

Section 27–3 Annelids (pages 694–699)

This section describes the defining features of annelids. It also describes the characteristics of the three classes of annelids.

Introduction (page 694)

1. What phylum are earthworms a member of? Annelida
2. What evidence is there that annelids are more closely related to clams and snails than to flatworms or roundworms? Annelids, clams, and snails all share a similar larval stage.

What Is an Annelid? (page 694)

3. What is a septum? A septum is an internal wall between two segments of an annelid's body.

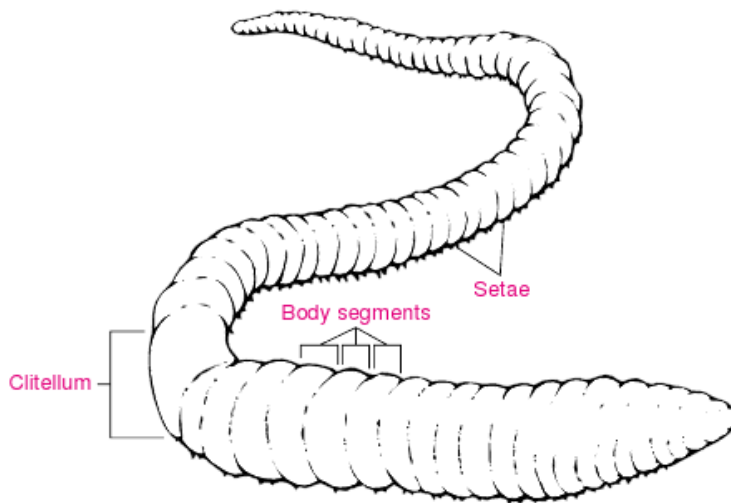
4. Attached to each annelid segment are bristles called setae.
5. Annelids are among the simplest animals to have a true coelom.

Form and Function in Annelids (pages 695–696)

6. How is the pharynx used differently in carnivorous species than in annelids that feed on decaying vegetation? In carnivores, the pharynx usually holds two or more sharp jaws that are used to attack prey. In worms that eat vegetation, the worm collects food by extending a pharynx covered with sticky mucus and pressing it against the surrounding sediments.
7. What is a closed circulatory system? It is a system in which blood is contained within a network of blood vessels.
8. What is a gill? A gill is an organ specialized for the exchange of gases underwater.
9. How do aquatic annelids respire differently than land-dwelling annelids? Aquatic annelids often breathe through gills, while land-dwelling annelids respire through their moist skin.
10. How do annelids keep their skins moist? They secrete a thin protective coating called a cuticle.
11. What are the two major groups of body muscles in annelids called?
 - a. Longitudinal muscles
 - b. Circular muscles
12. Marine annelids have paddle-like appendages called parapodia.

13. What is a clitellum, and what is its function? A clitellum is a band of thickened, specialized segments that secrete a mucous ring into which eggs and sperm are released.

14. Write labels on the illustration of the annelid for each of the features pointed to.



15. Complete the table about common types of oligochaetes.

OLIGOCHAETES

Type of Oligochaete	Description	Habitat
Earthworms	Long, pinkish-brown worms with few setae	Woods, fields, and gardens
Tubifex worms	Red, threadlike worms with few setae	Aquatic environments

16. Circle the letter of each sentence that is true about leeches.

- a. They suck blood and body fluids from their hosts.
- b. Most live in moist, tropical habitats.
- c. They are typically external parasites.
- d. All are carnivores that feed on snails.

17. What annelids do polychaetes include? They include sandworms, bloodworms, and their relatives.

18. Circle the letter of each sentence that is true about polychaetes.

- a. They typically have only a few setae.
- b. They have paired, paddlelike appendages tipped with setae.
- c. They suck the blood of their host.
- d. They are marine annelids.

19. How do the tunnels of earthworms affect other organisms? Earthworm tunnels provide passageways for plant roots and water and allow the growth of beneficial, oxygen-requiring soil bacteria.

20. Circle the letter of each sentence that is true about annelids.

- a. Earthworms are important to the diet of birds.
- b. Annelids bring minerals from deep soil layers to the surface.
- c. Marine annelids spend their lives burrowing through soil.
- d. Annelid larvae form part of the animal plankton.