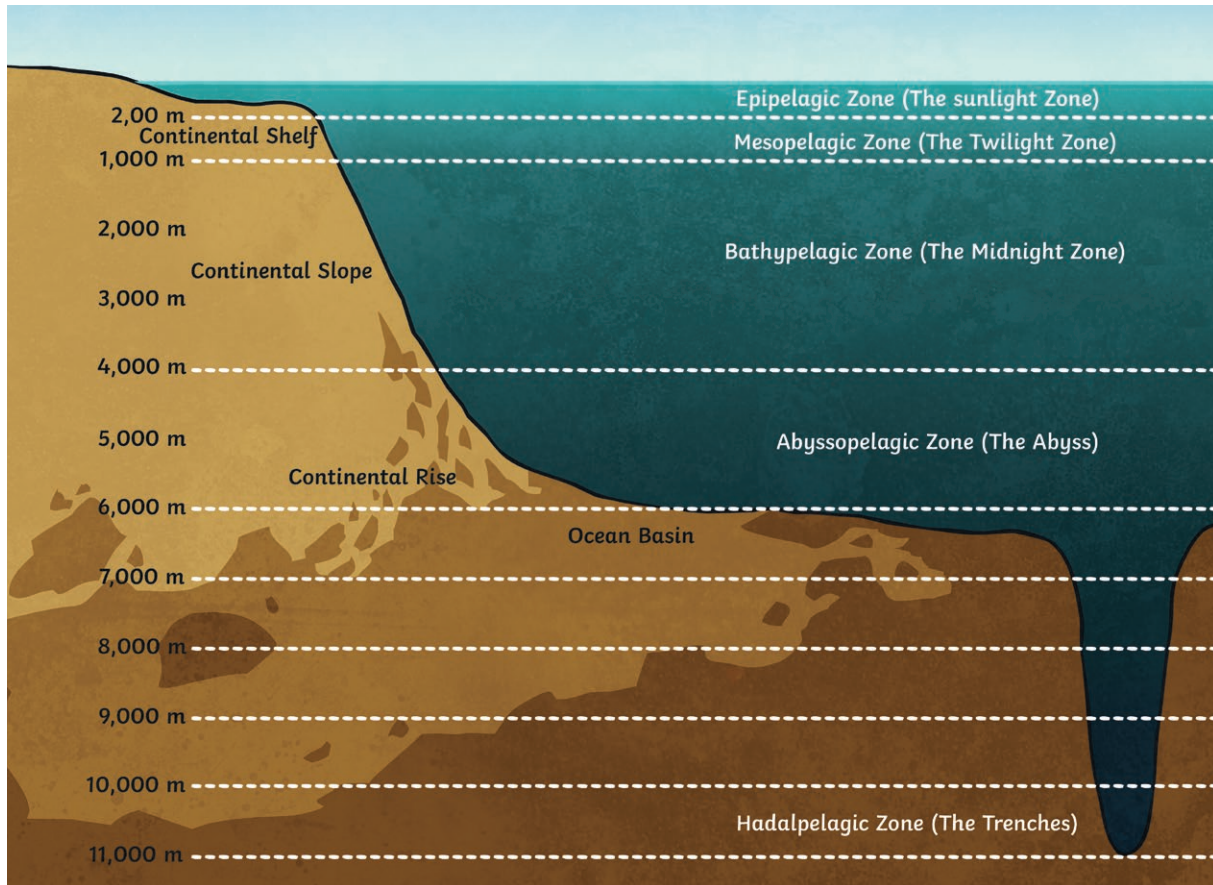


Layers of the Ocean



Oceans cover two-thirds of our Earth and there are five oceans (the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Antarctic or Southern Ocean and the Arctic Ocean) that all flow into each other.

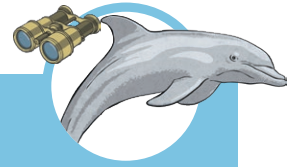
Did You Know...?

The Pacific Ocean is the largest and deepest of all the oceans. It is so deep in places that the world's tallest mountain, Everest, would sink without a trace!

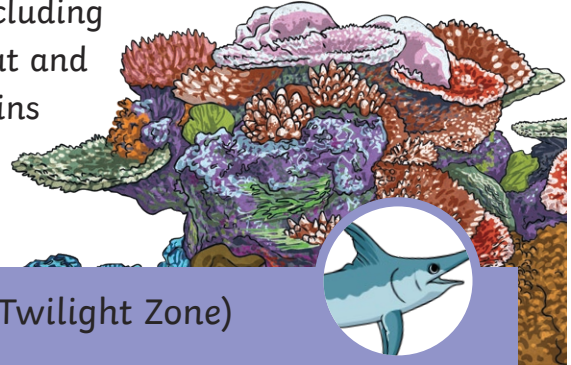
What Are the Layers of the Ocean?

Oceans are made of five layers which all have their own characteristics, including temperature, light and unique creatures living within them.

Epipelagic Zone (Sunlight Zone)



The Epipelagic Zone is up to 200m below the surface of the ocean. Sunlight reaches it which means that there is plenty of light and heat in this zone although both decrease the deeper you go. Due to the light and warmth, this is the layer with most life, including coral reefs, seaweed which plant feeders eat and fast swimming hunters, such as dolphins and salmon. Humans enjoy this layer for activities such as swimming and fishing.



Mesopelagic Zone (Twilight Zone)

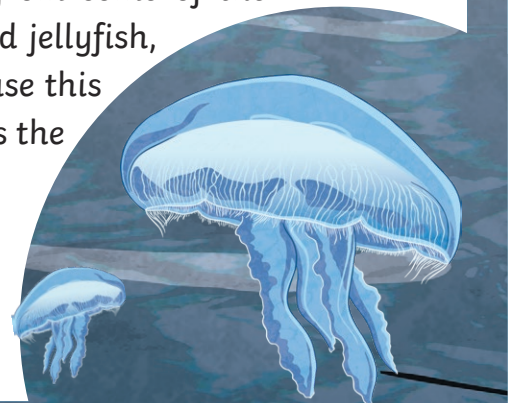


Up to 1,000m below the surface of the ocean, the Mesopelagic Zone is cold because only faint sunrays reach it. This layer is home to some of the strangest sea animals, which often have large eyes to help them see, including the sea cucumber, swordfish, wolf eel and octopus. No plants grow within this layer so creatures either feed by filtering the water or hunting other creatures at speed. Humans can dive to this layer but they must wear protective suits.

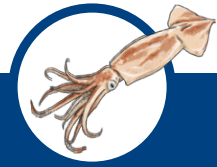


Bathypelagic Zone (Midnight Zone)

The Midnight Zone, which makes up nine-tenths of the ocean, is up to 4,000m below the surface of the ocean. It gets its name from the fact that sunlight cannot reach it. Some light, however, can be seen from some of the plants and creatures, such as anglerfish, viperfish and jellyfish, that produce their own light (bioluminescent). They use this light to hunt their prey. Some larger creatures, such as the sperm whale, dive to these depths to hunt for food.



Abyssopelagic Zone (Abyss)



This layer is up to 6,000m below the surface of the ocean and contains three-quarters of the ocean bed, which is covered with thick mud made from the remains of dead animals. No sunlight reaches this layer so it is pitch-black and near freezing, meaning that few creatures live here. Those that do are mainly transparent, blind invertebrates, such as lanternfish, amphipods and squid.

Hadalpelagic Zone (The Trenches)

The Trenches, 11,000m below the surface of the ocean, is actually a series of narrow valleys which can only be explored using specialist scientific equipment because of the immense pressure and near-freezing temperatures. No sunlight reaches this zone but unique creatures can be found, including some sea stars.



The ocean is a wonderful part of our world and oceanographers (people who study the plants and animals of the ocean) hope it will be explored more as technology advances.

Questions

1. Which is the deepest ocean on Earth? Tick one.

- ☐ the Pacific Ocean
- ☐ the Atlantic Ocean
- ☐ the Indian Ocean
- ☐ the Arctic Ocean

2. **Oceans have unique creatures living within them.**

What does the word unique mean? Tick one.

- ☐ similar
- ☐ individual
- ☐ many
- ☐ few

3. Name **three** creatures found in the Mesopelagic Zone.

- 1. _____
- 2. _____
- 3. _____

4. Fill in the missing words in this sentence:

The Bathypelagic Zone, making up _____ of the ocean, is up to _____ below the surface of the ocean and gets its name from the fact that _____ cannot reach this layer.

5. Find and copy one word which tells you that many of the creatures found in the Abyssopelagic Zone are see-through.

6. Why do you think that no plants grow in the Mesopelagic Zone?

7. In your own words, explain what is meant by bioluminescent.

8. Which layer would you least like to visit? Give **two** reasons.
