Name_____ Class_____ Date_____

Section 25-3 Plant Adaptations (pages 643-646)

Key Concepts

- How are plants adapted to different environments?
- How do plants obtain nutrients from sources other than photosynthesis?
- How do plants defend themselves from insects?

Aquatic Plants (page 643)

1. What adaptation do aquatic plants have that allows them to grow in mud that is saturated with water and nearly devoid of oxygen? _____

_____

2. How do waterlilies get oxygen to their roots? _____

_____

_____

3. Circle the letter of each sentence that is true about the adaptations of aquatic plants.

a. All aquatic plants grow very slowly after germination.

b. In waterlilies, oxygen diffuses from open spaces in petioles into the roots.

c. The knees of mangrove trees bring oxygen-rich air down to the roots.

d. The seeds of some aquatic plants can float in water.

Salt-Tolerant Plants (page 644)

4. What adaptation do the leaves of salt-tolerant plants have that protects them against high salt concentration? _____

_____

_____

Desert Plants (pages 644-645)

5. What are three plant adaptations to a desert climate?

a. _____

b. _____

c. _____

6. What are xerophytes? _____

7. Why do the roots of xerophytes have many hairs? _____

_____

_____

8. Where is most of a desert plant's photosynthesis carried out? _____

_____

9. Why do cactuses have small leaves or no leaves at all? _____

_____

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10. What is the advantage for many desert plants that have seeds that can remain dormant for years? _____

Nutritional Specialists (page 645)

11. The Venus' flytrap is an example of what kind of nutritional specialist?

12. What nutrient do carnivorous plants need to obtain from insects that they can't otherwise get from the environment? _____

13. How does a Venus' flytrap obtain the nutrient it needs from an insect it catches?

14. What common plant grows as a parasite on conifers in the western United States?

Epiphytes (page 645)

15. What are epiphytes? _____

16. Why aren't epiphytes considered to be plant parasites? _____

Chemical Defenses (page 646)

17. How do many plants defend themselves against insect attack? _____

18. How does nicotine protect a tobacco plant from potential predators? _____