

# Science Tech Trek: Coral Reef Relationships

## Teacher Post Trip Guide



### Post Trip Overview

After completing their Science Tech Trek, students will have the opportunity to reinforce and extend their understanding of the relationships between reef animals with post-field trip learning activities in the classroom. Teachers will guide their learners through a review of how reef animals depend on one another to survive. Then, learners will begin exploring the idea of conservation and how humans can help care for animals and their habitats.

### Supported Amplify Science Lessons

#### 2<sup>nd</sup> Grade Amplify Unit: Plant and Animal Relationships

##### Lessons:

- 1.3 Investigating Habitats
- 3.1 Habitat Scientist
- 3.4 Diagramming a System

### Supported NGSS Standards

**2-LS4-1:** Make observations of plants and animals to compare the diversity of life in different habitats.

**2-ESS2-2:** Develop a model to represent the shapes and kinds of land and bodies of water in an area.

Science and Engineering Processes	Disciplinary Core Ideas	Crosscutting Concepts
<b>Constructing Explanations and Designing Solutions</b> <ul style="list-style-type: none"> <li>• Make observations (firsthand or from media) to collect data which can be used to make comparisons (2-LS4-1)</li> </ul>	<b>LS4.D: Biodiversity and Humans</b> <ul style="list-style-type: none"> <li>• There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)</li> </ul> <b>ESS2.B: Plate Tectonics and Large-Scale System Interactions</b> <ul style="list-style-type: none"> <li>• Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)</li> </ul>	<b>Patterns</b> <ul style="list-style-type: none"> <li>• Patterns in the natural world can be observed. (2-ESS2-2)</li> </ul>

### Supported Common Core Standards

**CCSS.ELA-LITERACY.W.2.2:** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

**STT Central Phenomenon Questions**

**Science Tech Trek Learning Objectives**

<p>How does a coral reef help other animals in the ocean to survive?</p>	<p>Students will be able to...</p> <ul style="list-style-type: none"> <li>• Identify that coral is an animal</li> <li>• Recognize that the reef supports many different types of animals</li> <li>• Model the coral reef system's animal components</li> <li>• Explore the way maps present information about land and water</li> <li>• Observe animals, investigate scientific questions, and use tablets to document their explorations</li> </ul>
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## Post-Trip Guide

Logistics	
<p><b>Facilitated by classroom teacher at school</b> Time: 20-30 minutes</p>	
Learning Objectives	Materials
<p>Students will be able to...</p> <ul style="list-style-type: none"> <li>• Recognize that the reef supports many different types of animals</li> <li>• Discuss how reef animals need each other to survive</li> <li>• Explore ways humans can help animals in the wild to survive</li> </ul>	<ul style="list-style-type: none"> <li>• Printed Science Tech Trek summaries (examples on last page)</li> <li>• Pencils</li> <li>• Computer/projector/speakers</li> <li>• The Problem with Plastics video link: <a href="https://www.youtube.com/watch?v=526gMLHDVLg">https://www.youtube.com/watch?v=526gMLHDVLg</a></li> <li>• Washed Ashore video link: <a href="https://www.youtube.com/watch?v=KUS175scFeo">https://www.youtube.com/watch?v=KUS175scFeo</a></li> </ul>
Prep	
<ul style="list-style-type: none"> <li>• Print two copies of each Science Tech Trek summaries (one for each partner)</li> <li>• Pull up The Problem with Plastics video online</li> <li>• Pull up Washed Ashore: Art to Save the Sea video</li> </ul>	
Facilitation Outline	
<p><b>Quick Outline</b></p> <ol style="list-style-type: none"> <li>1. Reviewing learning objectives and Science Tech Trek concepts</li> <li>2. Expanding students' thinking about conservation</li> <li>3. Creative connection</li> </ol> <p><b>1. Reviewing Learning Objectives and Science Tech Trek Concepts</b> <i>8 minutes</i></p> <ul style="list-style-type: none"> <li>• Review the learning objectives for students' investigation of coral reefs.</li> <li>• Remind students of what they did during their Science Tech Trek: <ul style="list-style-type: none"> <li>○ Completed a mapping activity</li> <li>○ Explored coral reefs and the animals that live there</li> <li>○ Learned how animals in a reef need each other to survive</li> </ul> </li> <li>• Review what coral reefs are and what kinds of animals live there. Use a combination of partner sharing and whole group response: <p style="margin-left: 20px;">Guiding Questions:</p> <ul style="list-style-type: none"> <li>▪ In a coral reef, do many animals live there or few animals? (<i>many animals live in a coral reef</i>)</li> </ul> </li> </ul>	

- Are these animals all the same or are they different? (*coral reefs have many, different kinds of animals in them*)
  - What kinds of animals live in a coral reef? (*corals, sharks, big fish, small fish, crabs, sea stars, anemones, etc.*)
  - Is coral an animal? How do you know? (*coral is animal, because it eats other things for energy*)
- Make sure students have their Science Tech Trek summaries and a writing utensil.
  - Have students share their coral reef model on the front page of their summary with a partner. Partners can compare the numbers of corals, small fish, big fish, and sharks that they saw in the habitat.
  - Explain that in a coral reef, different animals need one another to survive.
  - Review how animals in a reef depend on one another to survive:
    - Guiding Questions:
      - What are some ways that reef animals depend on one another to survive? (*small fish live in the corals, sharks eat small fish, big fish find food and mate in a reef*)
  - Have students complete questions 1 and 2 on their summary, drawing a line on their model between two animals that help each other survive in the reef and explaining how they do so.

## 2. Expanding Students' Thinking on Conservation

10 minutes

- Discuss why a human diver might dive in a coral reef:
  - Guiding Questions:
    - Think back to your Science Tech Trek. In one of the reef pictures, there was a human diver. Why might a human diver visit a coral reef? (*a diver might visit a coral reef to see lots of different kinds of animals, conduct research to keep the reef healthy, or clean up trash there*)
- Guide students in making the connection that just like reef animals help one another to survive, humans can also help animals to survive by keeping taking care of their habitats in the wild.
- Show The Problem with Plastics video.
- Facilitate a discussion exploring ways that humans can help animals to survive in the wild. Use a combination of partner sharing and whole group response:
  - Guiding Questions:
    - We talked about how humans can dive in coral reefs and study them to help keep them healthy. Do we live near a coral reef? (*no*)
    - What large bodies of water do we live near? (*Great Lakes, Lake Michigan, Chicago River*)
    - What other actions can we take to help coral reefs in the ocean and animals in waterways near us? Think about what was mentioned in the video. (*using reusable bags, lunch bags, and water bottles, recycling and throwing away trash properly, picking up trash outside, reducing use of straws and other single-use plastics*)
    - How do these actions help animals? (*these actions keep animals' natural habitats clean and safe*)
- Have students share with a partner about an action they want to take or already do to help animals survive in the wild. Then, have each student share with the whole group.
- Have students answer question 3 on the back page of their summaries, drawing a picture of a human diver taking care of a coral reef. Students can also add themselves into their drawing, showing them doing their conservation action!

## 3. Creative Connection

2-12 minutes

- Explain that reusing, recycling, and reducing plastics can also be creative and fun.
- Show the Washed Ashore: Art to Save the Sea video.

- Challenge students to reuse items to create art, or for an extended project, have students collect items to repurpose into an aquatic themed art piece for your classroom.
- Share photos of your students' post-trip learning with #SheddLearning via Twitter, Instagram, or Facebook! Or email the photo with your school name to [learning@sheddaquarium.org](mailto:learning@sheddaquarium.org) and for Shedd to tweet from @SheddLearning.



Student A.

Below is the table of how many corals, small fish, big fish, and sharks you counted in the shark habitat.

Animal	Number
Coral 	2
Small Fish 	3
Big Fish 	2
Shark 	4



Science Tech Trek Summary Example

1. Draw an arrow between two different types of animals that help each other survive in the reef.

2. How do these animals help each other to survive?

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3. In the space below, draw a picture of a human diver helping take care of a coral reef to keep it healthy.