Lagoon Word Detectives

Use word parts and context clues to unlock meaning.

7.L.V.2 "Word Analysis: Use word knowledge and word analysis skills to determine the meaning of unfamiliar words and phrases and to communicate effectively for a variety of purposes."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline bioluminescence, defensive, and restrictions. Circle nearby words or phrases that help you infer each meaning, then write 1, 2, or 3 beside each clue to show which underlined word it explains.

Why Water Glows

1 On a summer night, visitors to a mangrove lagoon in Puerto Rico may see the water flash blue when a paddle moves through it. The glow comes from tiny organisms called dinoflagellates. These one-celled plankton produce light through a chemical reaction. During the day, the organisms are nearly invisible, but after dark their brief flashes can make each ripple look as if it holds sparks. The display is most noticeable in sheltered water, where waves do not scatter the light.

2 Scientists call this natural glow bioluminescence. The prefix bio- means "life," and luminescence refers to giving off light. Together, the word describes light made by living things. Dinoflagellates are not trying to decorate the lagoon. Many species flash when they are disturbed, perhaps because the sudden brightness startles small animals that might eat them. This defensive response can also attract larger predators, which may chase away the original threat. In this way, a tiny flash may help a tiny organism survive.

3 Because these lagoons are delicate ecosystems, protecting them requires careful choices. Bright shoreline lights can make the organisms' glow harder for people to see, while pollution can harm the water itself. Park guides may ask visitors to use quiet paddles and avoid swimming in certain areas. These restrictions are not meant to spoil a trip. Instead, they help preserve a habitat where living things depend on clean, calm water. Local rules can reduce damage during busy tourist seasons.

2 ANSWER WITH EVIDENCE

Use the passage

1. Use the prefix bio- and the nearby definition to explain what bioluminescence means.

2. What does defensive mean in the phrase “defensive response”? Which details support your inference?

3. What does restrictions mean in paragraph 3? Use two actions guides ask visitors to take as evidence.

4. Use context to determine the meaning of preserve in paragraph 3. Why do the restrictions help preserve the habitat?

3 YOUR TURN

Your own words

Write one science or nature sentence that uses an unfamiliar-looking word with a prefix, root, or suffix. Then write one sentence explaining how a word part and a context clue help a reader infer the word's meaning.

ANSWER KEY # Lagoon Word Detectives

GRADE 7 · 7.L.V.2

PART 1 · READ AND MARK

Underline bioluminescence, defensive, and restrictions. Circle nearby words or phrases that help you infer each meaning, then write 1, 2, or 3 beside each clue to show which underlined word it explains. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Use the prefix bio- and the nearby definition to explain what bioluminescence means.	**Bioluminescence is light produced by living things.**
2	What does defensive mean in the phrase "defensive response"? Which details support your inference?	**Defensive means meant to protect the organism. The flashes can startle animals that might eat it and attract larger predators that may chase away the threat.**
3	What does restrictions mean in paragraph 3? Use two actions guides ask visitors to take as evidence.	**Restrictions are rules or limits. Guides ask visitors to use quiet paddles and avoid swimming in certain areas.**
4	Use context to determine the meaning of preserve in paragraph 3. Why do the restrictions help preserve the habitat?	**Preserve means protect or keep safe. The restrictions help keep the water clean and calm for living things that depend on it.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The nocturnal moth rested under a leaf all day and searched for nectar after sunset. The root noct means night, and the phrase "after sunset" shows that nocturnal means active at night.

Accept equivalent meanings when students support them with accurate word-part analysis or context from the passage. For the open task, accept a plausible invented sentence and an explanation that uses both a word part and a context clue.