

Topic:

Ocean Exploration

Links to other year groups: Y2 Naming continents and oceans, Y3 Volcanoes, Y4 Coasts, Y5 Rivers, Y8 Risky World, Weather and Climate, Y11 Hazardous Earth

Key Vocabulary:

oceanographer - a person who studies the ocean

continental shelf - the ocean floor nearest the edges of continents

abyssal plain - the floor under the open ocean. It lies from 3km-6km below the surface. Much of it is flat

oceanic trench - a deep canyon on the ocean floor

seamount - a volcanic mountain on the ocean floor

mid-ocean ridge - a mountain range on the ocean floor formed where two tectonic plates meet

gyre - a large system of ocean currents moving in a circle. Gyres are caused because the Earth is rotating.



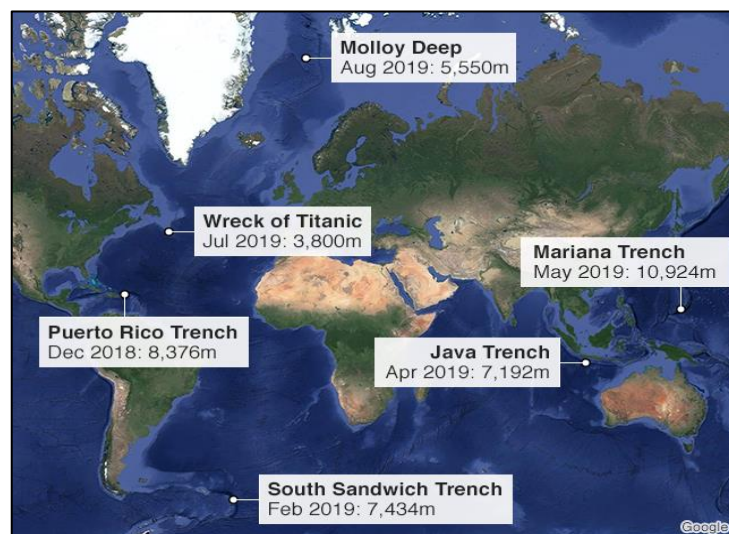
Human impact on our oceans:

Less than 5% of the ocean has been explored.

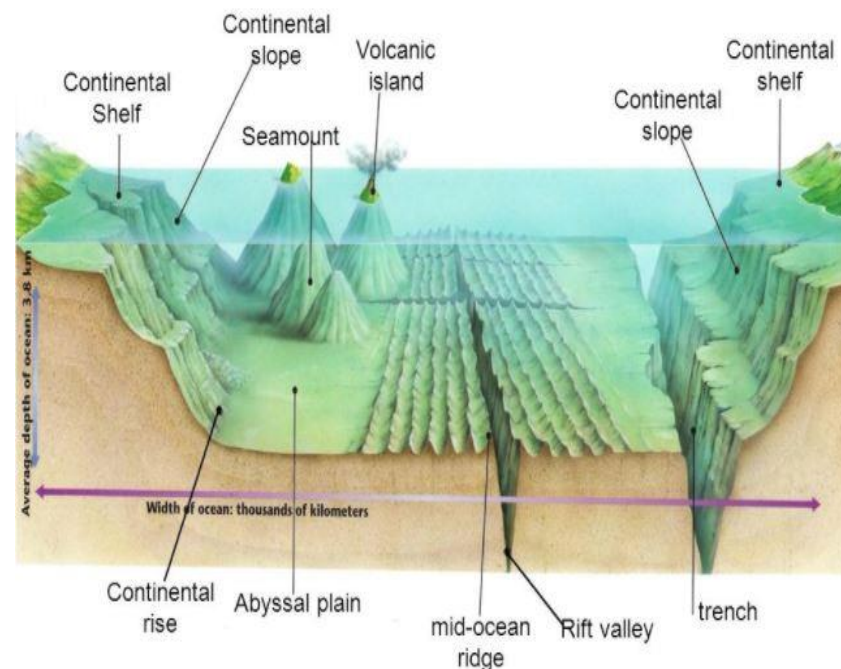
Plastic pollution, caused by humans, has become a major problem in the world's oceans. Plastic was found at the bottom of the Mariana Trench by James Cameron.

Sylvia Earle, an oceanographer, set up the charity 'Mission Blue' to help protect marine environments.

Map: Deepest part of each ocean visited by Vescovo



The Ocean Floor



Key facts/statistics:

Don Walsh and Jacques Piccard were the first people to reach the bottom of the Mariana Trench on January 23rd 1960 on the Trieste (pictured).

James Cameron visited the Mariana Trench in 2012 in his vessel, the Challenger Deep.

In 2019, Victor Vescovo was the first person to dive to the deepest part of each of the 5 oceans. (He has also climbed the highest peak on each of the 7 continents.)

The Mariana Trench, in the Pacific Ocean, is the deepest known part of the oceans. It is a crescent-shaped trench, south of Japan, measuring approx. 1,600 miles by 50 miles. The maximum known depth is 10,984 metres (6.825 miles) at the southern end and is known as the Challenger Deep.



Brief lesson sequence:	
1	Introductory lessons – why is the ocean important? Retrieval task: name the continents and oceans.
2	Is there an 8 th continent?
3	What are the deepest parts of the ocean? (Mapping the ocean floor.)
4	What are the features of the ocean floor?
5	What are the different zones in the ocean? (The Deep)
6	Water pressure experiment.
7	What types of technology do we need to explore the ocean?
8	Human impact: produce an infographic about plastic pollution (assessment task).