

Section 29–2 Form and Function in Invertebrates (pages 751–758)



Key Concept

- How do different invertebrate phyla carry out life functions?

Introduction (page 751)

1. What are seven essential tasks all animals perform to survive? _____

2. Why aren't more complicated systems in living animals necessarily better than simpler systems in other living animals? _____

Feeding and Digestion (pages 751–752)

3. How is the digestion of food different in simple animals compared to that in more complex animals? _____

4. Complete the table about types of digestion.

TYPES OF DIGESTION

Type	Definition
	Digestion of food inside cells
Extracellular digestion	

5. More-complex animals digest food in a tube called a(an) _____.

Respiration (pages 752–753)

6. Why do respiratory organs have large surface areas? _____

7. Why are respiratory surfaces kept moist? _____

8. What are gills? _____

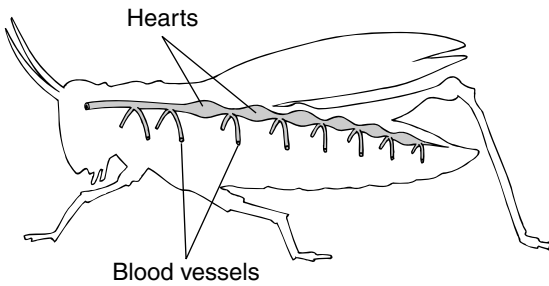
9. What are book lungs made of? _____

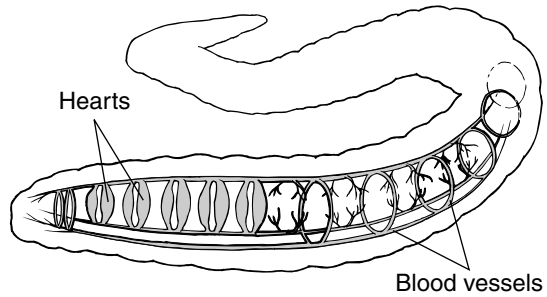
Circulation (page 754)

10. How do the smallest and thinnest animals meet the requirement of supplying oxygen and nutrients to cells and removing metabolic wastes? _____

11. Complex animals move fluid through their bodies using one or more _____.

12. Label each of the organisms below according to which has a closed circulatory system and which has an open circulatory system.





13. Closed circulatory systems are characteristic of what kinds of animals? _____

Excretion (pages 754-755)

14. What does the excretory system of most animals do? _____

15. How do aquatic invertebrates rid their bodies of ammonia? _____

16. Circle the letter of each way that terrestrial invertebrates eliminate nitrogenous wastes from their bodies.

- a. Ammonia diffuses from body tissues into the surrounding water.
- b. They convert ammonia into urea.
- c. They convert ammonia into uric acid.
- d. They form a thick paste that leaves the body through the rectum.

Response (page 756)

17. What three trends do invertebrates show in the evolution of the nervous system?

- a. _____
- b. _____
- c. _____

18. Number the following groups of invertebrates according to how centralized their nervous system is. Number the group with the simplest nervous system 1.

- _____ a. Flatworms
- _____ b. Cnidarians
- _____ c. Arthropods

19. What is cephalization? _____

20. Is the following sentence true or false? The more complex an animal's nervous system, the more developed its sense organs are. _____

Movement and Support (pages 756–757)

21. What are the three main kinds of skeletal systems among invertebrates?

- a. _____
- b. _____
- c. _____

22. What invertebrates have endoskeletons? _____

Sexual and Asexual Reproduction (pages 757–758)

23. What is the difference between external and internal fertilization? _____

24. Circle the letter of each sentence that is true about invertebrate reproduction.

- a. Most invertebrates reproduce sexually in one part of their life cycle.
- b. Asexual reproduction maintains genetic diversity in a population.
- c. Asexual reproduction includes budding and division in two.
- d. Most invertebrates have separate sexes.