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Mollusks, Arthropods, and Echinoderms • Section Summary

## **Echinoderms**

## **Guide for Reading**

- What are the main characteristics of echinoderms?
- What are the major groups of echinoderms?

Echinoderms are invertebrates with an internal skeleton and a system of water-filled tubes called a water vascular system. The skin of most echinoderms is stretched over an internal skeleton, called an endoskeleton. The water vascular system consists of fluid-filled tubes within the echinoderm's body. Portions of the tubes can squeeze together, forcing water into structures called tube feet. Most echinoderms use their tube feet to move and to capture food.

Most echinoderms are either male or female. Eggs are usually fertilized in the water. The fertilized eggs develop into larvae. The larvae eventually undergo metamorphosis and become adults.

There are four major groups of echinoderms: sea stars, brittle stars, sea urchins, and sea cucumbers. Sea stars are predators with five arms. A sea star feeds by forcing its stomach out through its mouth and between the shells of its prey. Chemicals break down the prey. The sea star sucks in the partially-digested prey.

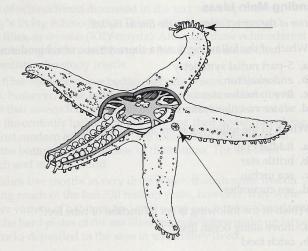
Brittle stars have long and slender arms, with flexible joints. Brittle stars use their arms to slither along the ocean bottom.

Unlike sea stars and brittle stars, sea urchins have no arms. Moveable spines cover and protect their bodies. A sea urchin's spines cover a central shell that is made of plates joined together. Sea urchins move mostly by using bands of tube feet that extend out between the spines.

The bodies of sea cucumbers are soft, flexible, and muscular. They move by using five rows of tube feet on their underside. Sea cucumbers use their tentacles to sweep food toward their mouths.

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chinoderms	
is section tells about bumpy-skinned animals called echinoderms.	
se Target Reading Skills	
eview the figure in your textbook showing a sea star's water vascular syst en write two questions that you have about the diagram in the graphic org ow. As you read, answer your questions.	ganizer
Water Vascular System	
What are tube feet?	echinoderm s box
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he skin of most echinoderms is stretched over an internal skeleton	,
/hat is a water vascular system?	
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4. Label the parts of a sea star's water vascular system in the diagram below.



## **Diversity of Echinoderms**

- 5. Is the following sentence true or false? A sea star forces its stomach into the opening of a clam's shell to digest the clam's body.
- **6.** Complete the table about the characteristics of other echinoderms.

Characteristics of Other Echinoderms				
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