

Section 24–3 Plant Propagation and Agriculture (pages 622–626)

This section describes how asexual reproduction occurs in plants. It also describes plant propagation and identifies which crops provide the major food supply for humans.

Vegetative Reproduction (pages 622–623)

1. The method of asexual reproduction used by many flowering plants is called _____.
2. What does vegetative reproduction enable a single plant that is well adapted to the environment to do? _____

3. Vegetative reproduction includes the production of new plants from what three kinds of plant structures?
 - a. _____
 - b. _____
 - c. _____
4. Why does vegetative reproduction enable plants to reproduce very quickly?

5. What do spider plants produce that allows them to reproduce vegetatively?

6. Is the following sentence true or false? New plants can grow from the leaves of a parent plant if the leaves fall to the ground and the conditions are right.

7. How do strawberry plants reproduce vegetatively? _____

8. How do bamboo plants reproduce asexually? _____

Plant Propagation (page 623)

9. What do horticulturists use plant propagation for? _____

10. Why might a horticulturist not want a plant to reproduce sexually by seeds?

11. Circle the letter of what a cutting must have to form roots when placed in a rooting mixture.

- a. Several stolons c. Buds containing meristematic tissue
b. A taproot d. Buds without meristematic tissue

12. When a piece of stem or a lateral bud is cut from a parent plant and attached to another plant, what are the cut piece and the plant to which it is attached called?

13. When stems are used as scions, the process is called _____.

14. What is the process called when buds are used as scions? _____

15. In what kind of cases do growers use grafting and budding? _____

Agriculture (pages 624–626)

16. Circle the letter of when evidence suggests that agriculture developed in many parts of the world.

- a. about 1–2 million years ago c. about 10,000–12,000 years ago
b. about 1000–2000 years ago d. about 100,000 years ago

17. What are three crop plants that most people of the world depend on for the bulk of their food supply?

- a. _____ b. _____ c. _____

18. The food taken from crops such as wheat, rice, and corn is stored in their _____.

19. What are the four crops that 80 percent of all U.S. cropland is used to grow?

20. What important crops were unknown in Europe before they were introduced there from the Americas? _____

21. What are two ways in which the efficiency of agriculture has been improved?

- a. _____
b. _____

22. How has the use of pesticides and fertilizers affected crop yields? _____

WordWise

Answer the questions by writing the correct vocabulary terms in the blanks.
Use the circled letter in each word to find the hidden word. Then, write a definition for the hidden word.

What is the process in which stems are used as scions?

— — — — — — —

What are the flower parts that are brightly colored and are found just inside the sepals?

— — — — — —

What are the floral parts called that produce the female gametophytes?

— — — — — — —

What does an anther and a filament together make up?

— — — — —

What is the sticky portion of the style where pollen grains frequently land?

— — — — — — —

What is a period during which a plant embryo is alive but not growing?

— — — — — — —

Which part of a flower is where haploid male gametophytes are produced?

— — — — —

What is a long, trailing plant stem that produces roots when it touches the ground?

— — — — — —

What is the process when buds are used as scions?

— — — — — — —

In a flower, what part contains one or more ovules?

— — — — —

What is the food-rich tissue that nourishes a seedling as it grows?

— — — — — — — — — —

Hidden Word: — — — — — — — — — — — — — — —

Definition: _____