

OCEAN FACTS

Clever creatures

Dolphins belong to a group of whales called toothed whales. They do not eat plankton but hunt squid and fish.

Dolphins are very intelligent creatures. They communicate with each other using different sounds arranged like words in a sentence.

Some dolphins are very rare. The **shepherd's beaked whale** is a recent discovery.

Dolphins are social animals. They live in family groups. If one dolphin is sick or injured, others will come to its rescue.

Dolphins are mammals. They breathe air and feed their babies with milk.

The **bouto** is a dolphin that lives in the Amazon River.

The **bottle-nosed dolphin** lives near coasts where it feeds on fish and prawns.

A **narwhal's** front tooth grows to form a tusk up to 2.5 metres long.

The largest whale with teeth is the **sperm whale** which reaches 20 metres in length. Sperm whales hunt squid and fish in deep waters, diving down 500 metres to find food.



Deadly creatures

Sharks and rays are found in all seas. Their skeletons are made of soft cartilage instead of hard bone.

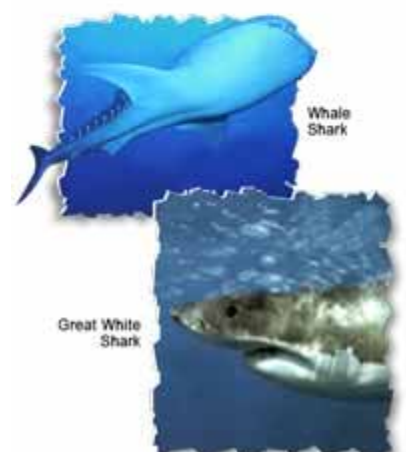
Sharks hunt other sea creatures, using their sharp teeth and strong muscles to overpower their prey.

The largest shark is the 18-metre long **whale shark**. Unlike most sharks, it does not hunt other animals. Instead, it feeds on plankton.

The harmless whale shark lives in warm waters.

The largest hunting shark is the **great white shark**. It may grow to 7 metres long and usually feeds on larger fish and other animals.

The great white shark sometimes attacks people.



Receptors on the head of the **hammerhead** shark help it to detect its prey. It swings its head from side to side as it swims.

The **manta** is a giant ray. Its wings can measure 7 metres across. Sometimes it jumps out of the sea, creating a large splash when it falls back.

The **thresher shark** uses its long tail to beat the water when hunting. Experts think that this may stun fish, making them easy to catch.

Large groups, called mobs, of **blue sharks** are often found in tropical oceans. As many as a thousand blue sharks may form one mob.

The **stingray** has a large, poisonous spine on top of its tail, which it uses to fight off attackers.



Flying creatures

Many birds live at sea feeding on fish or other sea creatures.

Most seabirds nest on islands, where their eggs and young are safe from attack.

Seabirds often make long journeys between their nesting sites and feeding grounds. Arctic terns travel between the Arctic and the Antarctic.

Herring gulls are very common. They feed on fish and shrimps, but will also fly inland to raid rubbish dumps and picnic areas.

The **great skua** is a large bird, over 50 cm long. It hunts other seabirds, as well as fish.

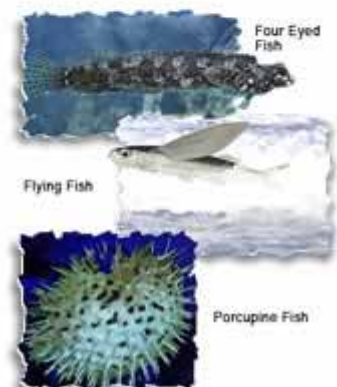
A **skimmer** finds fish by flying just above the surface of the sea, with its bill in the water. As soon as the bill strikes a fish, it is snapped up.

The largest seabird is the **wandering albatross**, which has wings 3.5 metres across. Long ago, sailors believed it was bad luck to kill an albatross.

Steamer ducks live around the coast. They cannot fly, but swim along the shore looking for shellfish, shrimps and crabs to eat.

Puffins nest on cliffs and rocky islands. The females lay just one egg each year.

Gannet fly around searching for fish in the water. They may dive from a height of 30 metres to catch their prey.



Strange creatures

There are many fish in the oceans that look strange to us, but they are actually very well adapted to their surroundings.

Thousands of fish have evolved to live in different places – on coral reefs, in icy waters, near the surface of the sea, or on the seabed.

The **four-eyed fish** swims at the surface with each of its two eyes half in and half out of the water. The fish looks for insect prey on the surface, while watching for danger under the sea.

Flying fish are able to leap out of the water and glide through the air, using their fins as wings. It is thought that the fish 'fly' in this way to escape hunters.

When danger threatens, the **porcupine fish** gulps huge amounts of water and swells up to four times its usual size. The stiff spines stick out to make the fish look like a spiky football.

The **swordfish** has a bony upper jaw, which can be over 1 metre long and shaped like a sword. Nobody knows what the sword is used for.

The **sailfish** is the fastest fish in the sea. It can reach speeds of 110 kilometres per hour.

The **coelacanth** lives in the deep waters of the Indian Ocean. Before one was caught in 1938, the coelacanth was known only from fossils dating back 60 million years. Scientists thought it had been extinct ever since.

The **sea dragon** is only 40 cm long. It swims near seaweed where it can hide easily.

Prehistoric creatures

Millions of years ago, strange creatures lived in the oceans.

Scientists know about these creatures because they have found fossils of their bones buried in ancient rocks.

Many of these giant sea animals lived before or at the same time as the dinosaurs.

Archelon was the largest turtle. It was nearly 4 metres long and lived about 70 million years ago.

Kronosaurus had the largest head of any hunter in the sea. It was almost 3 metres long and was armed with lots of sharp teeth.

Cryptocleidus had strong flippers to propel it through the water. It caught small fish in its long jaws armed with dagger like teeth.

Ichthyosaurus looked like a dolphin or large fish, but was really a reptile. Ichthyosaurus could not come on shore to lay eggs like most reptiles, so it gave birth to live young, as does a mammal.

Nothosaurus was one of the first reptiles to live in the sea. It lived in the waters that covered what is now Europe about 210 million years ago.

Tanystropheus lived on the coast. It dipped its long neck into the water and snapped up fish and shrimps.

Placodus lived about 200 million years ago in Europe. It ate shellfish and used its webbed feet to help it swim.



Metriorhynchus was a 3-metre long crocodile, which lived in the ocean 140 million years ago. It was so adapted to life in the sea that it even had a fish-like tail.

Mysterious creatures

Because the oceans are so vast there are many areas which have never been properly explored.

Sailors who have travelled off the main shipping routes have reported seeing strange and curious creatures. As nobody has ever caught one of these mysterious creatures, scientists do not believe they really exist.

The type of **sea monster** most often seen has a small head and a long neck held upright. Witnesses say they see a large body under the water with four large fins which move the creature slowly along. This sea monster looks like a prehistoric sea animal, **elasmosaurus**, which was about 10 metres long.

The 4-metre long **megamouth shark** was not discovered until the 1980s. Nobody knew about it until one was accidentally caught in a net. This proved that large sea creatures can exist without anybody knowing about them.

Long ago, sailors believed in **mermaids**. Today, scientists know that what they probably saw were seal-like creatures called **manatees**.

Manatees swim slowly in shallow coastal waters, feeding on water plants.

The **sea serpent** is supposed to be a gigantic, snake-like creature up to 30 metres long. Many people have reported seeing them.

A giant turtle-like creature was seen in 1877 by the crew of HMS *Osborne*. The creature was about 20 metres long and swam quickly.

Monsters of the sea

Some of the strangest monsters can be found swimming and living in the sea.

Large ones like the whales and sharks swim in the open ocean. Others, like giant sponges, hide deep down on the seabed.

Lurking at the bottom of the sea near Japan are **giant spider crabs**. With their claws outstretched they can measure nearly three metres.

The suckers on a 15-metre **giant squid** measure 10 cm across. But sucker scars on whales have been seen as long as 45 cm!

Trailing deadly poisonous tentacles, **Arctic giant jellyfish** drift in the northern seas. Their tentacles can reach down over 30 metres.

Sharks can detect vibrations and electricity given out by injured creatures over long distances. Some can even taste blood.

Loggerhead sponges can be a metre high and a metre across.



Walrus are huge, bulky animals. They have bristly whiskers to help them find their food on the seabed. Their huge tusks are used to haul themselves out of the water.

Weighing about 150 tonnes, the **blue whale** is the world's largest mammal. A blue whale can hold over a tonne of water in its mouth.

Deep-sea fish are fierce hunters with wide gulping mouths and long fangs.

The **tiger shark** with its sharp teeth is a fierce predator in the sea.

Vikings

Viking raids were carried out by warriors in longships. As many as 100 longships would take part in a single raid. The Vikings would land, capture as much money, food, cattle and valuables as possible and sail away again.

Longships were narrow boats, which could be up to 30 metres in length. They were not very heavy and were very quick through the water as they had oars as well as a large sail. Some longships had dragon heads carved on to them to make them look fiercer.

Viking warriors believed that when they died they would go to Valhalla, the banquet hall of the gods. Viking chiefs and famous warriors would often be buried with their boats and their favourite possessions when they died. Sometimes the body would be placed on the deck of the boat and burned.

Sea and Sailing

Ships and boats are very old inventions. Archaeologists think that people first made journeys in small boats 50,000 years ago. The boats were very simple canoes carved from tree trunks.

Ships and boats are not only used for transporting people, but for trade, too. Today, most of the goods traded between different countries are sent by ship.

Archaeologists don't really know when **sailing boats** were invented. However, the Ancient Egyptians sailed boats made of reeds along the River Nile over 5,000 years ago. These reed boats had square sails.

A triangular sail, called a **lateen sail**, was invented around 300 BC. Boats with lateen sails could sail where their crews wanted them to.

A type of boat called a dhow has a lateen sail.

In the 1400s **full rigging** was developed. Full-rigged ships had two or three masts with square and triangular sails.

In the 1400s and 1500s European explorers, such as Christopher Columbus, sailed small full-rigged ships across the oceans.

Soon after small portable steam engines were invented engineers built **steam-powered boats**. The *Charlotte Dundas* was built in 1801. The engine turned large paddle wheels, which pushed the boat through the water.

A hydrofoil has wings, which lift it out of the water. The reduced friction means it can go much faster than ordinary boats.

The idea for the **hydrofoil** was thought of in 1881. However, the first hydrofoil was not tested until 1905.

A **hovercraft** is half boat, half aeroplane. It skims across sea or land on a cushion of air. The first practical hovercraft was launched in 1959.

Most modern ships are pushed along by a **propeller**. It was patented in 1836 and soon replaced paddle wheels.

Communication at Sea

The **semaphore** system was the first way of communicating over long distances. Semaphore stations were positioned on hilltops, and the message was passed from one station to the next. The system was first used in France in 1794.

The message was shown by moving the arms on top of the semaphore station to different positions.

Radio was first used in the 1890s. Sailors used it to send signals to the shore by Morse code. The first radio programme was broadcast in 1906.

Mysterious disappearances

Throughout history there have been reports of people vanishing without trace. Ships and aeroplanes seem to have disappeared into thin air! Some of these cases are still shrouded in mystery.

Sometimes stories have been made up to explain disappearances. When famous band leader, **Glenn Miller**, vanished in 1944, some people believed that his face had been so disfigured in a plane crash that he had decided to hide away for the rest of his life.

In 1872 the entire crew of the merchant ship, the **Mary Celeste**, vanished. The ship was completely undamaged but no one on board was ever seen again. The crew's meal was found half-eaten on the table.

Often disappearances are hoaxes. In 1880, the story of a farmer who had apparently vanished hit the headlines in **Tennessee**, USA. It turned out that a hardware salesman, who had been snowed into his house, had invented the whole story out of boredom!

In 1937, **Amelia Earhart**, a record-breaking pilot, disappeared en route to an island in the Pacific Ocean. No one has ever been able to explain this mysterious disappearance.

Over the years, ships and aeroplanes have vanished in the **Bermuda Triangle**, without trace of any wreckage. In 1880, a ship called the HMS *Atlanta* disappeared together with 290 crew members.

Second sight

In 1889, **Morgan Roberts** wrote 'The Wreck of the Titan'. It tells the story of a massive luxury liner, called the Titan, which hit an iceberg and sank. The **Titanic** did exactly that 14 years later and more than 1,500 of the passengers were drowned.

More spooky cases

The Flying Dutchman was a ship, which sank in the 1600s. Its ghost is said to haunt the oceans. In 1881, the crew of HMS *Inconstant* thought they saw the ship.

In 1939, over 100 people claimed to have seen the ship as they sunbathed on a beach near Cape Town, South Africa.

During World War II, a German admiral reported that the crew of a U-Boat submarine had seen the phantom ship.

In 1911, the crew of the steamer, *Orkney Belle*, encountered **The Flying Dutchman**. It was totally deserted. It is said that three bells were heard and the ghost ship vanished into the fog.