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STANDARDS

- [CCSS](#): RST.9-10.1, 2, 4, 5, 6, 8, 10; RST.11-12.1, 2, 4, 6, 8, 10

ONLINE CONTENTS

- [Trouble in Paradise Video](#)
- [Crown of Thorns Starfish Crisis Video](#)
- [Ocean Alert: Overfishing Video](#)
- [Pollution: Everything is Connected Video](#)

CORAL REEF THREATS

This lesson is part of the *Coral Reef Threats* unit, which describes the natural and anthropogenic threats to coral reefs. Below is a summary of what is included in the entire unit. **THIS UNIT IS STILL IN DEVELOPMENT.**

UNIT CONTENTS

A. Lessons

Bleaching

[Watch It! Trouble in Paradise](#)

- A worksheet to accompany the [Trouble in Paradise](#) video

[Read It! Life & Death on the Reef](#)

- A worksheet to accompany the [Life & Death on the Reef](#) field blog

Crown-of-Thorns

[Watch It! Crown-of-Thorns Crisis](#)

- A worksheet to accompany the [Crown-of-Thorns Starfish Crisis](#) video

[Read It! Addressing Acanthaster](#)

- A worksheet to accompany the [Addressing Acanthaster](#) field blog

[Read It! Life, Death, and Rebirth](#)

- A worksheet to accompany the [Life, Death, and Rebirth \(Part 1\)](#) and [\(Part 2\)](#) field blogs

Overfishing

[Watch It! Ocean Alert: Overfishing](#)

- A worksheet to accompany the [Ocean Alert: Overfishing](#) video

[Read It! The Man-eaters](#)

- A worksheet to accompany the [The Man-eaters](#) field blog

[Read It! Best Wishes for Reef Fishes](#)

- A worksheet to accompany the [Best Wishes for Reef Fishes](#) field blog

[Read It! Sea Cucumber Craze](#)

- A worksheet to accompany the [Sea Cucumber Craze \(Part 1\)](#) and [\(Part 2\)](#) field blogs

Pollution

[Watch It! Pollution Everything is Connected](#)

- A worksheet to accompany the [Pollution Everything is Connected](#) video





WATCH IT! TROUBLE IN PARADISE

INSTRUCTIONS: Watch *Coral Reefs: Trouble in Paradise* (<https://youtu.be/Q-Pf9-Qyc9c>). Answer the questions below.

1. Before watching this film, research where the Chagos Archipelago is located and draw its location on the map of the Indian Ocean below.



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2. Why are the scientists aboard the research vessel “Golden Shadow” excited about their expedition to the Chagos Archipelago?
3. What is the Global Reef Expedition, and what is its purpose?
4. How are coral reefs worldwide currently endangered, and what are some of the stressors they face?





WATCH IT! TROUBLE IN PARADISE

5. Describe the Chagos Archipelago and its importance as a study site for scientists.

6. What is Dr. Sam Purkis studying on the expedition, and what is the purpose of his research?

7. Describe the symbiotic relationship between corals and algae.

8. What is coral bleaching, and what causes it?

9. Why are scientists worried about bleaching?

10. What scientific questions is Sam trying to answer about tropical, low-lying islands?

11. Describe the challenges faced by scientists like Sam Purkis when studying and monitoring changes in low-lying tropical islands and explain how he solved these issues.





WATCH IT! TROUBLE IN PARADISE

12. Why is the coconut crab an important species to protect, especially in the Chagos Archipelago?
13. In 2010 the Chagos Archipelago was established as a no-take Marine Protected Area (MPA). Has the MPA been effective in preserving fish populations? If it has not, what may be the cause?
14. Explain the relationship between fish, seaweed, and corals. Why is the presence of little fish that graze the reef important for coral health?
15. What does the term “recruitment” mean in the context of coral reefs, and how does it relate to the reefs in the Chagos Archipelago?

INSTRUCTIONS: Time to engage your critical thinking skills! Answer the questions below. For some answers, it may be necessary to conduct additional research.

16. What message does the film convey about the potential impact of human actions on the future of coral reefs?
17. Explain the concept of a Marine Protected Area (MPA) and its purpose in conservation efforts.
18. What actions can people take to preserve coral reefs and marine ecosystems?
19. Reflect on the importance of understanding and preserving coral reefs for the overall health of marine ecosystems and the planet.

