

## Sea Otters – Furry Mammals of the Sea

Bobbing like toys in the bathtub off California's central coastline are the California sea otters. Completely dark brown or with white patches of fur on their bodies and particularly on their heads, these marine animals look peaceful lying on their backs purposefully buoyed and held in place in the water in the canopy of kelp that rises from the ocean floor. Otters sometimes form rafts, or groups of otters, or can be seen alone resting until it is time to eat or groom.

Otters forage often for food, as they must eat about a quarter of their own body weight each day. If this were true for humans, a student weighing about 100 pounds would have to eat 25 pounds of food daily! Sea otters eat ocean invertebrates such as clams, sea urchins, mussels, crabs, abalone and other crunchy food. But sometime since they have to eat so much every day, they munch on poor food choices such as sand crabs or sand dollars that have little or no nutritional value. Better choices are large clams and abalone, when available, because they have a lot more meat. Some otters do have food preferences and some have tool preferences as well.

Otters are one of the few animals that use tools for eating their food. They usually use a rock on their chest to crack open an invertebrate to eat. One otter was seen using a bottle, as did her young pup following his mother's lead.

Sea otters are mammals and so have fur, are warm-blooded, give live birth, nurse their young with milk, and breathe oxygen. They don't have blubber like other sea mammals such as whales and must keep their fur healthy and themselves warm in order to survive. Needing a healthy internal body temperature of 100 degrees Fahrenheit, these otters need help to keep warm. Their amazing fur maintains an extraordinary thickness – approximately 1,000,000 hairs per square inch – in comparison with dogs that have 1,000 to 60,000 hairs per square inch and humans that have about 100,000 hairs per square inch. This thick insulation must be groomed often as they are subject to hypothermia, a serious condition of dangerously low body temperature. Humans can also develop such a condition.

## Sea Otters – Furry Mammals of the Sea (Cont'd)

In order to keep their fur groomed they are equipped with a unique system of insulation, a special protection or layer protecting them from the coldness. There exists within their fur tiny air bubbles that not only provide a buoying effect when they are in the water, but also act as a layer of air between the skin and the fur so that otters when well-groomed, are warm. When grooming, they are seen frolicking about spinning, moving all around, somersaulting, and doing acrobatics that look like playing but are actually helping them groom themselves. Otters have great flexibility in order to groom every part of their body.

Another interesting behavior of sea otters can be observed while they are resting in the kelp. While floating on their backs, they often have both paws and hind flippers sticking out of the water. This is another way for the otters to maintain their body temperature. Since their front paws and hind flippers have little or no fur on them, they stick them out of the water on a sunny day to help keep them warm.

Sea otters do swim on their stomachs sometimes in order to travel quickly and when they dive down in the ocean to pry loose or to seek invertebrates for a meal. But in comparison with other sea mammals, sea otters swim slowly – about 2-3 miles per hour - using their flattened tails for speed. Reminiscent of beavers, sea otters actually belong to the mustelid family that includes freshwater otters, weasels, minks, skunks, and badgers.

California sea otters live in a narrow band of territory along the California coastline – close to the shore and not in the deep waters. They spend most of their time in the ocean, hauling out on land only infrequently. Trying to survive in the small zone of the ocean, sometimes being tossed about by storms, needing to eat one quarter of their body weight daily, escaping predatory animals such as the great white shark, grooming constantly to keep their body heat, and competing for food with other animals, these cute, furry creatures lead a precarious, dangerously uncertain, life. Therefore, when you see pictures of them resting in the kelp, now you understand why they deserve it!

Name \_\_\_\_\_

Date \_\_\_\_\_

## Sea Otters – Furry Mammals of the Sea Questions

Use the article and your dictionary if needed to find the definition of the following words:

mammals

sea otter raft

invertebrates

mustelids

hypothermia

haul out

kelp

buoyed

canopy

insulation

predatory

forage

Name \_\_\_\_\_

Date \_\_\_\_\_

### **Sea Otters – Furry Mammals of the Sea Questions (Cont'd)**

Answer the following questions in complete sentences.

1. What are the characteristics of mammals?
2. How does a sea otter keep warm in the ocean?
3. What do otters eat? How much?
4. What tools do otters use?
5. In what part of the ocean do sea otters live?
6. Why do they rest in kelp?
7. What animal sometimes attacks sea otters?

Name \_\_\_\_\_

Date \_\_\_\_\_

## Sea Otters – Furry Mammals of the Sea Answers

mammals – animals that have fur or hair, give live birth, nurse their young with milk, breathe oxygen, and are warm-blooded

invertebrates – animals without backbones

hypothermia – dangerously low body temperature

kelp – seaweed

canopy – upper most layer

predatory – animals that survive by preying on other animals

sea otter raft – a group of otters buoyed together in the ocean

mustelids – a group of mammals including river otters, weasels, badgers, and skunks

haul out – to put out on land

buoyed – helping to make something float

insulation – a layer helping to keep something from being cold or hot

forage – searching for something to eat

Name \_\_\_\_\_

Date \_\_\_\_\_

## Sea Otters – Furry Mammals of the Sea Answers (Cont'd)

1. Mammals have fur or hair, give live birth, nurse their young with milk, are warm-blooded, and breathe oxygen.
2. Sea otters keep warm with dense fur – approximately 1,000,000 hairs per square inch and a layer of insulation of air bubbles. The fur needs to be groomed constantly.
3. Sea otters eat mainly invertebrates such as clams, crabs, sea urchins, mussels, and abalone. They will eat other crunchy invertebrates if no other food source is available.
4. Sea otters generally use rocks to crack open invertebrates, but they have been observed using other tools that are available including a bottle.
5. California sea otters live in a narrow band between the coastline and the deeper waters of the ocean.
6. The kelp acts as a buoy.
7. Great white sharks have been known to attack sea otters.