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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



LESSON 1

WHERE CAN CORALS GROW?

Coral reef geomorphology is an important scientific discipline. It studies many things, including:

- Distribution of coral reefs
- Reef shape and bathymetry
- Reef location in relation to land forms

You are going to become a coral reef geomorphologist. You will analyze the bathymetry model you just mapped to determine where you may find coral reefs and why. Then you will write a report (no more than 300 words) to explain which area of your bathymetry model scientists should visit to find corals.

Your report should include answers to the following:

- What areas of your bathymetric model would be capable of supporting coral reefs?
- Why can corals live in the areas you described?
- What type of coral reef (barrier, fringing, or atoll) do you expect to be there?
- Why can't corals live in the other areas of your bathymetric model?
- What area(s) of your model should coral reef scientists explore? (Rank from most likely to least likely of finding a coral reef.)

GRADING RUBRIC:

Category	4	3	2	1	Score
Complete Information	Report includes all of the topics requested.	Report includes 4 of the topics requested.	Report includes 2-3 of the topics requested.	Report includes 0-1 of the topics requested.	
Organization	Exceptionally clear, logical, mature, and thorough development with excellent transitions between and within paragraphs.	Clear and logical order with good transitions between and within paragraphs.	Somewhat clear and logical development with basic transitions between and within paragraphs.	Lacks development of ideas with weak or no transitions between and within paragraphs.	
Style/Voice	Style and voice are completely appropriate to the given audience and purpose. Word choice is specific and purposeful. Sentences are clear and to the point.	Style and voice are mostly appropriate to the given audience and purpose. Word choice is specific and purposeful. Sentences are mostly clear and to the point.	Style and voice are somewhat appropriate to the given audience and purpose. Word choice is often unspecific and redundant. Sentences are somewhat unclear.	Style and voice are not appropriate to the given audience and purpose. Word choice is excessively unspecific and redundant. Sentences are very unclear.	
Grammar/Spelling	The report is free of errors.	The report has only 1-2 errors.	The report has 3-5 errors.	The report has more than 5 errors.	
TOTAL	Out of 16:				