

Section 26–3 Cnidarians (pages 669–675)

This section explains what a cnidarian is and describes the two body plans that exist in the cnidarian life cycle. It also identifies the three groups of cnidarians.

Introduction (page 669)

1. Cnidarians are members of the phylum _____.

What Is a Cnidarian? (page 669)

2. What important features unite the cnidarians as a group? _____

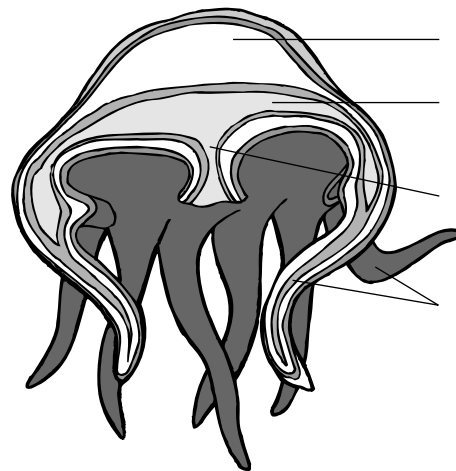
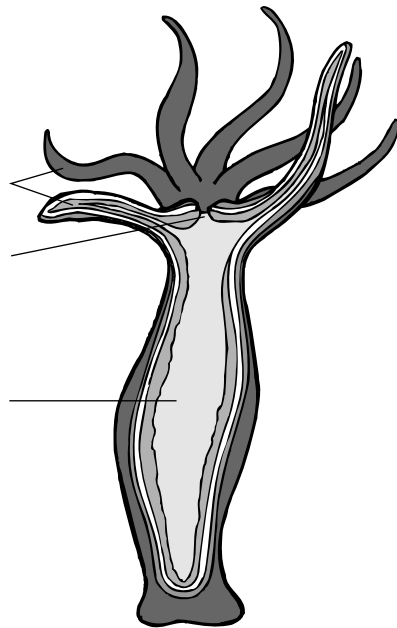
3. What are cnidocytes? _____

4. A poison-filled, stinging structure within a cnidocyte that contains a tightly coiled dart is called a(an) _____.

Form and Function in Cnidarians (pages 670–672)

5. Is the following sentence true or false? Cnidarians have bilateral symmetry.

6. What are the two stages in the cnidarian life cycle?
a. _____ b. _____
7. Write labels on each illustration below to identify the life-cycle stage and to name the different body parts.



Match the cnidarian structure with its description.

Structure	Description
_____ 8. Gastroderm	a. Digestive chamber with single opening
_____ 9. Mesoglea	b. Sensory cells that help determine direction of gravity
_____ 10. Gastrovascular cavity	c. Inner lining of the gastrovascular cavity
_____ 11. Nerve net	d. Loosely organized network of nerve cells
_____ 12. Statocysts	e. Layer that lies between gastroderm and epidermis
_____ 13. Ocelli	f. Eyespots that detect light

14. Circle the letter of each sentence that is true about form and function in cnidarians.

- a. In a polyp, the mouth points downward.
- b. Materials that cannot be digested are passed out of the body through the mouth.
- c. Cnidarians respire by diffusion through their body walls.
- d. Most cnidarians reproduce sexually and asexually.

15. What does a cnidarian's hydrostatic skeleton consist of? _____

16. Cnidarian polyps can reproduce asexually by _____.

17. In the *Aurelia* life cycle, how are young medusas released? _____

Groups of Cnidarians (pages 672–674)

18. Complete the table about classes of cnidarians.

CLASSES OF CNIDARIANS

Class	Characteristics of Life Cycle	Examples
	Live lives primarily as medusas	
	Polyps of most grow in branching colonies; some lack a medusa stage	
	Have only the polyp stage	

19. What is bioluminescence, and for what do jellyfishes use it? _____

20. How do hydras differ from other cnidarians in the class Hydrozoa?

21. Circle the letter of each sentence that is true about corals.

- a. Corals secrete an underlying skeleton of calcium carbonate.
- b. Corals are solitary polyps that live at all depths of the ocean.
- c. Coral colonies growing near one another produce coral reefs.
- d. Most corals are colonial.

22. Is the following sentence true or false? Sea anemones are solitary polyps.

23. How are coral reefs produced?

Ecology of Corals (page 675)

24. What variables determine the worldwide distribution of corals?

- a. _____ b. _____ c. _____

25. What do corals depend on to capture solar energy, recycle nutrients, and help lay down their skeletons?

26. Circle the letter of each way that coral reefs can be harmed.

- a. Sediments from logging can smother corals.
- b. Overfishing can upset the ecological balance of coral reefs.
- c. Algae can remove energy from corals.
- d. Industrial pollutants can poison corals.

27. What is coral bleaching?

WordWise

Use the clues to help you identify the vocabulary terms from Chapter 26. Then, put the numbered letters in order to find the answer to the riddle.

Clues

Vocabulary Terms

A poison-filled, cnidarian stinging structure

— — 1 — — — — —

An animal without a backbone

— — — 2 — — — — —

The innermost germ layer

— — 3 — — — — —

A large hole at the top of a sponge

— — — 4 — — —

An animal whose mouth is formed from the blastopore

— — — — — 5 — — — — —

The concentration of sense organs and nerve cells at the anterior end

— — — — — — — — — 6 — — — — —

Riddle: Which cnidarian stage is shaped like a bell?

Answer: 1 2 3 4 5 6