27-4 Mollusks











27-4 Mollusks www. What Is a Mollusk?

What Is a Mollusk?



Mollusks are soft-bodied animals that usually have an internal or external shell.

Mollusks include snails, slugs, clams, squids, and octopi.

Many mollusks share similar developmental stages.



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27-4 Mollusks www.What Is a Mollusk?

Many aquatic mollusks have a free-swimming larval stage called a trochophore.

The trochophore larva is also characteristic of annelids, indicating that these two groups may be closely related.







Body Plan

The body plan of most mollusks has four parts: foot, mantle, shell, and visceral mass.





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27-4 Mollusks 🗪

Form and Function in Mollusks

The muscular foot takes many forms

- flat structures for crawling
- spade-shaped structures for burrowing
- tentacles for capturing prey





Feeding

Mollusks can be herbivores, carnivores, filter feeders, detritivores, or parasites.





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Snails and slugs feed using a flexible, tongueshaped structure known as a **radula**.



End Show



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In an **open circulatory system**, blood is pumped through vessels by a simple heart.





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Nephridia remove ammonia from the blood and release it outside the body.



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Groups of Mollusks

The three major classes of mollusks are

- gastropods
- bivalves
- cephalopods



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Gastropods



Gastropods are shell-less or singleshelled mollusks that move by using a muscular foot located on the ventral side.

Many gastropods have a single shell that protects their bodies.

When threatened, they can pull completely into their shells.

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Gastropods include

- pond snails
- land slugs
- sea butterflies
- sea hares
- limpets
- nudibranchs



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Bivalves



Bivalves have two shells that are held together by one or two powerful muscles.

Common bivalves include:

- clams
- oysters
- mussels
- scallops





Cephalopods



Cephalopods are typically soft-bodied mollusks in which the head is attached to a single foot. The foot is divided into tentacles or arms.





27-4 Section QUIZ





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- 1 The trochophore larva is a characteristic that mollusks share with
 - a. flatworms.
 - b. roundworms.
 - c. annelids.
 - d. flukes.



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27-4 Section QUIZ

- 5 The body plan of most mollusks includes all of the following EXCEPT a
 - a. foot.
 - b. mantle.
 - c. shell.
 - d. radula.



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