

# Kelp Forest Connections

Trace feeding and shelter relationships in an ocean ecosystem.

**4.7.c** "interaction of organisms in the ocean."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## 1 READ AND MARK \_\_\_\_\_ Read it twice

**YOUR JOB** Underline the words that show one organism eats another organism. Then number 1, 2, and 3 beside the changes that happen when sea otters disappear, to trace how the organisms are connected.

### Life in a Kelp Forest

- ① Near a rocky ocean shore, a kelp forest grows from the seafloor toward the sunlit water. Kelp is an alga that makes its own food using sunlight. Its long blades provide food and hiding places for many animals. Purple sea urchins crawl over rocks and eat kelp blades. Small fish shelter among the swaying blades, where larger animals may have trouble finding them.
- ② Sea otters are predators in this forest. They dive to catch and eat sea urchins. By eating urchins, otters can keep the urchin population from growing too large. This leaves more kelp blades to grow. A healthy kelp forest can then offer more food and shelter to animals such as snails and small fish. Each change can affect several organisms.
- ③ Sometimes many sea otters disappear from an area. With fewer otters hunting them, more sea urchins may survive. The larger group of urchins can eat so much kelp that the forest shrinks. Snails and small fish then have less kelp for food or shelter. This shows how a predator, its prey, and the kelp forest are connected in an ocean ecosystem.

## 2 ANSWER WITH EVIDENCE \_\_\_\_\_ Use the passage

1 What do sea urchins eat? What does kelp provide for small fish?

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2 How do sea otters help keep sea urchin numbers from growing too large?

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3 Explain what can happen to the kelp forest when many sea otters disappear.

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4 How can a shrinking kelp forest affect snails and small fish?

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## 3 YOUR TURN \_\_\_\_\_ Your own words

Imagine that sea urchins become fewer in a kelp forest. Write three sentences predicting what could happen to the kelp and to small fish or snails. Use the word because in at least one sentence.

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**PART 1 • READ AND MARK**

Underline the words that show one organism eats another organism. Then number 1, 2, and 3 beside the changes that happen when sea otters disappear, to trace how the organisms are connected. Accept any marking that follows this job and points at the right text.

**PART 2 • ANSWERS**

| # | QUESTION                                                                   | ANSWER                                                                                |
|---|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1 | What do sea urchins eat? What does kelp provide for small fish?            | <b>Sea urchins eat kelp blades. Kelp provides shelter for small fish.</b>             |
| 2 | How do sea otters help keep sea urchin numbers from growing too large?     | <b>Sea otters catch and eat sea urchins.</b>                                          |
| 3 | Explain what can happen to the kelp forest when many sea otters disappear. | <b>More sea urchins may survive and eat more kelp, so the kelp forest can shrink.</b> |
| 4 | How can a shrinking kelp forest affect snails and small fish?              | <b>Snails and small fish have less kelp for food or shelter.</b>                      |

**PART 3 • YOUR TURN (SAMPLE ANSWER)**

Kelp blades could grow because fewer sea urchins would eat them. More kelp could give small fish more shelter. The kelp forest might become larger.

Accept predictions that correctly connect fewer urchins with more kelp and connect more kelp with added food or shelter for snails or small fish. Students may use cautious words such as could or might.