

Reefs at Work

Connect related ideas to build knowledge about a coastal ecosystem.

5.DSR.D “Regularly engage in reading a series of conceptually related texts organized around topics of study to build knowledge and vocabulary (These texts should be at a range of complexity levels so students can read the texts independently...)”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline words or phrases that name an effect of an oyster reef. Number 1, 2, and 3 beside details that explain three different effects, so you can connect ideas across the topic.

Oyster Reefs and Coastal Bays

- ① In a coastal bay, oysters do more than provide food. Each oyster pulls water through its body and traps tiny floating particles. A reef, a group of oysters living together, can filter much more water than one oyster. Earlier in this topic, you may have learned that muddy water blocks sunlight from underwater plants. Clearer water can help those plants grow.
- ② Scientists studying the bay found that reef building also changes the seafloor. Empty shells pile up and make hard spaces where young fish and crabs can hide. This shelter is called habitat, the place where an organism lives. The shells also slow waves near shore. When waves move more slowly, they may carry away less sand, so the shore can erode, or wear away, less quickly.
- ③ Now researchers are testing places to rebuild damaged reefs. They use maps of water depth, currents, and the muddy or sandy bottom. Knowledge about light and underwater plants helps them ask a new question: Will a restored reef improve water clarity enough for plants to spread? Knowledge about waves helps them predict another result, whether the reef could protect a nearby shore.

2 ANSWER WITH EVIDENCE Use the passage

1 How does the text connect oyster filtering to the growth of underwater plants?

2 What does habitat mean in this passage, and what part of the reef creates habitat for young fish and crabs?

3 What cause-and-effect chain explains how an oyster reef may reduce erosion near shore?

4 Name the two earlier ideas researchers use in paragraph 3, and tell what each idea helps them investigate or predict.

3 YOUR TURN Your own words

Imagine the next related text is about seagrass beds, which are underwater plants with long, grasslike leaves. Write exactly three sentences that use one idea from this passage to predict one way an oyster reef may affect a seagrass bed, then include one question you would carry into the next text.

PART 1 • READ AND MARK

Underline words or phrases that name an effect of an oyster reef. Number 1, 2, and 3 beside details that explain three different effects, so you can connect ideas across the topic. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How does the text connect oyster filtering to the growth of underwater plants?	Oysters trap floating particles, which can make water clearer. Clearer water lets more sunlight reach underwater plants, helping them grow.
2	What does habitat mean in this passage, and what part of the reef creates habitat for young fish and crabs?	A habitat is the place where an organism lives. Piled-up empty shells create hard hiding spaces for young fish and crabs.
3	What cause-and-effect chain explains how an oyster reef may reduce erosion near shore?	Reef shells slow waves, slower waves may carry away less sand, and less sand loss means less erosion.
4	Name the two earlier ideas researchers use in paragraph 3, and tell what each idea helps them investigate or predict.	Knowledge about light and underwater plants helps researchers investigate whether clearer water will let plants spread. Knowledge about waves helps them predict whether a reef could protect a nearby shore.

PART 3 • YOUR TURN (SAMPLE ANSWER)

The reef may help a seagrass bed because oysters trap particles and make the water clearer. Clearer water could let more sunlight reach the seagrass leaves. I would ask whether the seagrass also helps keep sand from washing away.

Accept answers that accurately connect reef filtering, water clarity, sunlight, plant growth, habitat, waves, sand, and erosion. For the open task, accept any accurate three-sentence prediction that uses a passage idea and includes a relevant question about seagrass beds.