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Foundation

STANDARDS

- **CCSS:** RST.9-10.1, 2, 3, 4, 5, 7, 8, 9, 10; RST.11-12.1, 2, 3, 4, 8, 9, 10; W.9-10.1, 2, 4; W.11-12.1, 2, 4; SL.9-10.1, 3, 4, 6; SL.11-12.1, 3, 4, 6
- **NGSS:** ESS 2.A, ESS 2.C, ESS 2.E, HS-ESS2-1, HS-ESS2-7
- **OLP:** 1.A.4, 5.B.1

ONLINE CONTENTS

- [Reef Types Quiz](#)

REEF TYPES

This lesson is a part of the *Reef Types* unit, which explains bathymetric features of the ocean floor and how this relates to coral reefs. Below is a summary of what is included in the entire unit.

UNIT CONTENTS

A. [Background Information](#)

- Reef Types
- Bathymetric Features of the Oceans' Floor
- Coral Reef Geomorphology Introduction
- Types of Coral Reef Geomorphology

B. Lessons

[Where Can Corals Grow?](#)

- An activity to make a bathymetry model and analyze it for potential coral growth

[Reef Typing](#)

- An activity to classify reef types (barrier, fringing, atoll)

[Read it! Lagoon Reefs](#)

- A worksheet to accompany the [Lagoon Reefs of Fakarava](#) field blog



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LEARNING OBJECTIVES

- Read, interpret, and comprehend a blog.
- Determine how to responsibly use the internet for collecting and responding to information.

MATERIALS

- Internet access
- Lagoon Reefs* blog (<http://www.lof.org/lagoon-reefs-of-fakarava/>)
- Read It! Lagoon Reefs** student worksheet
- Lagoon Life* blog (<http://www.livingoceansfoundation.org/lagoon-life/>)

INTEGRATING SUBJECTS

- English Language Arts

PRIOR KNOWLEDGE

- Students will have prior knowledge about bias and how to critique the validity of websites.

STANDARDS

- CCSS:** RST.9-10.1, 2, 4, 5, 8, 9, 10; RST.11-12.1, 2, 4, 8, 10
- NGSS Practices:** 6, 7, 8

PROCEDURE

- Have students read *Lagoon Reefs* blog (<http://www.lof.org/lagoon-reefs-of-fakarava/>).
- While reading, instruct students to take notes, connecting the information to their prior knowledge. They can note things that they agree and disagree with. A space, called *Notes*, is provided for this on the **Read It! Lagoon Reefs** student worksheet.
- Ask students to analyze the blog to determine the elements (like tone or visual design) and content that they like and dislike. Remind students to explain why they like or dislike each element they mention. There is also a space provided for these answers on the student worksheet.
- Have students answer the questions on their worksheet. When they are looking for definitions, they should use the context from the blog, our glossary, or other online resources. You may want to set rules distinguishing other websites or resources that they are allowed to access.
- If you set up an online community for your class, have the students post their comment(s) from the last question and allow them to respond to each other. If you do not have an online community, have the students share their comment(s) with each other, either orally or by passing their written responses around the classroom.

INSTRUCTIONS:

1. Read *Lagoon Reefs of Fakarava*, a blog from our Tuamotu, French Polynesia mission (<http://www.lof.org/lagoon-reefs-of-fakarava/>).
2. While reading the blog, take notes and connect it to your prior learning. Note things that you agree or disagree with. There is a space, below, for this.
3. Next, document what you like and dislike about this blog in the space below. Be sure to pay attention to things like style and tone, along with the content and visual design. Be sure to *explain* what it is that you do or do not like about each element.
4. Answer the questions.

NOTES**LIKES****DISLIKES**

1. What is the central idea of this blog?
2. What do the lagoon reefs of Fakarava look like? Cite specific textual evidence to support this.
3. Did the author fully support his claim? Explain why you think this.
4. *Archipelago*, *patch reefs*, and *emergent* are specific vocabulary for the topic of this blog. Define them below.
5. Write a sentence of your own creation that connects the three words from #4, above.



6. Is this blog a reliable source for scientific information? Why or why not?

7. Do you notice any bias in this writing? If so, what?

8. At the beginning of the blog, the author shares that he thinks the Fakarava lagoons are the “most unique.” Do you agree? Compare and contrast the information on the patch reefs of Fakarava lagoon (found in this blog) to that from the Colombia mission, linked at the end of the blog (<http://www.livingoceansfoundation.org/lagoon-life/>), and with information you have learned in class. Be sure to cite the other sources of information in your answer.

9. Describe three things that you learned while reading this blog entry (they do not have to relate to the central idea).

10. Construct a comment to post in response to this blog. Remember that a good comment makes connections, asks a question, or gives an opinion in a respectful manner. You might want to quote the part of the blog that you are specifically referring to. Don't be afraid to disagree with another writer, but be sure to explain yourself and remain polite.

1. What is the central idea of this blog?

The lagoon at Fakarava has an interesting coral community where branching corals have taken over the center of a once thriving *Porites* community.

2. What do the lagoon reefs of Fakarava look like? Cite specific textual evidence to support this.

Some of these patch reefs have very large *Porites* boulders that have been overgrown with branching corals after the *Porites* have died from exposure to air. Some of these grew so high that they formed small islands. Students should have specific quotes to back up this claim, which may vary but might include the following:

- **“There are thousands of small patch reefs...”**
- **“...there is a community dominated by unusually large boulder-like *Porites*...”**
- **“...the tops of the colonies are exposed during very low tides, and they die...”**
- **“...the colonies in the center of these lagoon reefs die completely and are replaced by a branching coral community...”**

3. Did the author fully support his claim? Explain why you think this.

Answers may vary. Be sure they explain their reasoning.

4. *Archipelago*, *patch reefs*, and *emergent* are specific vocabulary for the topic of this blog. Define them below.

- **Archipelago: a series of islands that are relatively close together.**
- **Patch reefs: an isolated, small coral reef that can often be found in a lagoon.**
- **Emergent: coming out of the water, breaking the surface.**

5. Write a sentence of your own creation that connects the three words from #4, above.

An archipelago may have many patch reefs, some of which are emergent.



6. Is this blog a reliable source for scientific information? Why or why not?

Yes. This is a first-hand account of what the author has seen. It is from a reputable organization that is based on scientific research. It also links you to the author’s credentials.

7. Do you notice any bias in this writing? If so, what?

Answers may vary, but should mention that it is written by a conservationist.

8. At the beginning of the blog, the author shares that he thinks the Fakarava lagoons are the “most unique.” Do you agree? Compare and contrast the information on the patch reefs of Fakarava lagoon (found in this blog) to that from the Colombia mission, linked at the end of the blog (<http://www.livingoceansfoundation.org/lagoon-life/>), and with information you have learned in class. Be sure to cite the other sources of information in your answer.

Answers may vary; however, students should have an opinion on whether Fakarava is unique. Students should have details which may include some or all of the following:

Fakarava	Both	Colombia
<ul style="list-style-type: none"> • <i>Porites</i> (finger/massive coral) surrounding <i>Acropora</i> (staghorn/elkhorn coral) and <i>Pocillopora</i> (cauliflower coral) • Up to 55 m 	<ul style="list-style-type: none"> • Patch reefs • Some algae growing on the corals 	<ul style="list-style-type: none"> • Star, brain, and pillar corals • Occasional elkhorn and staghorn corals (<i>Acropora</i>) • 15 m

Schrope, M. (2012, April 16). *Lagoon Life at Baja Nuevo, Colombia*. Retrieved March 25, 2015, from <http://www.livingoceansfoundation.org/lagoon-life/>.

9. Describe three things that you learned while reading this blog entry (they do not have to relate to the central idea).

Answers may vary.

10. Construct a comment to post in response to this blog. Remember that a good comment makes connections, asks a question, or gives an opinion in a respectful manner. You might want to quote the part of the blog that you are specifically referring to. Don’t be afraid to disagree with another writer, but be sure to explain yourself and remain polite.

Answers may vary.