

Lesson 6: Sea Stars

Primary Lesson Standard: 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

Essential Questions:

- 1) What are some examples of living things, or *organisms*, that can be found in the Salish Sea?
- 2) How do their different body parts help them survive, grow, and thrive in their environment?
- 3) Inquiry:
 - What do you notice?
 - What do you wonder?
- 4) How do sea stars interact with their environment?

Career Explorer Questions:

- 1) How do people work with sea stars?
- 2) What different jobs do people have related to this field?

Learning Objectives:

Students will be able to:

- 1) Identify sea stars.
- 2) Understand how the body parts of sea stars help them survive, grow, and thrive in their environment.
- 3) Recognize how people work with sea stars.

Key Concept: Sea stars, also known as starfish, are fascinating marine creatures belonging to the phylum Echinodermata. These animals are characterized by their radial symmetry, usually having five arms that radiate from a central disk, although some species can have more arms. Sea stars come in various sizes, colors, and patterns, adding to the diversity of marine life. One remarkable feature of sea stars is their unique water vascular system, which helps them move, capture prey, and exchange gases. Tube feet, part of this system, are present on the underside of their arms and play a crucial role in locomotion and feeding. Sea stars are primarily carnivores, preying on mollusks, small fish, and other invertebrates. They use their tube feet to open the shells of their prey and then push their stomachs out of their bodies to digest the prey externally. These marine animals are found in oceans worldwide, from shallow tidal pools to deep-sea environments. As a keystone species, they play a vital role in marine ecosystems, contributing to the balance of the food

chain and aiding in the regulation of certain populations. Sea stars are also known for their regenerative abilities; some species can regenerate lost arms, and in some cases, an entirely new sea star can grow from a severed arm. Understanding the background information on sea stars is essential for teachers to provide engaging and accurate lessons about marine biology and ecosystems.

Vocabulary: Sea star wasting disease


Assessment: Worksheet in the GSSC notebook.

Instructions: All parts of this lesson can be found in this document.

Read the page and click on the links as you go.

Teacher Prep/Considerations:

Set up computer and projector. Review the Power Point to be sure background information is adequately understood to explain to students. Have the slideshow chart from Lesson 6 ready to review and add to if necessary.

Watch:  Seastar Video

Slideshow:  2023 Who works with sea stars.pdf.pptx

Slide 1: Sea stars are amazing creatures that live in the ocean. They have a round body with arms, and some sea stars have five arms, while others might have more! They use special feet on their underside to move around and even catch their food.

Sea stars come in different colors and sizes, and they're super cool because some can even grow new arms if they lose one. They love to eat things like small fish, mollusks, and other sea animals.

These cool sea stars play an important role in keeping the ocean balanced. They live in all sorts of places in the ocean, from shallow pools to deep areas. So, sea stars are like the underwater stars that make the ocean a fantastic place!



Slide 2: Sea star wasting disease is a problem that some sea stars face. It's like they're not feeling well. Their arms might become droopy, and they can lose their color. It's a bit like when we catch a cold, but for sea stars. Scientists are trying to understand why this happens and how to help sea stars get better. It's important to learn about it so we can take care of our sea star friends in the ocean and keep the underwater world healthy!



Slide 3: People help sea stars in a few special ways.



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People work together to keep the oceans clean. We don't want to throw garbage into the sea because it can make the water not so nice for sea stars and other sea creatures. By keeping the oceans clean, we're helping sea stars have a happy and healthy home. So, we can be like sea star heroes by learning about them, keeping the oceans clean, and making sure our underwater friends are safe and happy!

Slide 4: Wildlife biologists study and watch sea stars to understand how they live and if they're feeling well. Imagine them as sea star friends who want to know more about them!

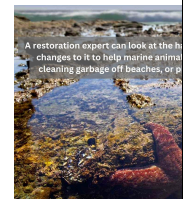
Biologists go to the ocean, observe sea stars, and even count how many there are. They look at their colors, arms, and how they move. If some sea stars are not feeling good because of sea star wasting disease, biologists try to figure out why and how to help.



Slide 5: When sea stars face problems, restoration experts come to the rescue!

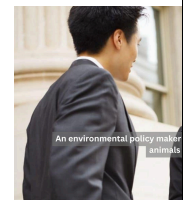
These experts work to make the sea star homes healthier. They might plant more sea grass or build safe places for sea stars to live. It's a bit like creating a cozy room for sea stars where they can be happy.

Restoration experts also teach people how to take care of the ocean, so sea stars have a clean and safe home. They're like sea star guardians, making sure our underwater friends stay strong and healthy. So cool, right?

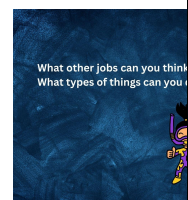


Slide 6: Environmental policy makers are like the wise leaders who make rules to keep our planet safe, including sea stars in the ocean. They create special plans to protect the sea and sea stars.

These awesome leaders make sure that people are careful about what they put in the water, so it stays clean for sea stars and their friends. They also decide on ways to help sea stars when they face challenges, like sea star wasting disease.



Slide 7: Ask students how they might help sea stars and local beaches be healthy and clean.



Worksheet:

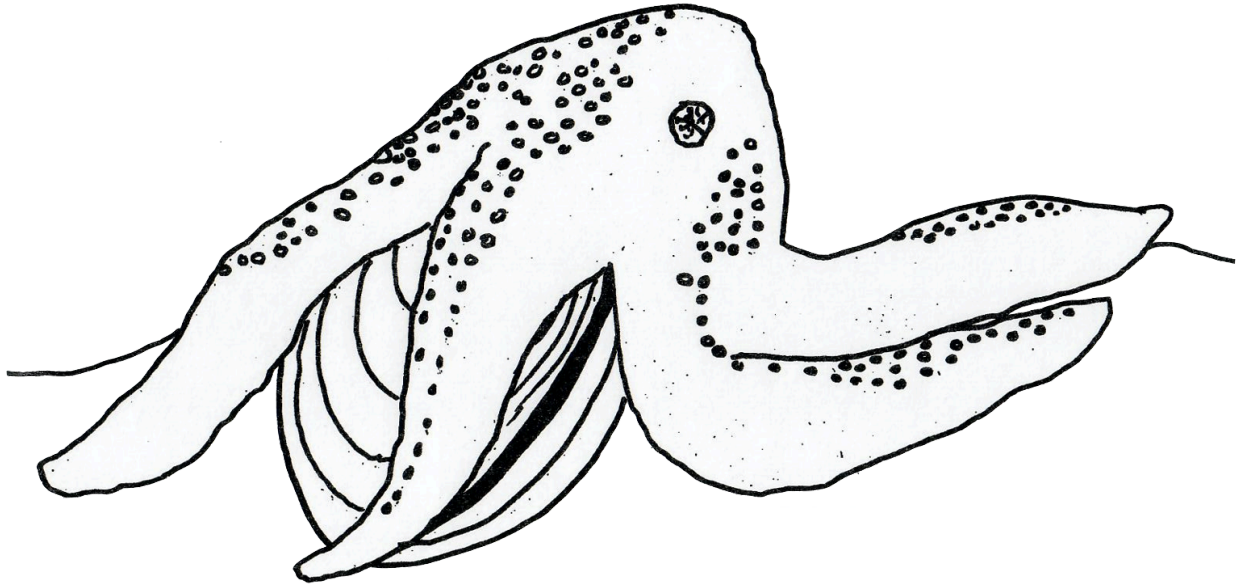
1. Circle the correct word and write it on the line, then color in the sea star.

A. Sea stars are _____.

Plants **Animals**

B. Sea stars use their _____ to move.

Tube Feet **Arms**



2. The sea star is _____ an oyster.

Hugging **Eating**

Optional Extensions:

- [☰ 1st Grade STEAM Activities](#)
- [Explore the Salish Sea: A Nature Guide for Kids](#) by Joe Gaydos (provided by GSSC upon request)
- Print and work through this [seashore packet](#).
- [Sea Creature Yoga Video](#) - follow along with the yoga poses inspired by some of our favorite sea creatures! Think about how their body parts help them live.