

*Disclaimer: This is a machine generated PDF of selected content from our databases. This functionality is provided solely for your convenience and is in no way intended to replace original scanned PDF. Neither Cengage Learning nor its licensors make any representations or warranties with respect to the machine generated PDF. The PDF is automatically generated "AS IS" and "AS AVAILABLE" and are not retained in our systems. CENGAGE LEARNING AND ITS LICENSORS SPECIFICALLY DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES FOR AVAILABILITY, ACCURACY, TIMELINESS, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Your use of the machine generated PDF is subject to all use restrictions contained in The Cengage Learning Subscription and License Agreement and/or the Kids InfoBits Terms and Conditions and by using the machine generated PDF functionality you agree to forgo any and all claims against Cengage Learning or its licensors for your use of the machine generated PDF functionality and any output derived therefrom.*

ocean

Britannica Student Encyclopedia: An A to Z Encyclopedia. 2015.

COPYRIGHT 2015 Encyclopædia Britannica, Inc.

Full Text:

An ocean is a huge body of salt water. Oceans cover nearly 71 percent of Earth's surface. They contain almost 98 percent of all the water on Earth.



The four major oceans cover most of Earth's surface.  
Encyclopædia Britannica, Inc.

There are four main oceans on Earth: the Pacific, the Atlantic, the Indian, and the Arctic. These oceans have no real borders, and water flows freely between them. Smaller parts of these oceans are called seas, gulfs, and bays.

## Ocean Water

Ocean water is salty. The saltiness comes from a chemical substance called sodium chloride, which is dissolved in the water. (The salt that people eat is sodium chloride in the form of crystals.)

Winds and other forces cause ocean water to be constantly in motion. Large amounts of ocean water move around Earth in patterns called currents. Ocean currents may be warm or cold. Warm currents tend to bring warm weather and rain to nearby land. Cold currents tend to cause a dry climate. The Gulf Stream is a warm current that runs north along the eastern coast of the United States.

Winds also cause ocean water to move in waves. Steady, powerful winds cause big waves. Gentle breezes create ripples. Large swells in ocean water usually come from stormy weather.

Tides are another way that ocean water moves. Tides are the rise and fall of ocean levels. This happens throughout the day. On a beach, for example, the ocean covers more sand at high tide than at low tide. The pull of a force called gravity between Earth and the Moon and the Sun causes tides.

## Ocean Floor

The ocean floor has many levels. The shallowest part of the oceans, called the continental shelf, lies along the edges of the continents. The edges of the continental shelf slope down toward the deep parts of the oceans, called the basins. At the bottom of the basins are large, flat plains.

In some places, deep cracks called trenches cut into the ocean floor. In other places, underwater mountain chains, called oceanic ridges, rise up from the floor. Earthquakes sometimes occur along the trenches and ridges. Parts of the ridges contain active volcanoes.

## Ocean Life

Living things inhabit all levels of Earth's oceans. Ocean plants grow fairly close to the water's surface because they need sunlight to stay alive. Sunlight penetrates the water to only about 656 feet (200 meters). The most numerous ocean plants are called phytoplankton. These tiny, one-celled plants drift with the ocean currents. Various kinds of sea grass and other plants also grow in the world's oceans. Seaweeds, which are plantlike forms of algae, are plentiful as well.



Staghorn coral can be seen at low tide in Thailand.

© 9comeback/Fotolia

Like ocean plants, most ocean animals live in shallower water. This is because there are more plants and animals to eat near the water's surface. But animals also can be found in deep water, including within the oceans' deepest, darkest trenches.



Tube worms grow near a vent, or opening in the seafloor.  
F. Grassle, Woods Hole Oceanographic Institution

The largest ocean animal is the blue whale. No larger animal has ever lived on Earth. The tiniest animals are a form of plankton called zooplankton. Hundreds of thousands of other types of animal also live in the ocean. These include clams, crabs, squid, dolphins, and many different kinds of fish. Corals and sea anemones look like plants, but they are animals, too.

## Importance of the Oceans

The world's oceans are important to life on Earth. Oceans are a great source of food for people around the world. They also provide minerals, oil, and natural gas. Phytoplankton and algae create much of the world's oxygen. Oceans also help to keep climates stable by storing heat from the Sun.

Today many dangers threaten the health of the oceans. People pollute oceans by dumping poisonous waste and garbage into them. Ocean pollution reduces oxygen in the water and harms ocean life. Overfishing and oil spills harm ocean life as well.



Firefighters battle a huge fire on an oil rig in the Gulf of Mexico. The Deepwater Horizon oil rig exploded in April 2010. The explosion resulted in the largest marine oil spill in history.

U.S. Coast Guard

People called oceanographers study the oceans to try to keep them healthy. Some examine the quality of the water and the way the water moves. Others look at the structures of the seafloors and basins. Another group of oceanographers is interested in the plants and animals that live in oceans.

**Source Citation** (MLA 8<sup>th</sup> Edition)

"ocean." *Britannica Student Encyclopedia: An A to Z Encyclopedia*, Encyclopaedia Britannica, 2015. *Kids InfoBits*, <https://link.galegroup.com/apps/doc/NZEJTN973663169/ITKE?u=onlinelibrary&sid=ITKE&xid=a1ed91ce>. Accessed 22 Feb. 2019.

**Gale Document Number:** GALE|NZEJTN973663169