

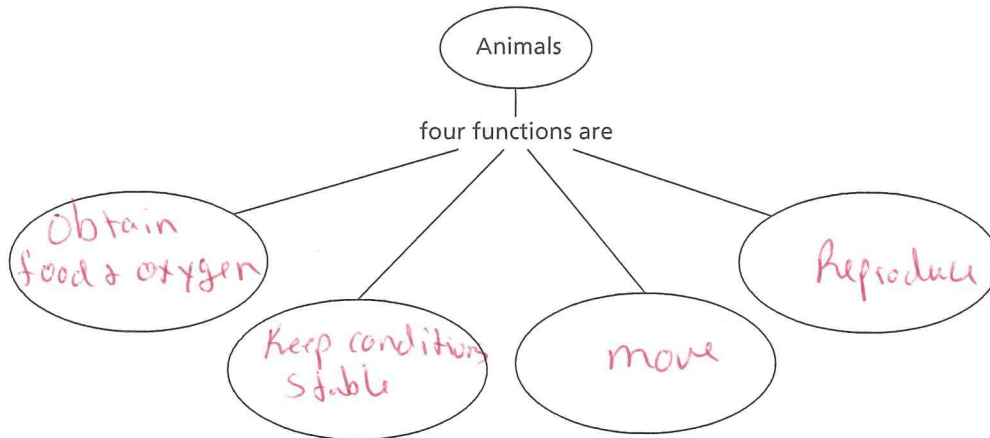
**Sponges, Cnidarians, and Worms** ▪ *Review and Reinforce*

# What Is an Animal?

## Understanding Main Ideas

Fill in the blank ovals to complete this concept map.

1-4.



## Building Vocabulary

From the list below, choose the term that best completes each sentence.

- |             |                      |
|-------------|----------------------|
| cells       | vertebrates          |
| adaptations | asexual reproduction |
| phyla       | fertilization        |
| organ       | invertebrate         |

22. A group of several different tissues is called a(n) organ.
23. Biologists classify animals into major groups called phyla.
24. fertilization is the joining of an egg cell and a sperm cell.
25. vertebrates are animals that have a backbone.
26. cells are the basic units of structure and function in living things.
27. Structures or behaviors that allow animals to perform the basic functions in their environments are called adaptations.
28. An animal without a backbone is called a(n) invertebrate.
29. asexual reproduction is the process by which a single organism produces a new organism identical to itself.

Sponges, Cnidarians and Worms

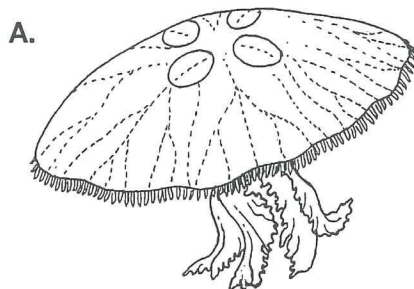
**Sponges, Cnidarians, and Worms** ▪ *Review and Reinforce*

# Sponges and Cnidarians

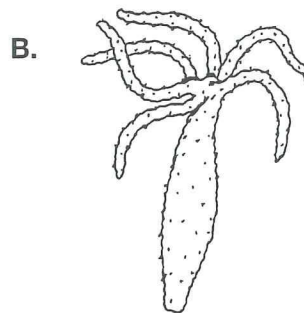
## Understanding Main Ideas

Answer the following questions on a separate sheet of paper.

1. What function does water perform for sponges?  
*Sponges get food & oxygen from water*
2. How does a sponge defend itself?  
*They have spikes*
3. Describe two methods of sponge reproduction.  
*asexual - budding and sexual - sperm & egg*
4. In the diagram, identify the two different body plans of cnidarians.  
Where is the mouth on each? Which animal probably swims?



Body Plan: medusa



Body Plan: polyp

5. How do cnidarians reproduce? *asexual - budding*  
*Sexual - depends on the species*
6. Describe how a coral reef is formed.  
*a coral polyp attaches to a hard surface, produces hard exoskeleton, dies & more are added*

## Building Vocabulary

Write an answer for each of the following questions in the spaces provided.

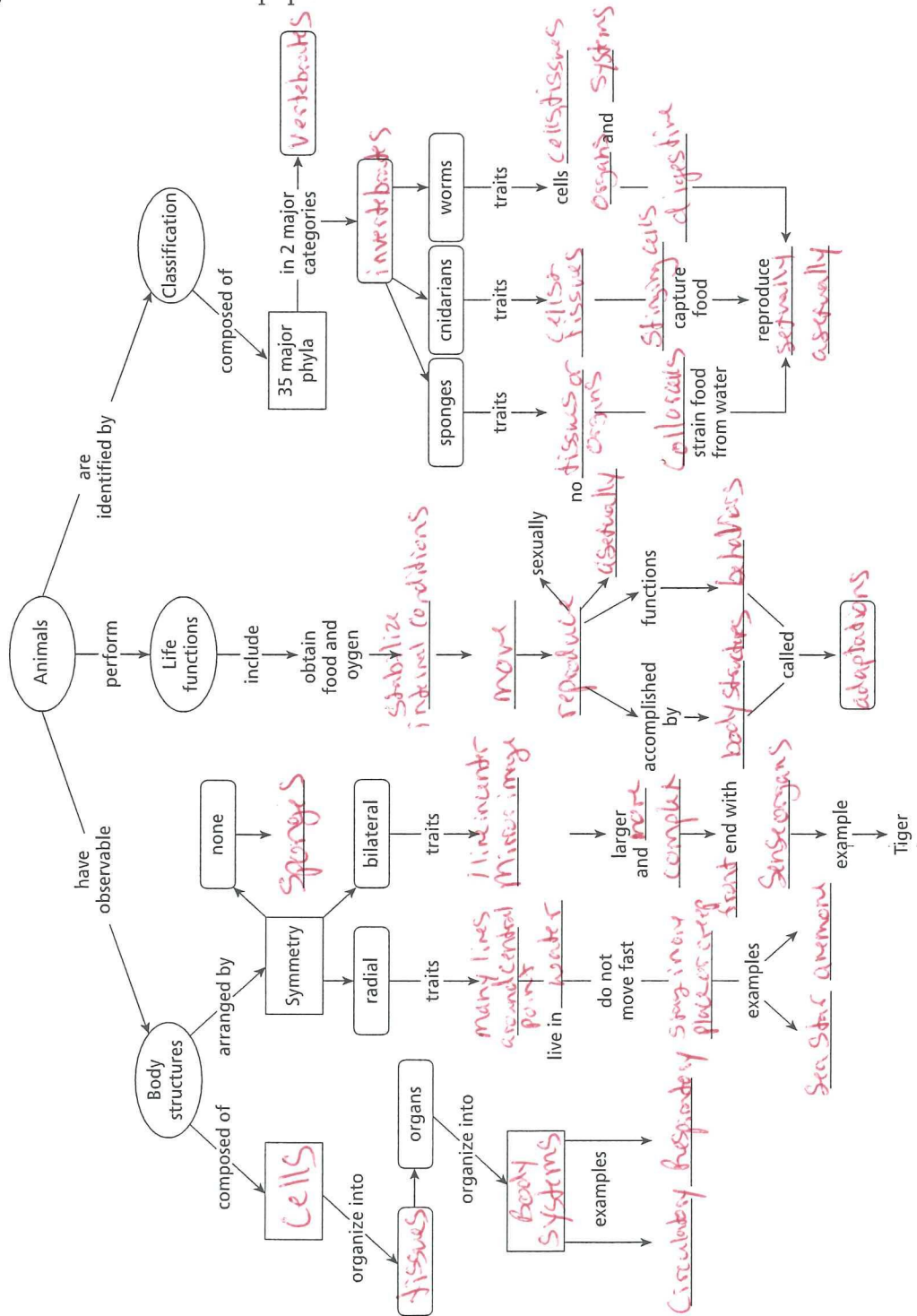
7. Explain what cnidarians are by describing how they feed and what kind of environments they live in. Give three examples.  
Jellyfish, corals, sea anemones, carnivores - use stinging cells to capture prey. Live in watery environments

8. What is a larva?  
Immature form of an animal that looks very different from the adult

**Sponges, Cnidarians, and Worms** ▪ *Connecting Concepts*

# Connecting Concepts

Develop a concept map that uses the Key Concepts and Key Terms from this chapter. Keep in mind the big idea of this chapter. The concept map shown is one way to organize how the information in this chapter is related. You may use an extra sheet of paper.



**Mollusks, Arthropods, and Echinoderms** ▪ *Review and Reinforce*

# Arthropods

## Understanding Main Ideas

Read each description. Decide which animal group best fits each question. Write your answers on a separate sheet of paper.

1. They are invertebrates with an exoskeleton, segmented body, and jointed appendages. They have an open circulatory system and reproduce sexually. Their name comes from the Greek for "joint-leg." What are they? *arthropods*
2. They have highly segmented bodies with one pair of legs attached to each segment. They are predators with venom. Some of them have more than 100 segments. What are they? *centipedes*
3. They all have two body sections and eight legs. Some of them are predators with fangs or a stinger; others are parasites. None of them have antennae. What are they? *arachnids*
4. They have segmented bodies with two pairs of legs on each segment. Most eat decaying leaves. They curl up into a ball when something disturbs them. What are they? *millipedes*

## Building Vocabulary

From the list below, choose the term that best completes each sentence. Use each term only once.

- |          |               |         |
|----------|---------------|---------|
| abdomen  | exoskeleton   | molting |
| antennae | metamorphosis |         |

5. An arthropod's *exoskeleton* protects it and keeps it from drying out.
6. The heads of some arthropods have *antennae*, which contain sense organs.
7. Some animals go through a process called *metamorphosis* during their life cycle in which their bodies undergo dramatic changes in form as they develop.
8. The hind body section of an arachnid is called its *abdomen*.
9. The process of shedding an outgrown exoskeleton is called *molting*.

Mollusks, Arthropods, and Echinoderms



**Mollusks, Arthropods, and Echinoderms** ▪ *Review and Reinforce*

## Echinoderms

### Understanding Main Ideas

Write the letter of the correct answer on the line at the left.

- C 1. Which of the following is *not* a characteristic of echinoderms?  
a. 5-part radial symmetry  
b. endoskeleton  
c. live in freshwater  
d. water vascular system
- a 2. Which of the following is *not* an echinoderm?  
a. fiddler crab  
b. brittle star  
c. sea urchin  
d. sea cucumber
- d 3. Which of the following is *not* a function of tube feet?  
a. move along ocean floor  
b. catch food  
c. grip surfaces  
d. digest food
- C 4. The life cycle of an echinoderm includes all of the following *except*  
a. eggs  
b. metamorphosis  
c. asexual reproduction  
d. fertilization

Answer the following.

5. Describe how a sea star captures its food.

uses tube feet to capture & hold prey

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### Building Vocabulary

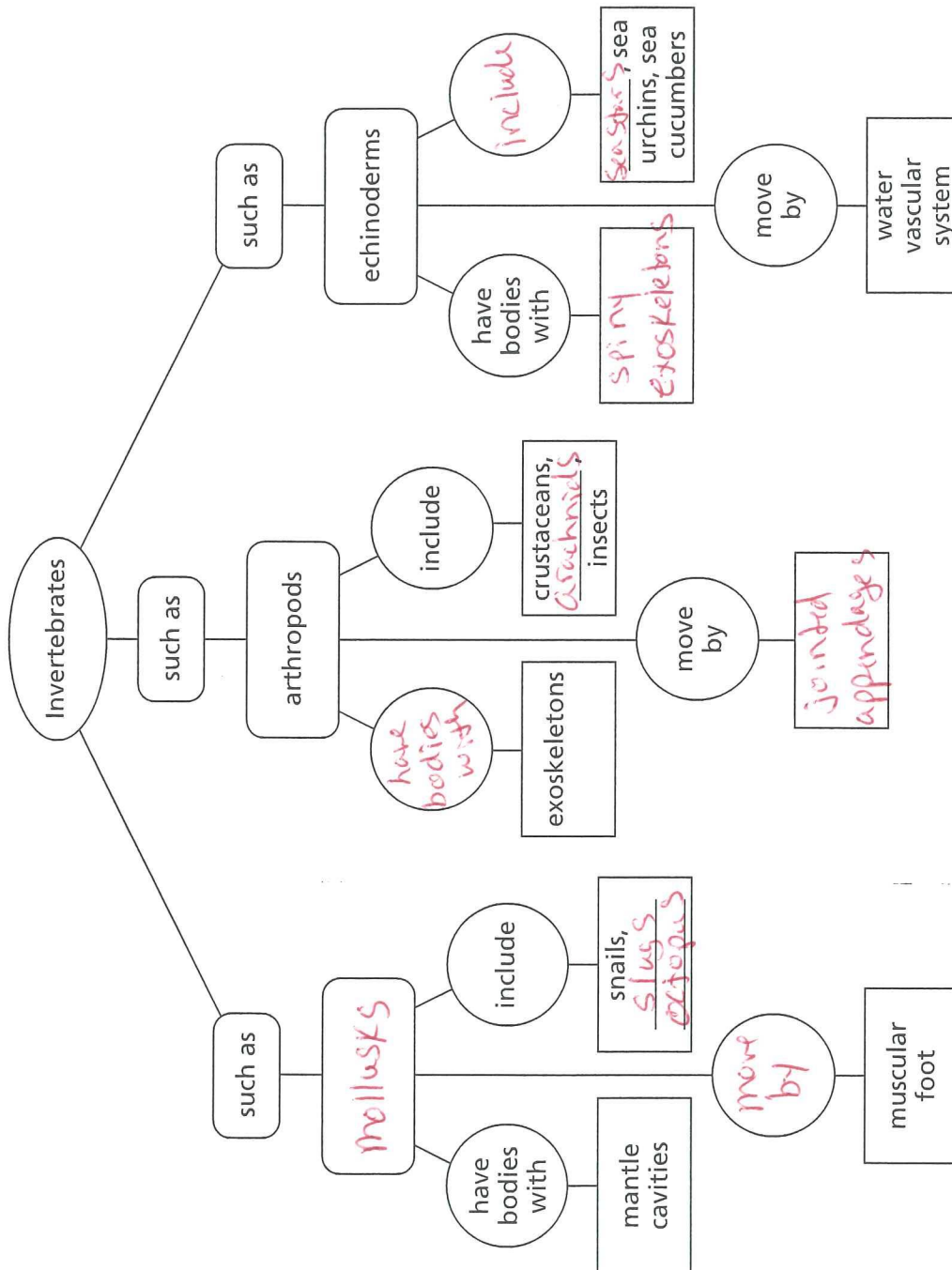
Fill in the blank to complete each statement.

6. The water-vascular system consists of fluid-filled tubes within the echinoderm's body.
7. An echinoderm has a(n) endoskeleton that supports its body.
8. Animals in the echinoderm phylum are radially symmetrical invertebrates that live on the ocean floor.

Mollusks, Arthropods, and Echinoderms ▪ Connecting Concepts

# Connecting Concepts

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Mollusks, Arthropods, and Echinoderms

**Fishes, Amphibians, and Reptiles** ▪ *Review and Reinforce*

## Fishes

### Understanding Main Ideas

Answer the following questions on a separate sheet of paper.

1. What function do gills perform? *To get Oxygen from the water*
2. How is the skeleton of a shark similar to the skeleton of a jawless fish? *both made of cartilage*
3. What are the major groups of fishes? *jawless, cartilaginous, bony*
4. What kind of fertilization do most fish have? *external*
5. What is the function of a swim bladder? *helps fish stabilize their body at different depths*

Determine whether each statement is true or false. If it is true, write true. If it is false, change the underlined word or words to make the statement true.

- Cartilaginous* 6. Sharks are bony fishes.
- ectotherms* 7. Fishes are endotherms.
- True* 8. Most species of fishes belong to the bony fishes group.

### Building Vocabulary

Fill in the blank to complete each statement.

9. The skeleton of a jawless fish is made of *cartilage*, a tissue that is more flexible than bone.
10. Most bony fishes have a gas-filled organ called a(n) *swim bladder*, which helps stabilize the fish at different depths in the water.

**Fishes, Amphibians, and Reptiles** ▪ *Review and Reinforce*

## Reptiles

### Understanding Main Ideas

Write the letter of the word or phrase that completes each statement.

1. Three adaptations that all reptiles have for conserving water are Kidneys, thick skin, and eggs with shells.  
A. lungs  
B. eyelids  
C. eggs with shells  
D. jaws  
E. kidneys  
F. thick skin
2. Snakes have specialized jaws that enable them to eat large prey.
3. All reptiles breathe with lungs.
4. Snakes look a lot like lizards, but snakes don't have eyelids.

### Building Vocabulary

Write a definition for each of the following terms.

5. Reptile  
- Ectothermic vertebrate with thick skin.  
- breathe w/ lungs  
- lay thick-shelled eggs
6. Amniotic egg  
An egg with a shell and internal membranes



**Fishes, Amphibians, and Reptiles ▪ Key Terms**

**Key Terms**

Use the clues to identify the words for the puzzle. Write the words on the lines. Then find the words hidden in the puzzle and circle them. Words are across or up-and-down.

**Clues**

An animal whose body controls its own temperature

The hardened remains of a living thing that existed long ago

An animal that has a notochord, nerve cord, and slits in the throat area

A flexible rod that supports an animal's back

The specific environment in which an animal lives

A bone found in the backbone

A vertebrate that lives in water and has fins

**Key Terms**

endotherm

fossil

chordate

notochord

habitat

vertebra

fish

g i d v e r t e b r a n k r  
 e f g w r i s u a h m o f c  
 v o t h a b i t a t y t r h  
 h s v r b h a u e l w o s o  
 l s p f d a t r i u m c y r  
 n i c i f e s a j l i h c d  
 a l i s y u r i n e d o j a  
 q u r h m p k g w s r r b t  
e n d o t h e r m w o d a e

**Birds and Mammals** ▪ *Review and Reinforce*

## Birds

### Understanding Main Ideas

Answer the following questions.

1. What are four characteristics that all birds share?  
Endothermic, feathers, 4-chambered heart, lay eggs
2. What are three adaptations that enable birds to fly?  
wings, feathers, hollow bones, air sacs, strongest muscles
3. What are two functions of feathers?  
steering + balancing
4. Briefly describe a bird's heart and circulatory system.  
4-chambers - 2 atria + 2 ventricles  
2 loops - one from heart to lungs; the other heart to body
5. Give two examples that show how the bills of birds allow them to live in diverse environments.  
Woodpecker's bill - insects - long + skinny  
Spoonbill - small animals in water - scoop + flat

### Building Vocabulary

From the list below, choose the term that best completes each sentence.

contour feather

crop

down feather

bird

gizzard

6. A bird's food is stored in its crop before it is digested.
7. A down feather is soft and used for insulation.
8. A bird is an endothermic vertebrate that lays eggs and has feathers and a four-chambered heart.
9. The gizzard is a muscular, thick-walled part of a bird's stomach where partially digested food is ground up.
10. A contour feather gives shape to a bird's body and helps a bird balance and steer during flight.

**Birds and Mammals** ▪ *Review and Reinforce*

# Mammals

## Understanding Main Ideas

Answer the following questions.

1. What are four characteristics shared by all mammals?  
Endothermic, hair, four chambered heart, mammary glands
2. What information can you infer from the size and shape of a mammal's teeth?  
What it eats
3. Briefly describe a mammal's heart and circulatory system.  
4-Chambers 2-loops
4. Where in a mammal's body does oxygen enter the bloodstream?  
Lungs
5. If a mammal has a dense coat of fur, what might you infer about the climate where that mammal lives?  
Cold climate

## Building Vocabulary

From the list below, choose the term that best completes each sentence.

monotremes

diaphragm

marsupial

placenta

mammal

6. Marsupial \_\_\_\_\_ are mammals whose young are born at a very early stage of development—they usually continue to develop in a \_\_\_\_\_ pouch on their mother's body.
7. A Placenta \_\_\_\_\_ is an organ that passes materials such as food and oxygen from the mother to the developing embryo, and carries the embryo's wastes away.
8. There are just three species of monotremes \_\_\_\_\_.
9. A large muscle called the diaphragm \_\_\_\_\_ helps mammals breathe.
10. Every mammal \_\_\_\_\_ has hair or fur, but sometimes not very much.

Birds and Mammals ▪ Connecting Concepts

# Connecting Concepts

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