

Ecosystem Services - Oceans

Lower Primary

Key Inquiry Questions

1. Why are oceans so important to your community and lifestyle?
2. How do human activities affect the oceans and ocean life?
3. What are some ways we can protect the oceans?

Learning Outcomes

1. Students will be able to understand the important ecosystem services ocean and coastal ecosystems provide and how they can better protect them by the end of the lesson.
2. Students will be able to realize how oceans are specifically important to their daily lives by the end of the lesson.
3. Students will

Sustainability Curriculum Goals

Systems Thinking:

1. Our planet - the biosphere - is a complex system that supplies resources and creates conditions that sustain life on Earth.
2. All forms of life, including humans, are connected to each other through man-made and natural ecosystems on which their well-being depends on.

Sustainable Futures:

1. Actions associated with a sustainable future reflect values of care, respect, responsibility, empathy, and compassion for all living and nonliving things.
2. Sustainable futures involve actions that work to preserve, protect, and/or restore the natural environment.

Activities/Goals:

1. Students should be able to explain what sustainability is, the importance of ecosystem services and biodiversity.

Overview:

The lesson will begin with students critically thinking about the extent of how dependent humans are on oceans, and how humans can help oceans. Students will then watch a short video to introduce the challenges ocean ecosystems are facing as a result of actions from humans. Lastly, students will complete a creative project that allows them to share their knowledge with the community and reflect on all they have learned about protecting the oceans.

Materials

SolarSPELL Resource:

1. “Restoring Our Oceans: How Fishers Can Turn the Tide of Overfishing”
(Environment > Teaching Resources > Environment and Sustainability >
Restoring Our Oceans: How Fishers Can Turn the Tide of Overfishing)

Other:

1. Pencils
2. Notebooks

Suggested Procedure

It is recommended that you complete the “Ecosystem Services - What does the Earth Provide” lesson before this one.

Before Lesson:

- Ask students to take out a sheet of paper and reflect on the following questions.
 - How much fish do you and your family eat a week?
 - What is your favorite kind of fish to eat and why is it your favorite?
 - What is one question you have about fish or catching fish?
- Allow students to talk about their answers with the neighbors first, then call on a few students to share.

During Lesson:

- Direct students to the video titled “Restoring Our Oceans: How Fishers Can Turn the Tide of Overfishing”
- Ask students to pay attention to the video because they will be answering questions about it after.
 - Questions:
 - 1. Raise your hand if you think that seafood resources can run out?
 - Ask a few students to say why they raised their hand.
 - Ask a few students who did not raise their hand why they do not think seafood resources will run out.
 - Explain to students that they learned from the video that fishers are catching fish at a faster rate than the fish population can grow, thus, the fish resources are running out.
 - 2. Ask students why it is bad that the fish resources are running out.
 - Possible answers: people will lose their jobs, people will be hungry, the ocean ecosystem will be harmed.
 - 3. Ask students what they think can be done to bring fish back to the oceans.

- Possible answer: nearshore fishers can create a Turf Reserve. The Turf is an area where a select group of fishers get to use that area to fish, and the Reserve is an area next to or inside of the Turf where fishing is not allowed.
- 4. Ask students who should be in charge of a Turf Reserve and why they think that.
 - Possible answer: communities of nearshore fishers should be in charge because they are the people doing most of the fishing, they rely on fishing to make money, and they know the most about the fish populations.
- 5. What questions or comments do you have about fish, and/or overfishing?

After Lesson

- Option 1:
 - Take students outside and ask them to collect as many pieces of “trash” as possible.
 - Students should mostly look for plastic items, cans, bags, and other items that take a long time to decompose.
 - Give students 10 minutes to collect these items.
 - Upon their return to class, inform students that waste like the items they found are also harmful to the oceans as animals often think plastic waste is food, resulting in their death.
 - Have students create a sculpture/piece of artwork using the materials they gathered as well as a poster (the size of a sheet of paper) that showcases what they learned during class.
 - See an example at the bottom of this lesson plan.
 - Posters could include slogans like:
 - Keep our ocean free of debris
 - Keep calm, and protect our ocean
 - I need the sea because it feeds me... protect our oceans!
 - By eating plastic animals died, seeing plastic nature cried. Say no to plastics!
- Option 2:
 - If the area you live in is relatively debris-free, have students create just the poster portion about the importance of protecting oceans, and fishing responsibly.
 - See an example at the bottom of this lesson plan.



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