



## **Reading Handout: All About Pinnipeds**

### **What is a marine mammal?**

The colossal blue whale, active sea otter, barking sea lion, plant-eating manatee and even the polar bear are all marine mammals. They share a number of characteristics with their land-dwelling relatives: they are warm-blooded, give live birth, nurse their young with milk, have hair at some time in their lives, and breathe air.

But marine mammals differ from land mammals in that their livelihood depends upon the ocean. They have bodies that are particularly well suited to life at sea. Ears, limbs, and body shape have all been streamlined to reduce drag as these animals swim through the ocean. Except for sea otters, marine mammals have a thick layer of fat called blubber under their skin. This aids buoyancy, provides insulation and serves as a reserve energy source for most marine mammals.

### **The Pinnipeds**

Seals, sea lions and walruses are carnivorous marine mammals that belong to the suborder Pinnipedia (*PINN-ih-PED-ee-ah*). The word pinniped means “feather-footed” or “fin-footed.” There are three families in this suborder:

- 1-The family Phocidae (*FOE-sih-day*) includes the “true” or “earless” seals. The true seals have tiny ear holes but no external ear flaps.
- 2-The family Otariidae (*O-TAR-ih-day*) are known as the “eared” seals and include sea lions and fur seals.
- 3-The family Odobenidae (*O-doe-BENN-ih-day*) includes the walruses and are the largest pinnipeds. Walruses are neither a seal nor sea lion, but share characteristics with each.

### **What do seals and sea lions have in common?**

They are both mammals, have live young, produce milk, have hair or fur on their bodies, are air breathing, and are “endothermic” or able to control their body temperature. Both types of animals are also semi-aquatic, which means that they spend part of their lives on land, and part of their lives in the ocean. They also have similar diets and they use their specialized whiskers to feel the movement of their prey in the water.

The major distinction between the two is that seals lack external ear flaps (called pinnae). Sea lions can also “walk” on land by standing up on their front flippers and by rotating their back flippers forward, while seals cannot.

There are three common pinnipeds in southern California: The Harbor Seal, Elephant Seal, and the California Sea Lion. No walruses are found this far south.

## **Harbor Seal**

Harbor seals are “true” or “earless” seals (Family Phocidae). They can be silvery gray with dark spots or black with white spots or rings. Their bodies are torpedo-shaped, which helps them to move quickly and easily through the water. On land they look a lot like giant sausages. Unlike sea lions, seals don’t have ear flaps. Instead they just have a tiny ear opening. A seal’s flippers are not long enough to allow them to “walk” on land like a sea lion. Instead they bounce along on their bellies.

### **How big are they?**

Males can grow to be about 6 feet long and weigh 370 pounds. Females are only slightly smaller.

### **Where do they live?**

Harbor seals live along the Pacific coast, from Alaska to Mexico. There are also harbor seals that live on the Atlantic coast. They will often haul out onto rocks or sandy beaches to rest, molt (shed their fur) or give birth to their pups.

### **What do they eat?**

They eat fish, squid, octopuses, mussels and crabs.

### **Did you know?**

Harbor seals don’t bark like sea lions do. Instead they make quiet grunts, growls, snorts and hisses. Most harbor seals are darker on their backs than they are on their bellies. Like most marine mammals, harbor seals have thick slimy tears to protect their eyes while they are swimming. These tears are like built-in goggles.

## **Elephant Seal**

Elephant seals are “true” or “earless” seals (Family Phocidae). They have large sausage-shaped bodies. When they bounce along the sand on their bellies, their blubbery bodies jiggle like *Jell-O*. Adults are tan or brown. Their fur is short and bristly. Males grow the large trunk-like noses when they are three to five years old.

### **How big are they?**

Northern elephant seal males can grow to be 14 feet long and weigh up to 4,400 pounds. Northern elephant seal females can grow to be 10 feet long and weigh about 800 pounds. Male Southern elephant seals are the largest of all the pinnipeds (seals, sea lions and walruses) and can grow to over 16 feet long and weigh up to 11,000 pounds.

### **Where do they live?**

Northern elephant seals can be found from the Aleutian Islands in Alaska to Baja California, Mexico. All elephant seals come to shore to molt (shed their fur) and rest twice a year. They also spend time on land during the breeding season.

**What do they eat?**

They eat a variety of fish, squid and slow-moving sharks, skates and rays.

**Did you know?**

These seals can dive to depths of 5,000 feet or more and hold their breath for up to two hours. Males spend about 250 days a year out in the ocean, without ever coming to shore. During this time they are known to travel at least 13,000 miles. Females spend about 300 days out to sea during the year and travel over 11,000 miles.

**California Sea Lion**

California sea lions are “eared” seals (Family Otariidae). They are usually a milk-chocolate brown. Their bodies are torpedo-shaped, which helps them to move quickly and easily through the water. Sea lions are eared seals and have small ear flaps on either side of their heads. Male sea lions have a “bump” on the top of their heads called a sagittal crest. This makes them look bigger and stronger when facing other males.

**How big are they?**

Males can grow to be 8 feet long and weigh 850 pounds. Females can grow to be 7 feet long and weigh about 240 pounds.

**Where do they live?**

California sea lions live along coasts in the North Pacific, from Alaska to California and Mexico. Sea lions come to shore to rest, molt (shed their fur) and have their pups.

**What do they eat?**

They eat a variety of fishes, squid and even octopuses.

**Did you know?**

Sea lions can “walk” on land by standing up on their front flippers and rotating their back flippers forward. Sea lions bark to communicate with other sea lions. Scientists believe that seals and sea lions can echolocate to find their food just like toothed whales (dolphins, porpoises, etc.). When a seal or sea lion is relaxed, its nostrils are closed. They have muscles around their nose used to push their nostrils open when exhaling and taking a breath.

**Fun Fact!**

The relative ancestry between all pinnipeds is still uncertain, but they all are thought to be descendants of bear-like animals.