

STANDARDS

- <u>CCSS</u>: RST.9-10.2, 4, 5, 7, 8, 9, 10; RST.11-12.2, 4, 8, 10; SL.9-10.4; SL.11-12.4
- **NGSS**: HS-LS1-1
- <u>OLP</u>: 5.C.22

ONLINE CONTENTS

- Coral Anatomy Quiz
- <u>Coral Anatomy Interactive</u> (at bottom of Coral Anatomy section) Use the interactive program to learn and explore more about the anatomy of a stony coral polyp.
- <u>What Are Corals? Video</u> Corals are animals. An individual coral's body, called a polyp, is mostly stomach, with a mouth on top. Its mouth is ringed with tentacles - but these just aren't any tentacles, they're lined with stinging cells, some filled with venom (neurotoxins) that paralyze their prey.
- <u>Form Fits Function Video</u> Ever heard the phrase form fits function? It's when the shape of something is designed for the job it is supposed to do. When applied to sea creatures it means their body parts are a good match for their role in the animal's survival.

CORAL ANATOMY

This lesson is a part of the *Coral Anatomy* unit, which explains some of the characteristics and structures of corals, and how they function. Below is a summary of what is included in the entire unit.

UNIT CONTENTS

A. Background Information

- Coral Anatomy
- Form Fits Function
- B. Lessons
 - Watch it! What Are Corals?
 - A worksheet to accompany the <u>What Are Corals?</u> video

Watch it! Form Fits Function

 A worksheet to accompany the <u>Form Fits Function</u> video

Interactive Coral Polyp

A worksheet to label the structures of a coral polyp and describe their function

Fitting the Function

 A crossword puzzle to match the coral structures to their function

Coral Anatomy Quiz

 A matching quiz to match the coral structures to their function

Coral Polyp Eco-Art

• An art project to design and build a coral polyp using recycled materials

Form Fits Function

• A lesson to design a poster of any plant or animal, labeling the parts and their functions

Read it! Swimming Among Soft Corals

 A worksheet to accompany the <u>Swimming Among Soft</u> <u>Corals of the Great Barrier Reef</u> 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
- Swimming Among Soft Corals blog (<u>http://www.lof.org/swimming-among-soft-corals-great-barrier-reef/</u>)
- Read It! Swimming Among Soft
 Corals 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

- <u>CCSS</u>: RST.9-10.2, 4, 5, 8, 9, 10; RST.11-12.2, 4, 8, 10
- **<u>NGSS Practices</u>**: 6, 7, 8

TEACHER'S NOTES

PROCEDURE

- Have students read Swimming Among Soft Corals blog (<u>http://www.lof.org/swimming-among-soft-corals-great-barrier-reef/</u>).
- 2. 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! Swimming Among Soft Corals** student worksheet.
- 3. 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.
- 4. 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.
- 5. 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 *Swimming Among Soft Corals of the Great Barrier Reef*, a blog from our Great Barrier Reef, Australia mission (<u>http://www.lof.org/swimming-among-soft-corals-great-barrier-reef/</u>).
- 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. On what area of the reef are most soft corals found? Why do you think this is? Cite specific textual evidence to support this.

- 3. Did the author fully support his claim? Explain why you think this.
- 4. Sclerites, proteinaceous, and turbidity 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. Compare and contrast the information in this blog to what you have learned about the anatomy of stony corals (hexacorals).

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.

- What is the central idea of this blog? Soft corals are diverse and they play important roles in coral reefs.
- 2. On what area of the reef are most soft corals found? Why do you think this is? Cite specific textual evidence to support this.

Mid-shelf reefs have the greatest abundance of soft corals. It is the best of both worlds, so it can support both extremes of these organisms. Students should have specific quotes to back up this claim, which may vary but might include the following:

- "...species that prefer clear nutrient-poor water coexist with soft corals that inhabit turbid waters..."
- "Soft corals of every growth form... competed for space among the stony corals..."
- "...changes in the abundance of species along gradients..."
- 3. Did the author fully support his claim? Explain why you think this. **Answers may vary. Be sure they explain their reasoning.**
- 4. Sclerites, proteinaceous, and turbidity are specific vocabulary for the topic of this blog. Define them below.
 - Sclerites: microscopic shards composed of calcium or aragonite that help to support the structure of the corals and anchor them to the substrate.
 - Proteinaceous: relating to proteins.
 - Turbidity: a measure of the clarity of water.
- Write a sentence of your own creation that connects the three words from #4, above.
 Soft corals, who prefer low *turbidity* like most other corals, are supported by skeletal elements like sclerites and proteinaceous material.
- 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 might mention that this scientist clearly thinks that soft corals are beautiful.



8. Compare and contrast the information in this blog to what you have learned about the anatomy of stony corals (hexacorals).

Answers may include some or all of the following:

Soft Corals	Both	Hard Corals
8 tentacles Lack a hard skeleton Sclerites	Made of polyps	6 tentacles Hard skeleton

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.