike tissues to transport water and nutrients.

14. Plants that have "pipelike" tissues to transport materials belong to the _____ group of plants.

Each of the following phrases is a characteristic of either vascular or nonvascular plants. In the space provided, write *V* for vascular plants or *N* for nonvascular plants.

15. _____ must be small

16. _____ some produce seeds

17. _____ can be any size

Choose the main group of living plants in Column B that best matches the definition in Column A, and write the corresponding letter in the space provided.

Column A	Column B
____ **18.** vascular, seed-bearing plants with flowers	**a.** ferns, horsetails, and club mosses
____ **19.** vascular, non-seed-bearing plants	**b.** gymnosperms
____ **20.** nonvascular plants	**c.** mosses and liverworts
____ **21.** vascular, seed-bearing plants without flowers	**d.** angiosperms

Review (p. 253)

Now that you've finished Section 1, review what you learned by answering the Review questions in your ScienceLog.

Section 2: Seedless Plants (p. 254)

1. There are _____ groups of seedless plants.

Mosses and Liverworts (p. 254)

2. Why would you have a hard time finding moss growing in the hot, dry desert?

_____

_____

_____

3. Rhizoids are like roots because

a. they contain vascular tissue.
b. they do not contain vascular tissue.
c. they help hold the plant in place.
d. None of the above