

Whale

One strange fact about whales is that they are the closest living relatives of hippopotamus. Both animals are now in the super-order Cetartiodactyla. Scientists use DNA and physical characteristics to figure out **ancestry**, or past family relatives, of animals alive today.

In scientific classifications, whales and dolphins are both in the order cetacea. Cetaceans evolved from a land- and water-loving, deer-like animal called the Indohyus, which lived 54 million years ago. Cetaceans stayed in the oceans 49 to 44 million years ago and became adapted to living in marine environments. They became more streamlined to glide through the water, their nose holes moved to the top of their heads, they lost their back legs, their front legs became flippers, and they grew flukes on their tails.

There are two different kinds of whales, those with teeth, and those that filter plankton through a part in their upper jaw called **baleen**. It is made of keratin, like our fingernails. Dolphins, porpoises, sperm whale, killer whale, pilot whale, and beluga whales are all toothed whales in the suborder odontoceti. The term “whale” usually refers to cetacean animals with baleen feeding filters.

The largest whales are the blue whales, which grow

up to 98 feet in length and 180 tonnes (roughly 396,832 pounds) in weight. They are the largest animal known to ever have existed, even larger than dinosaurs! The largest known dinosaur was only 23 to 37 tonnes.

Whales are mammals, so they breathe air, are warm-blooded, nurse their young, and have body hair. They have a layer of fat under their skin called blubber that helps keep them warm in the cold ocean water.

They breathe through their blowholes by shooting air out of the blowholes and then inhaling into their lungs. Most dives underwater are only five to eight minutes long, but the blue whale can hold its breathe for up to 40 minutes, and deep divers like bottlenose dolphins and sperm whales can stay under for 90 to 120 minutes. Whales are **conscious breathers**, meaning they have to think about breathing, so they don't ever sleep. If they did, they would drown. Whales talk to each other in what we call whale song. Some captive whales have even tried to mimic human speech.

Whales are estimated to live up to 77 years old, but one whale was found with a fragment of a harpoon from the 19th century in it which might make it 115 to 130 years old. Some dating techniques say another was 211 years old, but the science of the technique is not widely accepted. What do you think?

1. **New terms:** See how these three terms are used in the text, and write a definition next to each one.

ancestry past family relatives

baleen the keratin part of a whale's jaw that filters food

conscious breather an animal that controls its breath by thinking about it

2. What present-day animal is the whale related to? the hippopotamus

3. Blue whales are bigger than any dinosaur was.

True or False?

4. Whale breathe through their blowholes.

True or False?