

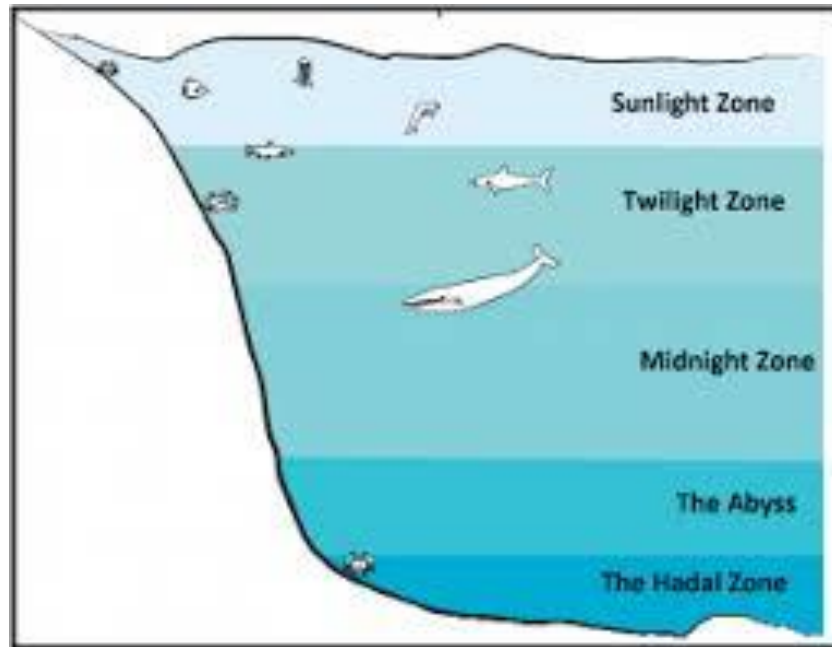


Oceanography: Vertical Ocean Zones

Earth's oceans are home to a multitude of diverse plant and animal life! Though scientists from all across the world have spent many years studying the ocean, there are still incredible findings yet to be discovered in its depths.

We know that the oceans are very vast and deep. They cover 71% of our planet. The deepest part, the Mariana Trench, is just under 7 miles deep! There are many methods that scientists use to categorize the ocean and the life it contains; one is based on light.

There are 5 distinct photic layers of the ocean: the epipelagic zone (the sunlight zone), the mesopelagic zone (the twilight zone), the bathypelagic zone (the midnight zone), the abyss (the abyssopelagic zone), and the trenches (the hadalpelagic zone).



Fun facts about each zone:

The **sunlight zone** has lots of light and oxygen and low pressure. The majority of ocean life exists in this zone, and many human activities such as boating, fishing, and watersports take place here.

The **twilight zone** contains some interesting sea creatures such as eels and swordfish. This layer is penetrated by a few rays of light.

The **midnight zone** contains no light and has very cold temperatures and high pressure. Organisms in this zone (and the abyssal zone) are bioluminescent, and many do not have sight.

The **abyss** contains extremely high pressure and freezing temperatures. Very little life can survive in this zone.

The **trenches** are the final zone, this is one of the most mysterious and hostile environments on the planet. Organisms here eat debris that float down from the upper layers.

OCEAN ZONES ACTIVITY:

Can you match each sea creature to the ocean zone it lives in? (Check your answers below)

Sunlight Zone (Epipelagic Zone)
Twilight Zone (Mesopelagic Zone)
Midnight Zone (Bathypelagic Zone)
The Abyss (Abyssopelagic Zone)
The Trenches (Hadalpelagic Zone)



ANSWER KEY:

Sunlight Zone: Shark, Sea Turtle, Dolphin

Twilight Zone: Krill

Midnight Zone: Sperm Whale, Squid, Deep-Sea Angler Fish

The Abyss: Sea Spider, Basket Star

The Trenches: Tube Worms, Sea Cucumber