

**SECTION 26-1 REVIEW**

**INTRODUCTION TO THE ANIMAL KINGDOM**

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**VOCABULARY REVIEW Distinguish between the terms in each of the following pairs of terms.**

- 1. **vertebrate, invertebrate** \_\_\_\_\_  
\_\_\_\_\_
- 2. **protostome, deuterstome** \_\_\_\_\_  
\_\_\_\_\_
- 3. **radial symmetry, bilateral symmetry** \_\_\_\_\_  
\_\_\_\_\_
- 4. **ectoderm, mesoderm, endoderm** \_\_\_\_\_  
\_\_\_\_\_

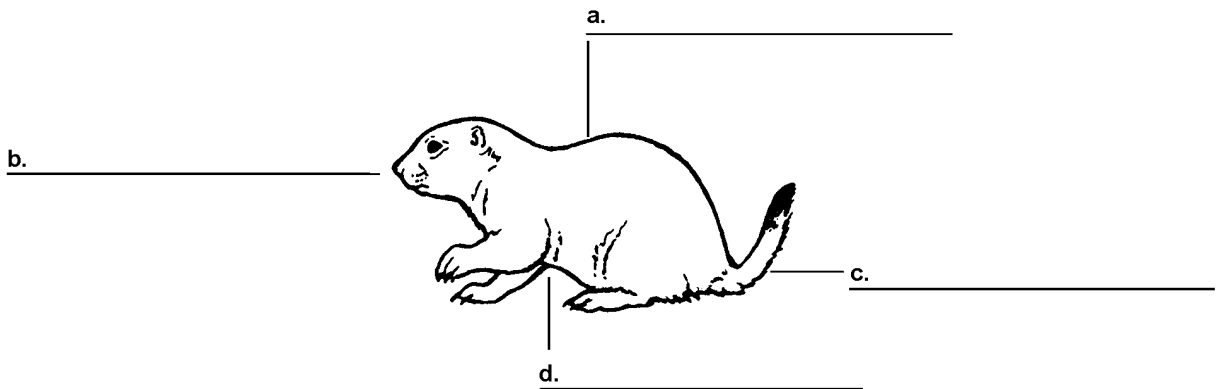
**MULTIPLE CHOICE Write the correct letter in the blank.**

- \_\_\_\_\_ 1. Invertebrates account for
  - a. fewer than 5 percent of all animal species.
  - b. about 50 percent of all animal species.
  - c. about 25 percent of all animal species.
  - d. more than 95 percent of all animal species.
- \_\_\_\_\_ 2. Which of the following statements accurately describes animals?
  - a. All animals are multicellular, all are heterotrophic, and all lack cell walls.
  - b. All animals are multicellular, some are heterotrophic, and some have cell walls.
  - c. Some animals are multicellular, all are autotrophic, and all lack cell walls.
  - d. Some animals are multicellular, some are heterotrophic, and some lack cell walls.
- \_\_\_\_\_ 3. Cephalization is associated with
  - a. bilaterally symmetrical animals.
  - b. radially symmetrical animals.
  - c. sponges.
  - d. hydras.
- \_\_\_\_\_ 4. Invertebrates are
  - a. a subphylum of the phylum Vertebrata.
  - b. members of a single large phylum.
  - c. animals with a complete absence of body symmetry.
  - d. a special group of animals that share a common characteristic.
- \_\_\_\_\_ 5. Body parts formed by the mesoderm include the
  - a. lungs.
  - b. liver.
  - c. muscles.
  - d. pancreas.

**SHORT ANSWER** Answer the questions in the space provided.

1. How do animals differ from the unicellular organisms? (p.657) \_\_\_\_\_  
\_\_\_\_\_
2. The bodies of most animals contain four basic types of tissues. What are the four tissues that make up an animal's body? (p.657) \_\_\_\_\_  
\_\_\_\_\_
3. Why is cephalization important to animals? (p.663) \_\_\_\_\_  
\_\_\_\_\_
4. Describe the early stages of development of animals that reproduce sexually and start their life as a zygote. (p.661) \_\_\_\_\_  
\_\_\_\_\_
5. Name two groups of animals whose members show segmentation. (p.662) \_\_\_\_\_  
\_\_\_\_\_
6. Discuss the process of excretion in animals. (p.659) \_\_\_\_\_  
\_\_\_\_\_

**STRUCTURES AND FUNCTIONS** In the drawing of a prairie dog shown below, label the animal's anterior and posterior ends and its dorsal and ventral surfaces in spaces *a - d*. (p.662)



What type of symmetry does this animal have? \_\_\_\_\_

**SECTION 26-2 REVIEW**

**SPONGES**

**VOCABULARY REVIEW Define the following terms.**

- 1. **choanocyte** \_\_\_\_\_  
\_\_\_\_\_
- 2. **osculum** \_\_\_\_\_  
\_\_\_\_\_
- 3. **spicule** \_\_\_\_\_  
\_\_\_\_\_
- 4. **larva** \_\_\_\_\_  
\_\_\_\_\_
- 5. **sessile** \_\_\_\_\_  
\_\_\_\_\_

**MULTIPLE CHOICE Write the correct letter in the blank.**

- \_\_\_\_\_ 1. Adult sponges are sessile, which means that they
  - a. have no blastula stage.
  - b. attach to a surface and do not move.
  - c. use a jellylike substance for body support.
  - d. produce both eggs and sperm.
- \_\_\_\_\_ 2. Choanocytes perform all of the following functions except
  - a. drawing water into the interior of the sponge.
  - b. engulfing and digesting food that is filtered from the water.
  - c. passing nutrients to archaeocytes.
  - d. distributing nutrients throughout the rest of the body.
- \_\_\_\_\_ 3. Sponges eliminate carbon dioxide and ammonia by
  - a. allowing them to diffuse into the water that passes through the sponge.
  - b. convert them into urea and storing the urea in a structure called a urinary bladder.
  - c. transporting them to an excretory organ that empties into the osculum.
  - d. converting them into usable carbohydrates.
- \_\_\_\_\_ 4. After a sponge egg is fertilized, the zygote develops into a(n)
  - a. external bud.
  - b. gemmule.
  - c. larva.
  - d. gastrula.

**SHORT ANSWER** Answer the questions in the space provided.

1. What are the three substances that a sponge's skeleton may be made of? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

What cells are responsible for producing the spicules? \_\_\_\_\_

\_\_\_\_\_

2. How do archaeocytes participate in the sexual reproduction of sponges? (p.666) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

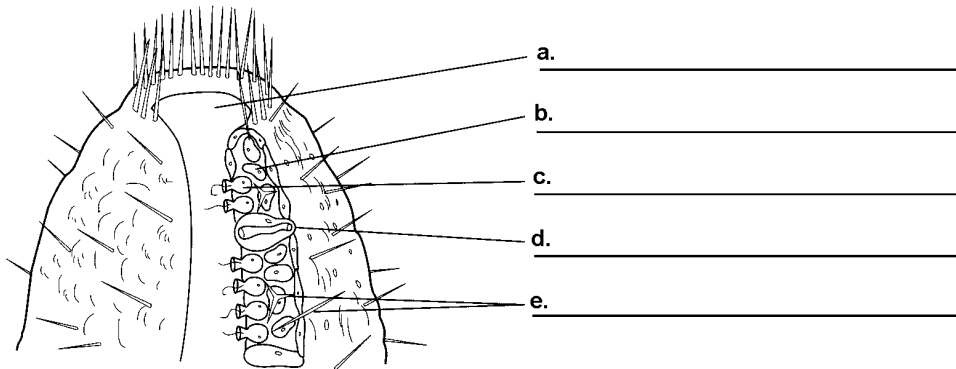
3. Would gemmules or larvae be better at distributing a population of sponges through an area? Explain your reasoning. (pp.666-667) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

4. Why are sponges classified as animals? (p.664) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**STRUCTURES AND FUNCTIONS** Identify the structures labeled *a - e* in the diagram of a sponge shown below. Use the following terms: spicules, osculum, pore cell, archaeocyte, and choanocyte. (p.665)



1. What type of feeder is the animal called a sponge? (p.665) \_\_\_\_\_

**SECTION 26-3 REVIEW**

**CNIDARIANS**

**VOCABULARY REVIEW Define the following terms.**

- 1. **cnidocyte** \_\_\_\_\_  
\_\_\_\_\_
- 2. **nematocyst** \_\_\_\_\_  
\_\_\_\_\_
- 3. **polyp** \_\_\_\_\_
- 4. **medusa** \_\_\_\_\_
- 5. **gastrovascular cavity** \_\_\_\_\_  
\_\_\_\_\_

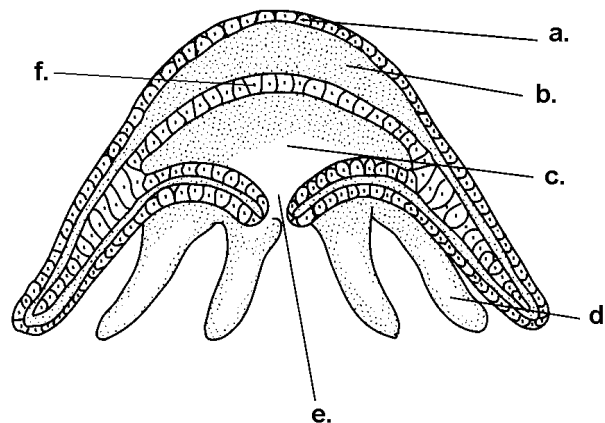
**MULTIPLE CHOICE Write the correct letter in the blank.**

- \_\_\_\_\_ 1. The structure that coordinates the complex activities of a cnidarian's body is the
  - a. gastrovascular cavity.
  - b. statocyst.
  - c. nerve net.
  - d. tentacle.
- \_\_\_\_\_ 2. An example of a cnidarian in the class Hydrozoa is a
  - a. coral.
  - b. sea anemone.
  - c. jellyfish.
  - d. Portuguese man-of-war.
- \_\_\_\_\_ 4. Corals exist in a symbiont relationship with
  - a. fungi.
  - b. algae.
  - c. hydras.
  - d. clownfish.
- \_\_\_\_\_ 5. Coral reefs occur in areas where there are
  - a. high levels of sediment.
  - b. high levels of sunlight energy.
  - c. very deep waters.
  - d. high levels of pollutants.
- \_\_\_\_\_ 6. What is a digestive chamber with only one opening called?
  - a. gastrovascular cavity
  - b. blastula
  - c. central cavity
  - d. stomach
- \_\_\_\_\_ 7. Which of the following is a characteristic of cnidarians?
  - a. bilateral symmetry
  - b. radial symmetry
  - c. cephalization
  - d. segmentation

**SHORT ANSWER** Answer the questions in the space provided.

1. How are the tentacles of cnidarians adapted for capturing prey? (p.669) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. List the main difference between a hydra and most other cnidarians. (p.673) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. What is the dominant body form in the life cycle of a jellyfish? (p.673) \_\_\_\_\_  
What is the dominant body form in the life cycle of a sea anemone? (p.674) \_\_\_\_\_
4. The Green Hydra gets its name from a symbiont that lives within its tissues. What does this symbiont do for the hydra that helps keep it alive? (673) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Describe the formation of a coral reef. (p.675) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

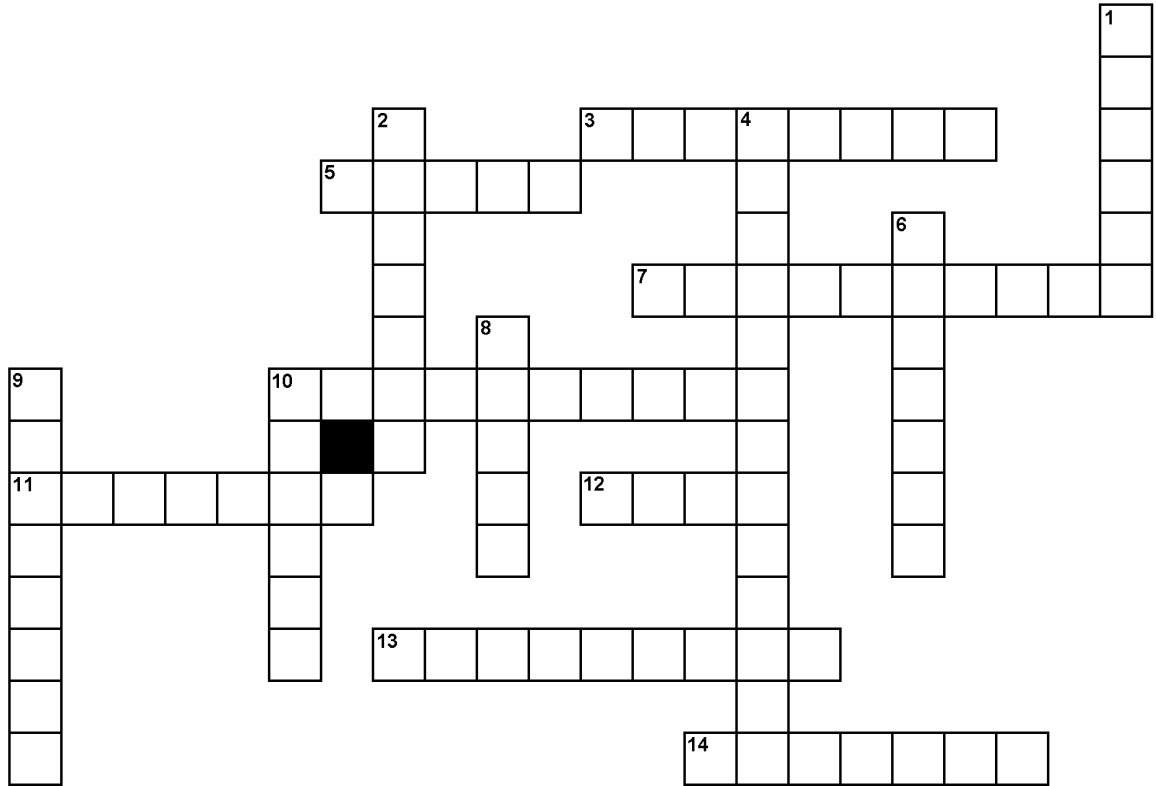
**STRUCTURES AND FUNCTIONS** Identify the structures labeled *a - f* in the diagram of a cnidarian body shown below. Use the following terms: gastrovascular cavity, epidermis, mouth/anus, mesoglea, tentacle, and gastroderm. (p.670)



Which body form is represented by this diagram? \_\_\_\_\_

## VOCABULARY - CHAPTER 26

The crossword puzzle is a simple way to master some of the more important vocabulary terms in this chapter.



**Across**

- 3. sponges belong to the phylum called \_\_\_\_\_
- 5. structure that coordinates the complex activities of a cnidarian's body is the \_\_\_\_\_ net
- 7. phylum name of the comb jellies
- 10. sticky cell used by a comb jelly for capturing prey
- 11. refers to organisms that have anchored themselves to a substrate and do not move around in their environment
- 12. a \_\_\_\_\_ jelly is the largest animal to move with cilia
- 13. stinging cell used by cnidarians to capture prey
- 14. opening on the top of a sponge

**Down**

- 1. swimming form of a jellyfish
- 2. ball of archaeocytes and spicules
- 4. approximately 95% of all animal species are \_\_\_\_\_; they have no backbone
- 6. soft component of bath sponges; made of protein
- 8. sessile stage of a sea anemone
- 9. jelly-like material forming the middle region of the cnidarians
- 10. \_\_\_\_\_ cell is a type of cell that draws water into a sponge

The following words in this puzzle are **not** found in this chapter. Use a reference source and look up their meaning.  
**Ctenophora, colloblast, comb, and collar.**