

Section 28–4 Echinoderms (pages 734–738)

This section identifies the distinguishing features of echinoderms. It also describes functions carried out by the water vascular system of echinoderms and describes the different classes of echinoderms.

Introduction (page 734)

1. An internal skeleton is called a(an) _____.
2. What forms an echinoderm's endoskeleton? _____

3. In what environment do all echinoderms live? _____

What Is an Echinoderm? (page 734)

4. Is the following sentence true or false? The bodies of most echinoderms are two-sided. _____
5. What are five features that characterize echinoderms?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
6. What characteristic of echinoderms indicates that they are closely related to vertebrates? _____

Form and Function in Echinoderms (pages 735–736)

7. What functions does the water vascular system carry out in echinoderms?

8. The water vascular system opens to the outside through a sievelike structure called a(an) _____.
9. What is a tube foot? _____
10. Is the following sentence true or false? Sea stars usually feed on mollusks.

11. In most echinoderms, how are solid wastes released? _____

12. What is the structure of the nervous system in most echinoderms? _____

13. What do most echinoderms use to move? _____
14. Is the following sentence true or false? Echinoderms reproduce by internal fertilization. _____

Groups of Echinoderms (pages 737–738)

15. Complete the table about groups of echinoderms.

GROUPS OF ECHINODERMS

Group	Description of Feeding	Description of Body
	Many are detritivores or grazers	Disk-shaped
Sea cucumbers		Look like warty, moving pickles
Sea stars	Carnivores	
		Long, feathery arms and attached to the ocean bottom by a stalk

16. How do sand dollars defend themselves? _____

17. When a brittle star is attacked, it sheds one or more arms. How does this help the echinoderm? _____

18. Where are most sea cucumbers found? _____

19. What happens if a sea star is pulled into pieces? _____

20. Where do many feather stars live? _____

Ecology of Echinoderms (page 738)

21. What is the effect of a sudden rise or fall in the number of echinoderms in a marine habitat? _____

22. Circle the letter of each sentence that is true about the ecology of echinoderms.

- a. The crown-of-thorns sea star is a major threat to coral reefs.
- b. Sea urchins help control the distribution of algae.
- c. Echinoderms feed almost exclusively on coral.
- d. Sea stars help control the number of clams and corals.

WordWise

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

What is it called when an arthropod sheds its entire exoskeleton and manufactures a large one to take its place?

— — — o — — —

What is the immature form of an insect called?

— — — — o

What is the structure called on an echinoderm that operates much like a living suction cup?

— — — — — o — — —

What is a specific chemical messenger called that affects the behavior or development of other individuals of the same species?

— — — — o — — — — —

What is a mouthpart adapted for biting and grinding food called?

— o — — — — —

What is the tough external covering of an arthropod called?

— o — — — — — — — — —

Hidden Word: — — — — —

Definition: _____
