



The Sea Otter —

Keystone Species of the Kelp Forest

Reading Worksheet — Level F | tahricteaches.com

The sea otter is one of the ocean's most remarkable mammals, found along the coasts of the North Pacific from California to Alaska and across to Russia and Japan. Unlike most marine mammals, sea otters do not rely on a thick layer of blubber to stay warm. Instead, they depend entirely on their dense **fur** — the thickest of any animal on Earth, with up to one million hairs per square inch — to survive in icy coastal waters.

To stay warm, a sea otter constantly grooms its fur, working air into the strands to **trap** tiny **bubbles** against its skin. This layer of trapped air acts like a wetsuit, keeping cold water away from the otter's body. Sea otters also use their buoyant fur to **float** effortlessly on their backs, where they eat, sleep, and even give birth, almost never coming onto dry land.

When it is time to eat, a sea otter will **dive** beneath the surface, sometimes to depths of over 60 meters, to **hunt** for sea urchins, crabs, clams, and other shellfish along the ocean floor. Remarkably, sea otters are one of the few animals known to use tools: they often carry a flat rock to the surface and use it to crack open hard shells while floating on their backs.

Despite their resourcefulness, sea otters face serious **threats** to their survival. Oil spills are especially dangerous, since oil destroys the insulating properties of their fur, making it nearly impossible for an otter to stay warm or **survive** in cold water. Hunting for the fur trade once pushed sea otter numbers to the edge of extinction, reducing a global **population** of hundreds of thousands to only a few thousand animals by the early 1900s.

Thanks to decades of conservation efforts and legal protection, sea otter populations have slowly begun to recover in parts of their range, though they remain vulnerable to **pollution**, fishing nets, and changing ocean conditions. Scientists consider sea otters a keystone species, since their appetite for sea urchins helps protect entire kelp forest ecosystems. Protecting sea otters means protecting one of the ocean's most important habitats.

A. Vocabulary

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|----------------|--|
| 1. fur ____ | a. harmful substances that damage air, water, or land |
| 2. trap ____ | b. to continue to live, especially after a difficult event |
| 3. bubble ____ | c. to chase and catch animals for food |

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| 4. float ____ | d. the thick hair covering the body of an animal |
| 5. dive ____ | e. to catch and hold something so it cannot escape |
| 6. hunt ____ | f. a small ball of air or gas surrounded by liquid |
| 7. threat ____ | g. to rest on top of water without sinking |
| 8. survive ____ | h. to jump or go down into water, usually headfirst |
| 9. population ____ | i. something that may cause harm or danger |
| 10. pollution ____ | j. the total number of a kind of animal living in an area |



B. True or False

1. Sea otters rely mainly on blubber to stay warm. ____
2. A sea otter's fur is the thickest of any animal on Earth. ____
3. Sea otters trap air bubbles in their fur to stay warm. ____
4. Sea otters almost never come onto dry land. ____
5. Sea otters cannot dive very deep to find food. ____
6. Sea otters sometimes use rocks as tools to crack open shells. ____
7. Oil spills are not dangerous to sea otters. ____
8. Hunting for the fur trade once nearly wiped out sea otters. ____
9. Sea otters help protect kelp forest ecosystems. ____



C. Fill in the Blanks

Word Bank: survive, population, pollution, hunt, dive

1. To find food, a sea otter will _____ beneath the surface, sometimes more than 60 meters deep.
2. Sea otters _____ for sea urchins, crabs, and clams along the ocean floor.
3. Oil spills make it nearly impossible for an otter to _____ in cold water.
4. Hunting for the fur trade once reduced the global sea otter _____ to just a few thousand animals.
5. Today, sea otters still face threats from _____, fishing nets, and changing ocean conditions.

D. Comprehension Questions

1. Why do sea otters depend on their fur instead of blubber to stay warm?
2. Explain how trapped air bubbles help a sea otter survive in cold water.
3. Describe how sea otters find and eat their food, including their use of tools.
4. What historical event nearly caused sea otters to go extinct, and what caused it?
5. Why are sea otters considered a 'keystone species' for kelp forest ecosystems?

E. Discussion Questions

1. Should governments spend money protecting species like the sea otter? Why or why not?
2. What other animals are known to use tools, and how does tool use show intelligence?
3. What steps could coastal communities take to reduce pollution and protect ocean habitats?





Answer Key

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A. Vocabulary: 1-d, 2-e, 3-f, 4-g, 5-h, 6-c, 7-i, 8-b, 9-j, 10-a

B. True/False: 1-F, 2-T, 3-T, 4-T, 5-F, 6-T, 7-F, 8-T, 9-T

C. Fill Blanks: 1-dive, 2-hunt, 3-survive, 4-population, 5-pollution

D. Comprehension:

1. Unlike other marine mammals, sea otters lack a thick layer of blubber, so they depend entirely on their dense fur — the thickest of any animal — to stay warm in icy coastal waters.
2. By grooming constantly, otters work air into their fur to trap bubbles against their skin, creating an insulating layer that keeps cold water away from their body, almost like a wetsuit.
3. Sea otters dive beneath the surface, sometimes over 60 meters deep, to hunt for sea urchins, crabs, and clams, and they often carry a flat rock to the surface to use as a tool for cracking open hard shells.
4. Hunting for the fur trade reduced the global sea otter population from hundreds of thousands to only a few thousand animals by the early 1900s, nearly driving the species to extinction.
5. Sea otters are a keystone species because their appetite for sea urchins keeps urchin populations in check, which protects kelp forests that provide habitat for countless other ocean species.