

Life Science Worksheet

Soft Bodied Critters



1. What type of symmetry? _____
2. What type of symmetry? _____
3. What type of symmetry? _____



4. Which one ? dorsal ventral Anterior Posterior
5. Which one ? dorsal ventral Anterior Posterior
6. Which one ? dorsal ventral Anterior Posterior
7. Which one ? dorsal ventral Anterior Posterior
8. Which one? Proximal Distal Lateral Medial
9. Which one? Proximal Distal Lateral Medial



10. What phylum? _____
11. Common name? _____



12. What Phylum? _____
13. What body type? _____
14. Name it: _____
15. Name it: _____
16. What Phylum? _____
17. What body type? _____
18. Name the structure: _____
19. Name the structure: _____



20. Name the Phylum _____

21. Common Name? _____

22. Name it. _____

23. Name it. _____

24. Name it. _____

25. What's the Phylum? _____

26. The Common Name? _____

27. Name it: _____

28. Name it: _____

29. Name it: _____

30. Name it: _____



31. Name the Phylum: _____

32. Common Name: _____



33. Which one ? dorsal ventral Anterior Posterior

34. Which one ? dorsal ventral Anterior Posterior



35. Which one ? dorsal ventral Anterior Posterior

36. Which one ? dorsal ventral Anterior Posterior

37. Name it: _____

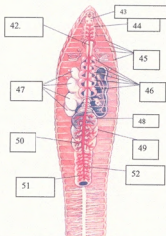
38. (The segments) Name it: _____

39. (The bristles) Name it: _____

40 Name it: _____

41. Name it: _____





44. Name it: _____

Section
26-2

Sponges

(pages 590–593)

SECTION REVIEW

In this section you learned about the characteristics of sponges, which belong to the phylum Porifera. You discovered that these animals are among the most ancient on Earth and that they inhabit almost all areas of the sea.

Sponges are so different from other animals that they were once thought to be plants. They barely move, and they have no specialized tissues or organ systems and nothing that

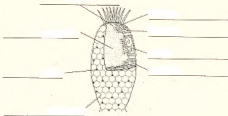
resembles a mouth or a gut. Most biologists believe that sponges evolved from single-celled ancestors separately from other multicellular animals.

Sponges are filter feeders that sift microscopic particles of food from water. The body of a sponge is designed so that water flowing through a central cavity serves as the respiratory, excretory, and internal transport systems.

Applying Definitions: Building Vocabulary Skills

- A. Use the terms in the accompanying list to label the diagram.
- B. In the space provided, write the term that best matches each of the following definitions.

amoeba-like cell
central cavity
collar cell
epidermal cell
osculum
pore
pore cell
spicule



- _____ 1. The area enclosed by the body wall of the sponge
- _____ 2. A special kind of cell that builds spicules
- _____ 3. Cells that have flagella and trap food particles.
- _____ 4. One of thousands of openings in the body wall
- _____ 5. Large hole where water leaves the sponge
- _____ 6. One of many structures that form the skeleton of the sponge
- _____ 7. Specialized cell through which water enters the sponge
- _____ 8. Cell on the outer surface of the sponge

Form and Function: Understanding the Main Ideas

Explain in one or two sentences how sponges carry out each of the following life functions.

1. Feeding: _____

2. Internal transport: _____

3. Excretion: _____

4. Respiration: _____

5. Reproduction: _____

**Section:
26-3****Cnidarians***(pages 564–569)***SECTION REVIEW**

In this section you were introduced to the phylum Cnidaria. You discovered that cnidarians are soft-bodied animals with stinging tentacles arranged in circles around their mouths. Some familiar cnidarians include jellyfish, corals, and hydras.

You learned that all cnidarians exhibit radial symmetry and have specialized cells and tissues. You also learned that a typical cnidian has an internal space called a gastrovascular cavity in which digestion takes place.

You discovered that almost all cnidarians capture and eat small animals by using stinging structures called nematocysts, which are located on their tentacles. You also learned that cnidarians lack a centralized nervous system and muscle cells. There are, however, specialized epidermal cells that serve the same function as muscle cells.

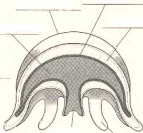
In the last part of this section, you read about the three classes of cnidarians. You also learned how cnidarians fit into the world.

Applying Definitions: Building Vocabulary Skills

Most cnidarians have life cycles that involve two different body forms. Label each diagram below with the name of the correct body form. Then label both diagrams to show the following parts:

epidermis
mesogleagastroderm
mouthgastrovascular cavity
tentacle

Body style?



Body style?

Interpreting Diagrams: Exploring the Main Ideas

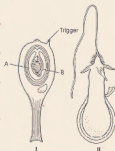
Use the accompanying diagrams to answer the questions that follow.

1. Where on the body of a cnidarian are these structures located? _____

2. What occupies the region labeled A on the diagram? _____

3. What is the structure labeled B? _____

4. Briefly describe the condition of the stinging cell in Figure 1.



5. What is the function of the trigger? _____

6. What is the condition of the nematocyst in Figure II? What has happened?

NUTRITION IN HYDRA

Name _____

Label the following parts of the hydra on the diagram below. State the function/purpose of each part.

- a. mouth _____

- b. tentacle _____

- c. gastrovascular cavity _____

- d. nematocysts _____

- e. basal disk _____

- f. egg _____

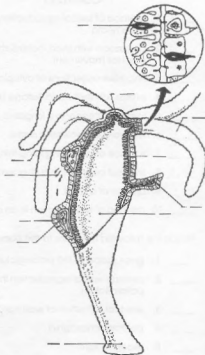
- g. ovary _____

- h. sperm _____

- i. testis _____

- j. bud _____

- k. mesoglea _____



Fill in the blanks with the correct answers.

The _____ move food through the _____ into the gastrovascular, or digestive, cavity. When the lining of the digestive cavity secretes _____ the food is broken up into tiny pieces. The partly digested food is then engulfed by special cells in the lining that _____ it further. Any undigested or indigestible material is egested through the _____.

Section
26-4

Unsegmented Worms

(pages 570–579)

SECTION REVIEW

In this section you were introduced to the group of animals known as unsegmented worms. Unsegmented worms include flatworms (phylum Platyhelminthes) and roundworms (phylum Nematoda).

You learned that flatworms are the simplest animals with bilateral symmetry. You also learned that most members of this phylum

exhibit enough cephalization to have what can be called a head.

You discovered that roundworms are among the simplest animals that have a digestive system with two openings, a mouth and an anus. Several parasitic roundworms that cause diseases in humans were discussed, including *Ascaris*, *Trichinella*, and hookworms.

Understanding Definitions: Building Vocabulary Skills

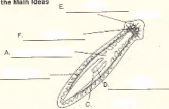
Each of the statements below describes either flatworms, roundworms, or both. If the statement describes flatworms, write an F in the blank before the statement. If the statement describes roundworms, write an R. If the statement describes both, write both an F and an R.

- _____ 1. Are invertebrates
- _____ 2. Are members of phylum Nematoda
- _____ 3. Includes blood flukes
- _____ 4. Includes free-living and parasitic animals
- _____ 5. Have a digestive system with only one opening
- _____ 6. May have asexual reproduction
- _____ 7. Eliminate undigested wastes through the anus
- _____ 8. Includes *Ascaris*

Applying Concepts: Understanding the Main Ideas

The body plan of a free-living flatworm is shown at right.

1. Label each lettered structure on the diagram.
2. Label the anterior and posterior ends of the worm.
3. What type of symmetry does the body show?



**Section
27-2****Annelids**

(pages 594–601)

SECTION REVIEW

In this section you were introduced to members of the phylum Annelida. These animals, which are also known as segmented worms, include the familiar earthworm as well as about 9000 other species, such as sandworms, bloodworms, and leeches.

You learned that annelids are characterized by a long, segmented body and that they live both in water and on land. By studying in detail the earthworm's body systems, you

learned how annelids carry out essential life functions.

Annelids are important in many habitats. Small annelids that live in the ocean serve as food for other organisms. Earthworms and similar annelids are important in soil conditioning. Earthworms also perform the valuable function of processing nutrients from dead organisms into substances that can be used by plants.

Applying Concepts: Basic Functions in Annelids

Complete each sentence below to describe how the indicated function is carried out by annelids. You may add additional sentences if you wish.

1. **Respiration:** Aquatic annelids typically breathe _____

2. **Internal transport:** The circulatory system in annelids _____

3. **Excretion:** Annelids produce two kinds of wastes. Solid wastes _____

4. **Response:** Annelids have a well-developed nervous system _____

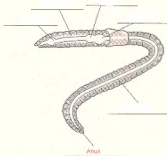
5. **Movement:** Muscles in the annelid _____

6. **Reproduction:** Most annelids reproduce _____

Relating Concepts: Understanding the Main Ideas

Listed in the left column are the major organs that make up the digestive system of the earthworm. Listed in the right column are words that describe the basic function of each organ. Match each function in the right column with the corresponding organ in the left column by writing the correct letter in the blank.

- | | |
|--------------------|--------------------------------------|
| _____ 1. Intestine | a. Chops food into small pieces |
| _____ 2. Anus | b. Pumps food and soil or grabs prey |
| _____ 3. Gizzard | c. Entrance for food |
| _____ 4. Crop | d. Eliminates wastes |
| _____ 5. Esophagus | e. Storage area for food |
| _____ 6. Pharynx | f. Digests food |
| _____ 7. Mouth | g. Passageway for food |



Concept Mapping

The construction of and theory behind concept mapping are discussed on pages vii–ix in the front of this Study Guide. Read those pages carefully. Then consider the concepts presented in Section 27–2 and how you would organize them into a concept map. Now look at the concept map for Chapter 27 on page 264. Notice that the concept map has been started for you. Add the key facts and concepts you feel are important for Section 27–2. When you have finished the chapter, you will have a completed concept map.

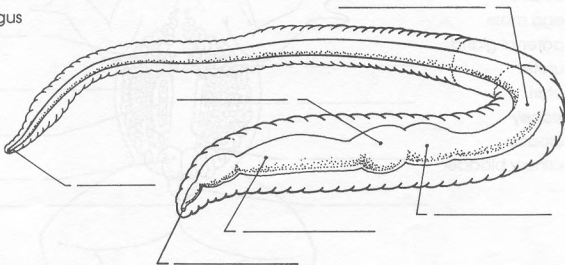
THE EARTHWORM

Name _____

Digestive System

Label the following parts of the digestive system of the earthworm.

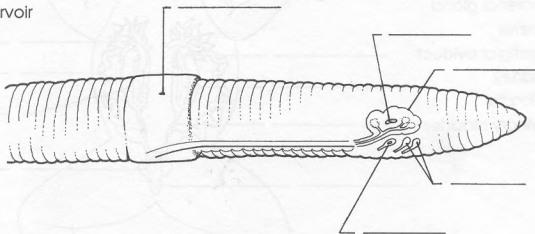
- a. crop
- b. esophagus
- c. intestine
- d. mouth
- e. anus
- f. gizzard



Reproductive System

Label the following parts of the reproductive system of the earthworm.

- a. sperm receptacle
- b. testis
- c. sperm reservoir
- d. ovary
- e. clitellum



Fill in the blanks with the correct answers.

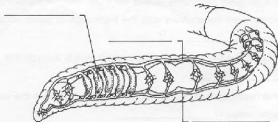
In the earthworm, after food enters the mouth, it passes through the _____ and is then stored in the _____. From there, it passes to the _____, where it is mechanically broken down by grinding. After this, it is chemically broken down in the _____. Undigested material is egested through the _____. Since an earthworm produces both eggs and sperm, it is considered to be a _____. However, an earthworm _____ self-fertilize.

CIRCULATORY SYSTEMS

Name _____

Label the following parts of the circulatory system of the earthworm in the diagram.

- a. aortic arches
- b. ventral blood vessel
- c. dorsal blood vessel



NERVOUS SYSTEMS OF THE EARTHWORM AND GRASSHOPPER

Name _____

Label the following parts of the nervous system of the earthworm on the diagram below.

- a. brain
- b. nerves
- c. ventral nerve cord
- d. ganglia

