Reef Chain Reaction

Trace how living things and human choices affect a coral reef.

5.T.T.2.b "Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text. (I)"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two details that show one living thing or action affects another, then write the same number beside each connected pair. Use your marks to explain how the details connect.

Parrotfish and Coral Reefs

1. Coral reefs are built by tiny animals called coral polyps. Each polyp makes a hard skeleton from minerals in seawater. Over many years, these skeletons pile up and form reefs. Reefs give fish places to hide and find food. In return, some fish help the reef stay healthy by affecting what grows on its surface each day.

2. Parrotfish use beaklike teeth to scrape algae from rocks and dead coral. Algae can spread quickly in warm, sunny water. When too much algae covers living coral, the coral gets less sunlight. Parrotfish eat the algae as they scrape. Their feeding gives coral more open space and sunlight, which helps polyps grow and build more reef.

3. Scientists noticed that reefs with fewer parrotfish often had more algae. In some places, people had caught many parrotfish for food, leaving fewer grazers. To protect reefs, managers set fishing rules that limit parrotfish catches. These rules can affect coral indirectly: more parrotfish can eat more algae, and less algae can give coral a better chance to grow.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does a parrotfish's feeding help coral polyps grow? Use two details from the passage.

2. What relationship does the text show between catching parrotfish and the amount of algae on a reef?

3. How did the scientists' observation connect to managers making fishing rules?

4. How do reefs and some fish help each other, according to the passage?

3 YOUR TURN

Your own words

Write a three-sentence cause-and-effect explanation tracing how catching many parrotfish could affect a fish that hides in a reef. Include at least three details from the passage.

ANSWER KEY

Reef Chain Reaction

GRADE 5 · 5.T.T.2.b

PART 1 · READ AND MARK

Underline two details that show one living thing or action affects another, then write the same number beside each connected pair. Use your marks to explain how the details connect. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does a parrotfish's feeding help coral polyps grow? Use two details from the passage.	**Parrotfish scrape and eat algae. With less algae covering coral, coral gets more open space and sunlight, helping polyps grow.**
2	What relationship does the text show between catching parrotfish and the amount of algae on a reef?	**Catching many parrotfish leaves fewer fish to eat algae, so the reef can have more algae.**
3	How did the scientists' observation connect to managers making fishing rules?	**Scientists observed that fewer parrotfish were linked to more algae, so managers limited catches to keep more parrotfish on reefs.**
4	How do reefs and some fish help each other, according to the passage?	**Reefs provide fish with hiding places and food, while some fish help reefs by affecting what grows on their surfaces.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

If people catch many parrotfish, fewer of them scrape algae from the reef. More algae can cover living coral, so coral may get less sunlight and grow less. If the reef grows poorly, fish may have fewer places to hide and find food.

Accept explanations that correctly trace the relationship from fewer parrotfish to more algae, less healthy coral, and fewer reef resources for fish. Student responses may use different wording if they include accurate passage details and clear cause-and-effect links.