

Discovery Tour



Dolphin

Dolphins are mammals, and part of the same family as whales. They are expert swimmers and predators who eat other sea creatures like fish, squid, and shrimp. Long ago in the Jurassic time period, a sea-going reptile, or “ichthyosaur,” named *Ophthalmosaurus* looked and acted a lot like dolphins do today. Growing up to 18 feet long, *Ophthalmosaurus* used its streamlined body to swim fast and dive deep in search of its prey, which probably included fish and squid. Like dolphins, *Ophthalmosaurus* gave birth to its young in the water, and probably took care of its babies after they were born. Can you find any other marine animals that have bodies shaped like dolphins and *Ophthalmosaurus*?



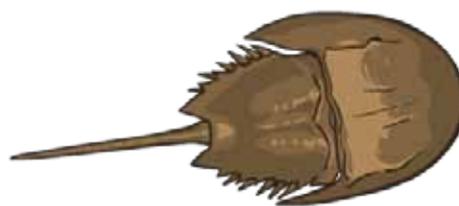
Hermit Crab

Can you find the hermit crab? Most crabs have hard shells that they use to protect themselves from predators. But hermit crabs are different. They have soft belly regions with no hard covering. Instead, these sea creatures find protection by borrowing the empty shells of sea snails. The crabs pick shells that are big enough to hide their entire body. As the animal grows, it leaves the old shell behind and finds a newer, bigger one. Like other crabs, hermit crabs are omnivores—they eat other animals as well as algae. They’ve been around since the Cretaceous, the final period of the Mesozoic Era. So that means hermit crabs and dinosaurs lived side by side! Can you find any other animals at the aquarium today that may have been around since the Age of the Dinosaurs?



Horseshoe Crab

Horseshoe crabs are strange-looking animals with two large eyes, 12 legs, and a hard outer shell. They’ve lived on Earth for about 300 million years, since long before the first dinosaurs. Horseshoe crabs belong to a group of animals called arthropods. Most arthropods have a hard outer skeleton, a body with several parts, or segments, and limbs with joints. Arthropods living today include insects, spiders, crabs, lobster, and shrimp. How many different arthropods can you find?



Pelican

Pelicans are expert fish-catchers! These amazing birds fly around looking for a fish; when they spot one, they dive into the water and use their long beaks to catch it. Way back in the Age of Dinosaurs, flying reptiles called pteranodons probably did the very same thing. Pteranodons, like Tiny, Don, and Shiny, were also great fliers with long beaks. Paleontologists think that pteranodons dove into the water and used those beaks to catch fish, just like pelicans do today! Beaks are clues that can tell you what kind of food an animal eats. So when you see other birds today, check out the shape and size of their beaks, and see if you can guess what they like to eat!



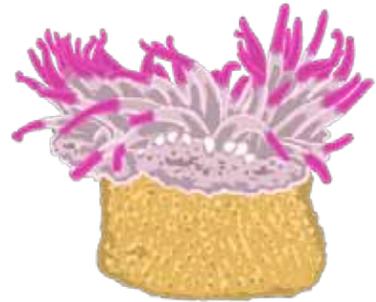
Penguin

Most birds use their feathered wings to fly through the air. But penguins are different. They can't lift themselves up into the sky. Instead, penguins use their wings to fly underwater! Yup, penguins are expert swimmers that zoom through the ocean making quick turns with those feathered wings! Millions of years ago, in the Cretaceous time period, another bird named Hesperornis lived much the same way as penguins do today. Unable to fly in the air, this ancient bird was also a fish-eater that used its feathers for staying warm rather than flying through the clouds! But unlike penguins, Hesperornis had tiny arms, making use of its strong legs and big feet to propel itself through the water. Have a look at some of the other sea creatures around here. How do they move through the water?



Sea Anemone

Sea anemones are cool sea creatures. Although they look like plants, they're actually animals—and predators too! They attach themselves to the rocky ocean bottom near the seashore. When a fish or shrimp swims by and touches one of those sticky arms, it's poisoned and then eaten by the anemone! Like their close relatives, the corals and jellyfish, anemones have been around for millions of years, since long before the Age of Dinosaurs. Dinosaurs that lived near the ocean would have seen anemones in the tide pools, just like you can! So the next time you're at the beach, remember that many sea creatures you see there have lived on Earth for millions of years! What do you think might be the oldest kind of creature living at the aquarium?



Sea Lion

Sea lions are mammals, like us, but they make their living in the ocean. So instead of legs, these hefty carnivores have strong flippers that make them excellent swimmers. They need to be able to swim fast to catch plenty of fish and squid! Sea lions can dive hundreds of feet below the surface in search of food, but they always need to come back up for air. Way back in the Jurassic time period, a giant marine reptile named Plesiosaurus also hunted fish and squid, and it also used powerful flippers to move quickly through the water. Plesiosaurus was an air-breather too. So even though it could dive deep to hunt its food, this huge reptile always returned to the surface to breathe. Can you find any other animals here that live in the water but come back up to the surface for air?



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Sea Otter

Sea otters are amazing creatures! These ocean-living mammals eat fish, sea urchins, crabs, and other animals, and they have thick fur to keep them warm in the frigid sea. And sea otters are one of the few animals to use tools! Lying on their backs at the water's surface, they crack open hard-shelled creatures by hitting them against a rock placed on their chest. Do you know what kind of animal uses tools the most? Humans, like you and me! I'm a paleontologist, and we use lots of tools, from jackhammers and shovels to dental picks and brushes. Sometimes we even use helicopters! What kinds of tools have you used today?



Sea Star

Sea stars, or starfish, are marine animals that live mostly along coastlines. Sea stars usually have five arms, and if they lose an arm, they can grow a replacement! Even though they don't have a brain, sea stars are excellent predators, with a strange hunting style. Believe it or not, these amazing creatures can pry open a clam or mussel and push their stomach inside the shell, where they then eat the soft part of the animal. Sea stars have used this technique for a long time, since the Age of Dinosaurs! One of the best things about starfish is that they're easy to observe. They stay in the same place sometimes for over a week. That takes patience! See if you can observe any starfish moving today.



Sea Turtle

Sea turtles are reptiles that live in the ocean. Of all the sea turtles living today, the biggest is the Leatherback, which grows to about 6 feet long. But back in the Cretaceous time period, a sea turtle named Archelon was more than twice that size, about 13 feet long and 16 feet wide! All sea turtles are air-breathers that must lay their eggs on land. The females dig holes in the sand, lay dozens of eggs each, and then return to the sea. When the young hatch from the eggs, they must get to the ocean quickly because many predators want to eat them. If young turtles manage to survive those first few years, they can live a long time, sometimes reaching the ripe old age of 100! How old are the sea turtles at your aquarium? Ask an aquarium guide if they know the age.



Shark

Sharks are a group of carnivorous fishes that have been around for hundreds of millions of years, since long before the Age of Dinosaurs. Today we think of the Great White as the king of sharks, but during the Cretaceous Period, near the end of the Age of Dinosaurs, a shark named Cretoxyrhina was one of the giants of the seas, reaching lengths of 25 feet! All sharks share an amazing feature in common. They don't have any bones! Instead, their skeletons are made of cartilage, a flexible tissue found mostly around the joints of back-boned animals, including you! Feel the tip of your nose. Does the tip move when you wiggle it? That's cartilage you're feeling!

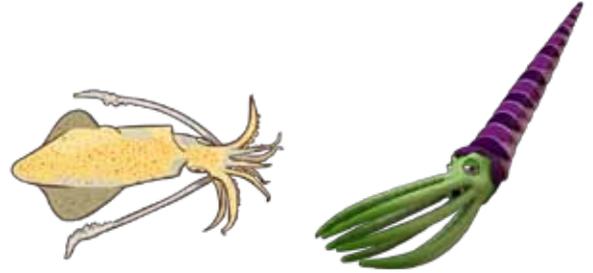


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Squid

Squid are amazing sea creatures. Like us, they have two eyes, a mouth, and a body. But they also have three hearts, eight arms, and move around using jet propulsion! Yup, squid actually swim backwards by pulling water into their bodies and then forcing it out in a fast, strong jet. Millions of years ago, in the Triassic Period, a relative of squids called Michelinoceras lived in the oceans. Like modern squids, Michelinoceras had eight arms, swam using jet propulsion, and was a great predator. But Michelinoceras had a hard, protective shell that covered most of its body. Take a look around and see how many animals you can find that protect themselves from predators with some sort of hard covering.



Whale

Whales are mammals, just like you, and they're the biggest animals alive today. Long ago in the Age of Dinosaurs, there were no whales, or any big mammals. Back then, giant reptiles, like Shonisaurus, were by far the largest creatures on Earth. Shonisaurus belongs to a group of marine reptiles called ichthyosaurs. Like whales, ichthyosaurs were air-breathers. So, even though they could spend a long time underwater, they always returned to the surface to take a breath. Can you think of any other animals that live in the water but have to come up to the surface to breath?



Walrus

Check out those super-long walrus tusks! Just like the tusks of elephants, walrus tusks are actually teeth that grow very long. But those teeth aren't used for eating. Instead, walruses use their tusks for showing off and fighting with other walruses. Sound familiar? Lots of animals have similar kinds of features. Triceratops was a huge plant-eating dinosaur that probably used its horns for showing off and wrestling with other Triceratops. Strange features like tusks and horns often help animals compete with each other to see who's the biggest and strongest. How many other kinds of animals can you find today that have some special feature used for showing off, or for fighting?

