

Unit 6 Review

Summary

- An invertebrate is an animal that does not have a backbone.
- Sponges and cnidarians are invertebrates that have bodies made up of two cell layers separated by jellylike layers.
- An adult sponge remains in one spot and filter-feeds by bringing water through pores in its body wall into a central cavity.
- Cnidarians have stinging cells at the ends of their tentacles that they use to stun their prey.
- Worms are more complex than sponges or cnidarians.
- There are three large groups of worms—flatworms, roundworms, and segmented worms.
- Flatworms have a digestive cavity with only one opening. Many flatworms are parasites; others are free-living.
- Roundworms have long thin bodies with pointed ends and a digestive tube with two openings—a mouth and an anus.
- Segmented worms have complex organ systems. The earthworm is a common segmented worm that improves soil for plant growth.
- A mollusk is an invertebrate with a soft body that is usually covered by one or more hard shells.
- Many mollusks live in water. A few live on land.
- Mollusks are sometimes classified by their number of shells or by the shape of their muscular foot.
- The four main parts of a mollusk are the head, the visceral mass, the mantle, and the foot.
- An arthropod is an invertebrate that has a segmented body with a hard outer covering and jointed legs.
- An arthropod's exoskeleton protects its body, but cannot grow along with the animal. When the animal grows, the exoskeleton is molted.
- Insects are a large and diverse group of arthropods. Most insects can fly, produce a large number of offspring, and have compound eyes.
- Other classes of arthropods include crustaceans, arachnids, centipedes, and millipedes.
- Echinoderms are complex invertebrates that have radial symmetry. Unlike arthropods, echinoderms have internal skeletons.



For Your Portfolio

1. Set up an ant farm. You may be able to find a pre-made ant farm in a hobby shop, toy store, or craft shop. You can also make your own by placing a sealed, empty glass jar into a slightly larger glass jar. Fill the space between the two jars with sandy soil. Add ants and food scraps, such as small pieces of lettuce and fruit. Sprinkle the added materials with water. Make holes in the lid and close the larger jar. You may want to place a piece of screen over the lid on the outside. Observe the ants as they tunnel through the soil. Record in a journal the ants' activities for a few weeks. Release the ants into a suitable environment after you have completed your observations.
2. If you live in an area close to the ocean, visit a tide pool. Tide pools are small bodies of water that remain when the tide goes out. You can see many different types of invertebrates living together in tide pools. Sketch the animals you see. Look in library books to identify the animals you observe. Be sure to just observe—and not touch—the animals!
3. If you do not live near an ocean, you may be able to visit an aquarium. Although aquariums usually focus on large ocean animals, including fish and mammals, many aquariums also have exhibits on invertebrates. Some even have tide pools where you can touch animals such as starfish. Learn all you can about the animals at the aquarium and report your findings to your class.
4. Do library research on one of the invertebrates you have learned about in this unit. For example, you may wish to learn all you can about butterflies. Find out where the monarch butterfly lives, what it eats, and how it moves. Make a poster of the animal you have researched.
5. Adopt a hermit crab. Hermit crabs are very small crabs that live in mollusk shells. They stay inside their chosen shell until they grow too large; then they find a new shell. Anywhere the crab goes, it carries its new home with it. The shell gives extra protection to the little crab. You can get hermit crabs in pet shops. Find out what foods your hermit crab needs and set it up in a terrarium. Observe its actions and give a report to your class.
6. Order meal worms from a biological supply catalog or buy them from a pet shop. Observe the meal worms when you get them. Place them in meal. Then dig them up every few days. What changes do you see? Report your findings to your class.
7. Find out about complete and incomplete metamorphosis. How do these two processes differ? Which insects go through complete metamorphosis? Make a poster showing the differences in the stages of the two processes. If you can, observe insects that go through the two different types of metamorphosis. Report your findings to your class.

Unit 6 PRACTICE TEST

Complete the following statements.

1. Animals that do not have a backbone are called _____.
2. The simplest invertebrates are _____.
3. Sponges reproduce asexually by _____ or _____.
4. _____ may have a tube-shaped body or they may have the shape of an upside-down bell surrounded by tentacles.
5. The simplest worms are _____.
6. Many worms live on or in another living thing and cause it harm. These worms are _____.
7. The most complex worms are _____.
8. A type of segmented worm that lives in and improves soil is the _____.
9. Invertebrates with a segmented body, a hard body covering, and pairs of jointed legs are called _____.
10. The hard body covering of an arthropod is called a(n) _____.
11. _____ differ from other arthropods and from all other invertebrates because they can fly.
12. A _____ is made up of many tiny lenses.
13. Spiders are one type of _____.
14. _____ outnumber insects in the water.
15. _____ have one pair of legs on most of the segments of their body.
16. _____ use their tube feet for movement and feeding.

Answer each of the following questions.

17. What is the main way in which the body form of an echinoderm differs from most other animals? _____
18. What is the difference between flatworms, roundworms, and segmented worms?

Answer one of the following questions.

19. Insects have many traits that help them to thrive. Give three traits of insects that help them to thrive and explain the role of each trait.
20. Write an essay in which you describe an imaginary arthropod. The imaginary animal must have all the traits of an arthropod: a segmented body, a hard body covering, and pairs of jointed legs. Where does your imaginary arthropod live? What does it eat? How does it move? How does it reproduce? Draw a picture of your arthropod.