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Living Oceans
Foundation

STANDARDS

- **CCSS:** RST.9-10.1, 2, 3, 4, 5, 7, 8, 10; RST.11-12.1, 2, 3, 4, 8, 10; SL.9-10.1, 2, 3, 6; SL.11-12.1, 2, 3, 6
- **NGSS:** HS-ESS2-1, HS-LS2-6
- **OLP:** 5.B.7, 5.B.8, 5.C.33, 7.A.5, 7.C.2, 7.C.3

ONLINE CONTENTS

- [Reef Zonation Quiz](#)
- [Coral Reef Zones Video](#)
Scientists divide coral reefs into zones. They base these divisions on location within the reef and characteristics such as depth, wave action, light intensity, temperature, and water chemistry. Zones of the reef include: lagoon, back reef, reef flat, reef crest, and fore reef.

REEF ZONATION

This lesson is a part of the *Reef Zonation* unit, which explains the characteristics and location of the reef zones. Below is a summary of what is included in the entire unit.

UNIT CONTENTS

A. [Background Information](#)

- Reef Zones
- Zonation Patterns

B. Lessons

[Watch it! Coral Reef Zones](#)

- A worksheet to accompany the [Coral Reef Zones](#) video

[Modeling the Reef](#)

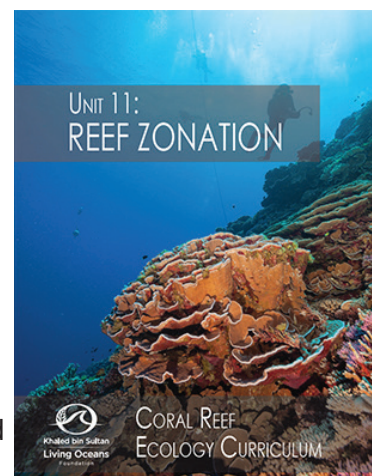
- An art project to research and model a coral reef

[GIS Mapping](#)

- An activity exploring interactive GIS mapping tools

[Read it! Let's Name the Zones](#)

- A worksheet to accompany the [Let's Name the Zones, the Zones, the Zones of the Reefs... of Raivavae and Tubuai](#) field blog



READ IT!

TEACHER'S NOTES

AUTHOR

- Melinda Campbell. Khaled bin Sultan Living Oceans Foundation

LEARNING OBJECTIVES

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

MATERIALS

- Internet access
- Let's Name the Zones* blog (<http://www.lof.org/lets-name-the-zones-the-zones-of-the-reefs-of-raivavae-and-tubuai/>)
- Read It! Let's Name the Zones** student worksheet

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

PROCEDURE

- Have students read *Let's Name the Zones* blog (<http://www.lof.org/lets-name-the-zones-the-zones-of-the-reefs-of-raivavae-and-tubuai/>).
- 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! Let's Name the Zones** 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.

READ IT!

LET'S NAME THE ZONES

INSTRUCTIONS:

1. Read *Let's Name the Zones*, a blog from our Austral Islands, French Polynesia mission (<http://www.lof.org/lets-name-the-zones-the-zones-the-zones-of-the-reefs-of-raivavae-and-tubuait>).
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.

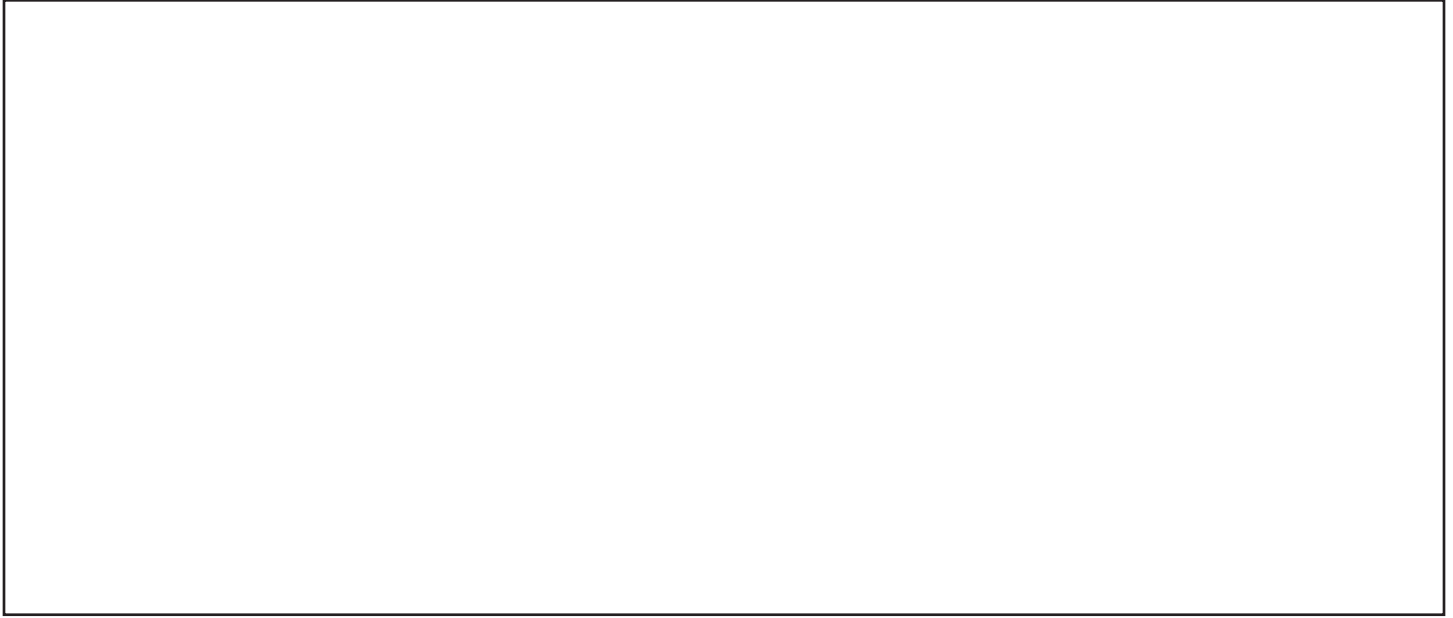
NOTES

LIKES

DISLIKES

1. What is the central idea of this blog?

2. Sketch the Austral reef (ignore grooves) described here. Don't forget to label it!



3. How does the Austral fore reef change as the water gets deeper? Cite specific textual evidence to support this.

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

5. *Massive*, *digitate*, and *encrusting* are specific vocabulary for the topic of this blog. Define them below.

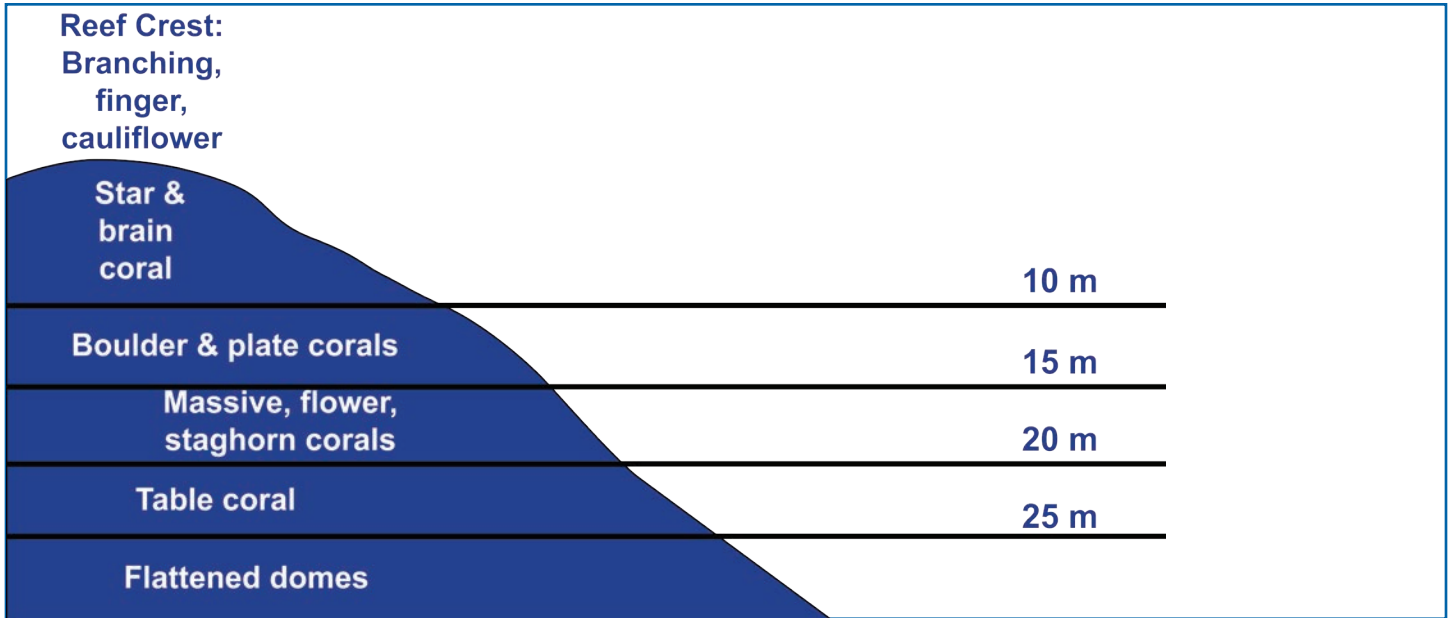


6. Write a sentence of your own creation that connects the three words from #5, above.
7. Is this blog a reliable source for scientific information? Why or why not?
8. Do you notice any bias in this writing? If so, what?
9. Describe three things that you learned while reading this blog entry (they do 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?

As you move through different zones of the reef, the coral community changes.

2. Sketch the Austral reef (ignore grooves) described here. Don't forget to label it!



3. How does the Austral fore reef change as the water gets deeper? Cite specific textual evidence to support this.

Small corals near the surface turn into much larger corals dominating the deeper depths. Students should have specific quotes to back up this claim, which may vary but might include the following:

- “From 10-15 m deep, the grooves were colonized by small pore corals...”
- “...the reef... transitions ... to a community ... of large massive and lobate corals...”

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

Answers may vary. Be sure they explain their reasoning.

5. *Massive*, *digitate*, and *encrusting* are specific vocabulary for the topic of this blog. Define them below.

- **Massive:** a growth form that includes corals that look like domed boulders.
- **Digitate:** a growth form where corals are cylindrical in shape and grow upwards. They often look like fingers.
- **Encrusting:** a growth form that adheres to rocky substrates. They do not grow upwards, they grow outward covering the rocky substrate.



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

Corals come in many forms, including *massive*, *digitate*, and *encrusting*.

7. 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.

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

Answers may vary, but should mention that this blog has little interpretation which would be open to bias.

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.