

Key Words

mollusk:	invertebrate with a soft body, which is usually covered by one or more hard shells
visceral mass:	part of a mollusk body that contains the reproductive, digestive, and excretory organs
mantle:	fold of skin that wraps around and protects the visceral mass of a mollusk
bivalves:	mollusks that have two shells hinged together
univalves:	mollusks that usually have a single coiled shell
cephalopods:	mollusks that have either no shell or a small shell inside the body

KEY IDEAS

Mollusks are soft-bodied vertebrates that are usually covered by a shell. Although many mollusks live in water, some types live on land.

Mollusks make up the second largest group of animals. They live in fresh water, in the ocean, or on land. A **mollusk** (MAHL-uhsk) is an invertebrate with a soft body that is usually covered by one or more hard shells. The mollusk body has four main parts: a muscular foot used for movement; a head that contains the mouth and sense organs, the visceral mass, and the mantle. The **visceral mass** (VIHS-uhr-uhl mas) contains the reproductive, digestive, and excretory organs. The **mantle** (MAN-tuhl) is a fold of skin that wraps around and protects the visceral mass. The mantle also produces the shell in those mollusks that have a shell.

Depending on the type of mollusk, the head may be separate or absent. The foot can be different shapes. Mollusks are classified by the shape of their foot and the number of shells that cover their body.



1. What are the four body parts of a mollusk?

Body Form. Mollusks that have two shells that are hinged together are called **bivalves** (BEYE-valvz). They have a wedge-shaped foot that they use to pull themselves forward or to dig holes in sand or mud. Unlike other

mollusks, bivalves do not have a head. However, they do have sense organs that are normally found in the heads of other animals. Look at the row of dots on the scallop in Fig. 27-1. Each dot is a simple eye. Other bivalves include oysters, clams, and mussels.

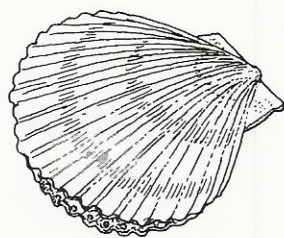
Univalves make up the largest group of mollusks. **Univalves** (YOON-uh-valvz) are mollusks that usually have a single coiled shell, like a snail shell. Some univalves, such as the slug, have no shell. A univalve has a large flat foot that ripples as the animal creeps forward. Univalves have a distinct head with two pairs of tentacles. One pair of tentacles is used by the univalve to feel its way around. A simple eye is at the end of each of the other two tentacles.



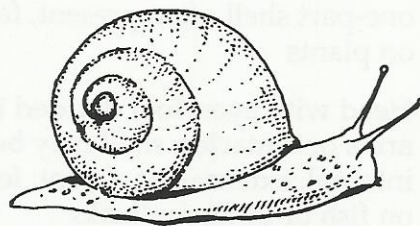
2. What are three differences between univalves and bivalves?

Cephalopods (SEHF-uh-loh-pahdz) are mollusks that have either no shell or a small shell inside their body. They are the largest, most complex, and most active mollusks. Examples of cephalopods are the giant squid and the octopus. All cephalopods live in the ocean. A cephalopod has a large head and brain. Its foot is divided into long tentacles that are used for grabbing and pulling prey into its mouth. A cephalopod moves by squirting water out of its body.

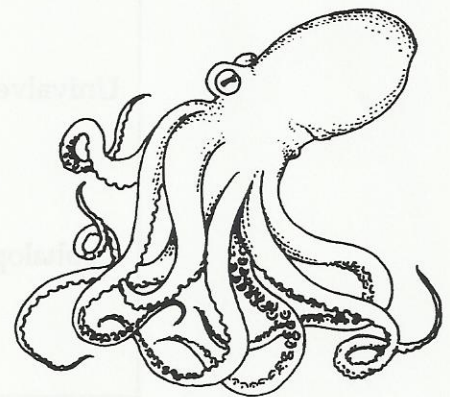
Fig. 27-1



Scallop
Bivalve



Snail
Univalve



Octopus
Cephalopod

Feeding. Each kind of mollusk feeds in a different way. Bivalves such as clams are filter feeders. Water passing through a bivalve's body carries small particles of food. The food is removed by cilia and sticky surfaces within the visceral mass. Univalves such as snails have a mouth and a well-developed digestive system. They feed on plants. Ocean-dwelling cephalopods such as the octopus feed on fish and other mollusks. The tentacles surrounding the cephalopod's mouth catch and hold the prey. The tentacles then move the food into the mouth where it is crushed by powerful jaws.

Reproduction. Most mollusks have separate sexes. A male produces sperm and a female produces eggs. The sperm and egg join to form the offspring. Most mollusks have a distinct kind of larva that looks like two cones placed on top of one another. See Fig. 27-2. A band of cilia separates the two cones in the middle. The larva is free-swimming.

Fig. 27-2 Mollusk larva

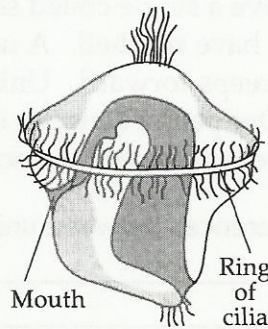


Fig. 27-3 shows the different traits of the three main groups of mollusks.

Fig. 27-3

Class	Characteristics	Examples
Bivalves	Body with no head, wedge-shaped foot for digging, two-part hinged shell, filter feeder	Clams, oysters scallops
Univalves	Head with eyes and tentacles, large flat foot for movement, coiled one-part shell often present, feeds on plants	Snails, slugs
Cephalopods	Head with eyes; foot divided into arms or tentacles; shell may be internal, external, or absent; feeds on fish or other mollusks	Octopus, squid

**TAKE
ANOTHER
LOOK**

**Check Your
Understanding**

Write a sentence explaining the connection between each pair of words.

3. bivalve, two _____

4. univalve, one _____

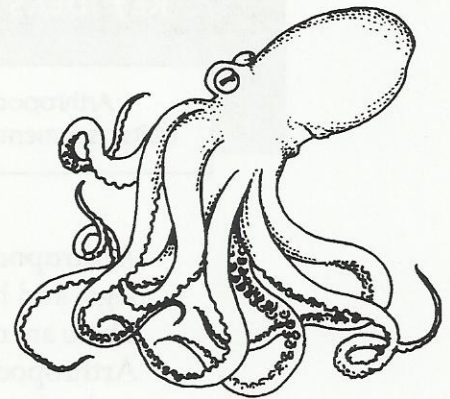
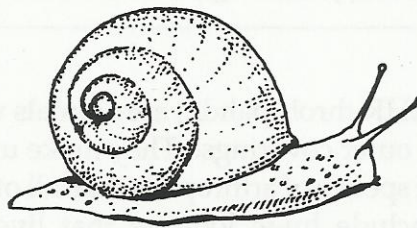
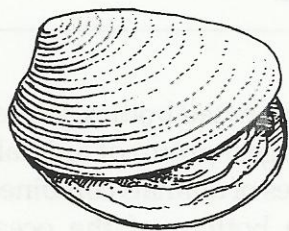
5. cephalopod, shell _____

Complete the following sentences.

6. The _____ are mollusks that do not have a head.
7. A _____ creeps forward as its large foot ripples.
8. A univalve has two pairs of _____ on its head.
9. The largest and most complex mollusks are the _____.

Label each mollusk in Fig. 27-4. Choose from *univalve*, *bivalve*, or *cephalopod*.

Fig. 27-4



10. _____ 11. _____ 12. _____

13. Describe the differences in body forms of bivalves, univalves, and cephalopods. _____

14. Although slugs have no shells, they are classified as univalves? Why do you think they are classified this way? _____

