

Name \_\_\_\_\_

Hr. \_\_\_\_\_

## Invertebrates: *What Is a Mollusk?*

Kingdom: *Animalia*

Phylum: *Mollusca* [mo LUSK uh] means “soft-bodied.”

The phylum mollusca is made up of soft-bodied invertebrates that usually have a shell. **Mollusks** may appear to be very different, but they are all structurally similar. They are found living on land and in fresh and salt water. They include animals such as clams, oysters, snails, slugs, octopus, and squid. Have you ever eaten a clam? If you have, you know that most of the body is soft and slimy.

### Body Plan

**Mollusks** have a soft body, usually covered by a hard shell. The soft body is covered and protected by a **mantle**. The mantle, a thin membrane, secretes the shell for many mollusks. The mollusk has three body parts: head, foot, and a visceral mass. The **head** contains the brain and sensory organs, the **foot** is the muscular part of the body and may be divided into parts (i.e., the octopus). The **visceral mass** area is the space in which the body parts are located.

Most mollusks have well-developed organs that form various systems. They have an open circulatory system. The blood is not always inside the blood vessels the way a human's blood is—it fills open spaces in the body and bathes the organs. Mollusks also have a digestive system, reproductive system, and nervous system. The octopus and squid have a jet-action water vascular system they use for swimming. The water is forced out through a tube-like structure near the head, which sends the mollusks quickly in the opposite direction. Another special structure found in some mollusks, such as the snail, is the **radula** [RAJ oo luh]. The radula is a rough, tongue-like organ that is used to scrape algae off of rocks. Some people even use snails to clean the glass sides of their aquariums.

### Classifying Mollusks

These unique animals are classified into three classes. It is possible to tell which group a mollusk belongs to by its body shape. The classification of mollusks is based on these three ideas: shell or no shell, its type of shell, and its type of foot.

**Gastropods** make up the largest class of mollusks. Members of this class have only one shell and are sometimes called **univalves**. Gastropod means “stomach foot” and includes snails, slugs, and conchs. Gastropods are adapted to living on land. The gastropod lays a mucus trail on the ground for its foot to glide over.

**Bivalves** are well-known mollusks that have a hinged shell in two parts. Clams, oysters, and scallops make up this class of mollusks. The clam uses powerful muscles to close its shell and relaxes these muscles to open its shell. Most are marine, but a few live in fresh water. They do not have a radula; they filter-feed organic particles through their gills. Most attach to something or burrow underground. Many mollusks—not just oysters—make pearls. Pearls are made when an irritant, such as a grain of sand, becomes embedded in the mantle. The mollusk then coats the irritant with the same material used to produce the lining of its shell, which makes the irritant less painful to the mollusk. In time, as more material covers the irritant, a pearl is produced.