

A Printable Scholar Ocean Book

How Deep Is the Ocean?

A dive from the sunny surface to the deepest trench

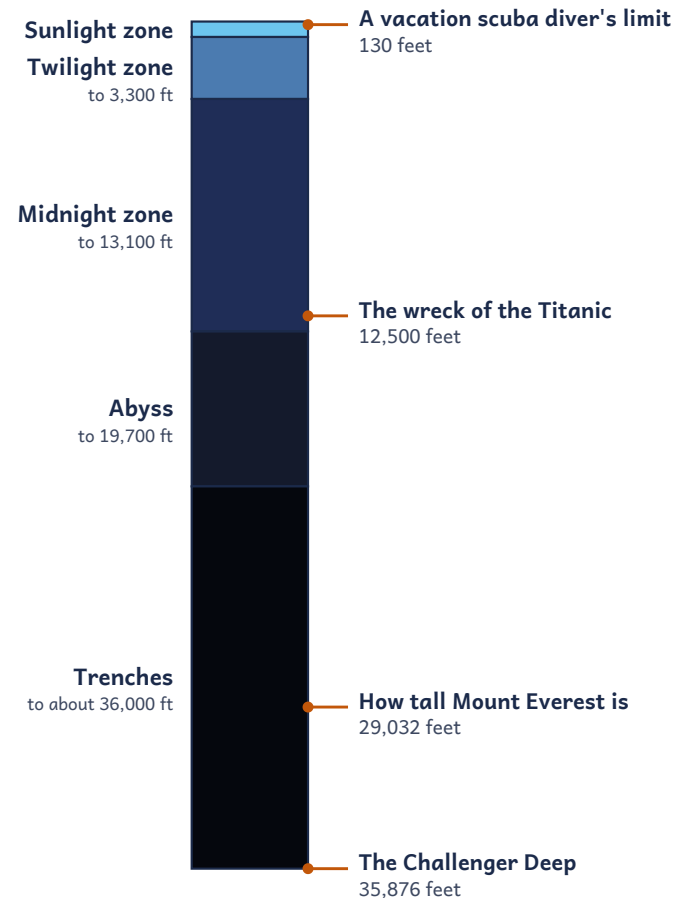


This book belongs to _____

Going Down

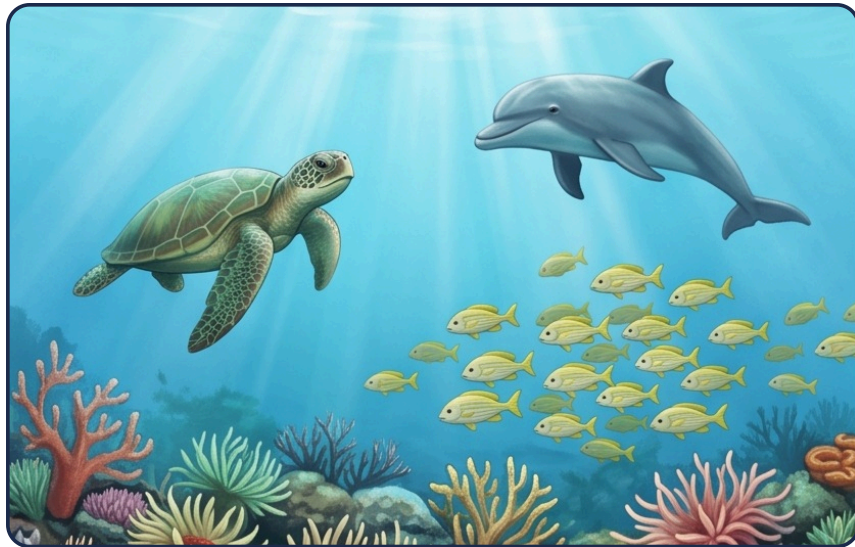
Climb into the submarine. We are going to the bottom of the sea. On the way down the water gets darker, colder and heavier.

Scientists split the ocean into five zones. This chart shows them at their real sizes. Look how thin the sunny part is!



The Sunlight Zone

Zone 1



0 to 660 feet below the surface
0 to 200 meters

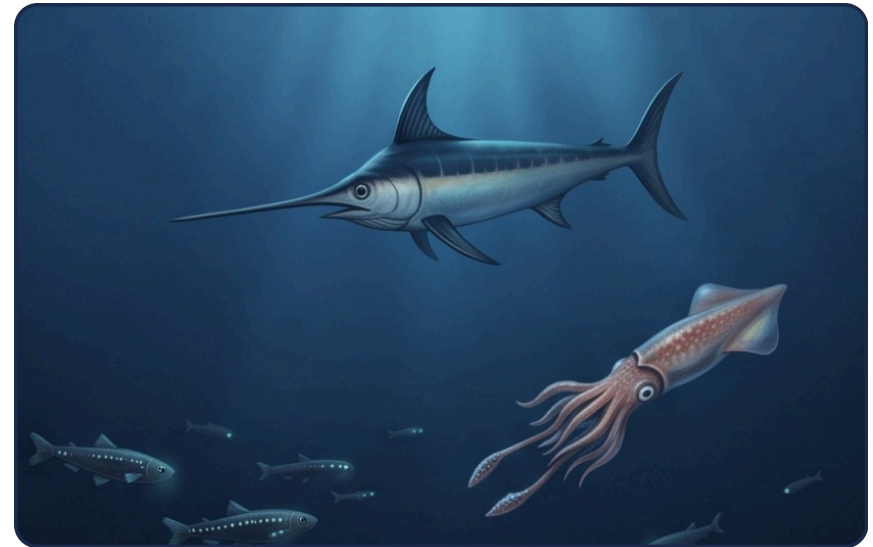


Sunlight shines into this zone, so the water is bright. In most places it is the warmest part of the sea. Seaweed and tiny floating plants grow here, and animals come to eat them. Sea turtles, dolphins and most of the fish you know live in this zone.

How deep is that? A scuba diver on vacation can go down to about 130 feet.

The Twilight Zone

Zone 2



660 to 3,300 feet below the surface
200 to 1,000 meters



Only a faint blue glow reaches this zone. It is too dim for plants to grow. Swordfish and squid hunt in the gloom, and many small fish make their own light.

How deep is that? The deepest scuba dive ever made was 1,090 feet.

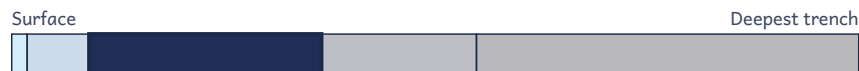
The Midnight Zone

Zone 3



3,300 to 13,100 feet

below the surface
1,000 to 4,000
meters



You are here

No sunlight ever reaches this zone. It is pitch dark and almost freezing. The only light comes from animals that glow. An anglerfish dangles a glowing lure to bring small fish close to its teeth. Sperm whales can dive this deep to hunt squid.

How deep is that? The wreck of the Titanic lies about 12,500 feet down.

The Abyss

Zone 4



13,100 to 19,700 feet

below the surface
4,000 to 6,000
meters



You are here

The abyss is black and near freezing, and the water above presses down very hard. There is little to eat. Animals live on scraps that drift down from above. Dumbo octopuses flap fins that look like ears, and sea cucumbers crawl over the mud.

How deep is that? Mount Rainier is 14,410 feet tall. Set on the floor at the bottom of this zone, its top would be about a mile under water.

The Trenches

Zone 5



19,700 to 36,000 feet

below the surface
6,000 to about
11,000 meters



You are here

Trenches are deep, narrow canyons in the sea floor. They are the deepest places on Earth. The deepest spot of all is the Challenger Deep, in the Pacific Ocean. Snailfish and tiny shrimp-like animals live here in the dark.

How deep is that? Mount Everest is 29,032 feet tall. Set in the deepest trench, its top would still be more than a mile under water.

The Ocean by the Numbers

How big?

The ocean covers about 71 of every 100 parts of the Earth. Most of our planet is under water.

How deep, most of the time?

On average the sea floor is about 12,100 feet down. That is in the midnight zone.

How deep, at the deepest?

The Challenger Deep is about 35,876 feet down. That is almost 7 miles.

How hard does the water press?

At the bottom of the deepest trench, about 8 tons press on every square inch. That is like a big elephant standing on a postage stamp.

How cold?

The deep sea is close to freezing all year, just a few degrees above ice.

The Deepest Dive



A small research submarine of today

In 1960 two men, Jacques Piccard and Don Walsh, rode to the bottom of the Challenger Deep. They sat inside a thick steel ball that hung under a diving craft called the Trieste.

The trip down took almost five hours. They stayed on the bottom for about 20 minutes. No person went back for 52 years.

Today robots and small submarines explore the deep sea. Most of the sea floor has still never been seen by anyone.

Check What You Know

Circle the right answer. Look back in the book if you need to.

1. Which zone gets the most sunlight?

Sunlight zone

Midnight zone

Abyss

2. Where does an anglerfish live?

Sunlight zone

Midnight zone

On the beach

3. What are the deepest places in the ocean?

Reefs

Waves

Trenches

4. What happens to the water as you go deeper?

It gets darker

It gets brighter

It gets warmer

5. About how deep is the deepest spot in the ocean?

Almost 7 feet

Almost 7 miles

Almost 70 miles

Answers: 1. Sunlight zone • 2. Midnight zone • 3. Trenches • 4. It gets darker • 5. Almost 7 miles

The depths in this book come from NOAA, the United States ocean and weather agency.