THE OCEAN

Ocean Zones and the Ocean Floor

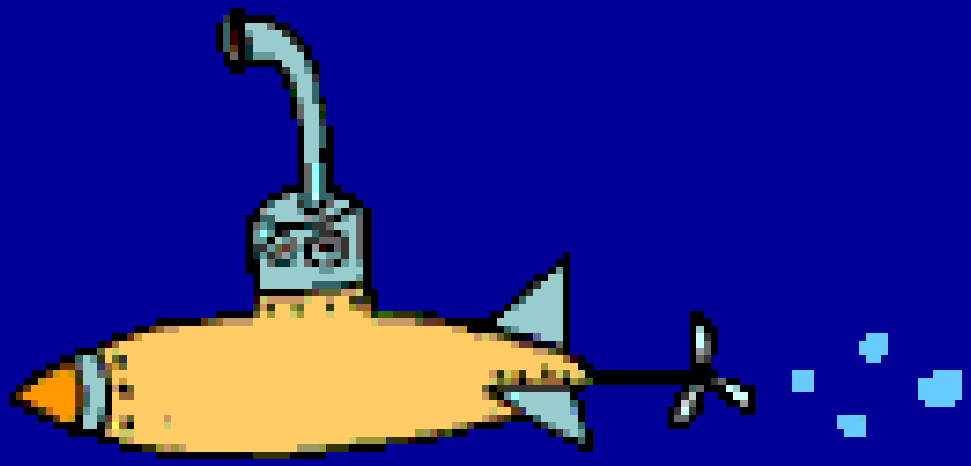
The Ocean Floor

For many years, nobody knew what was at the bottom of the ocean's floor.

Because of the darkness, cold, and extreme pressure, scientists have had to develop new technology to enable them to study the deep ocean floor.

Scientists discovered the best way of mapping the ocean's floor was to use Sonar (Sound Navigation and Ranging)

Sonar uses sound waves to create a picture of the ocean's floor.



Remember!

Intertidal

Neritic

Open Ocean

Shore (high to low tide)

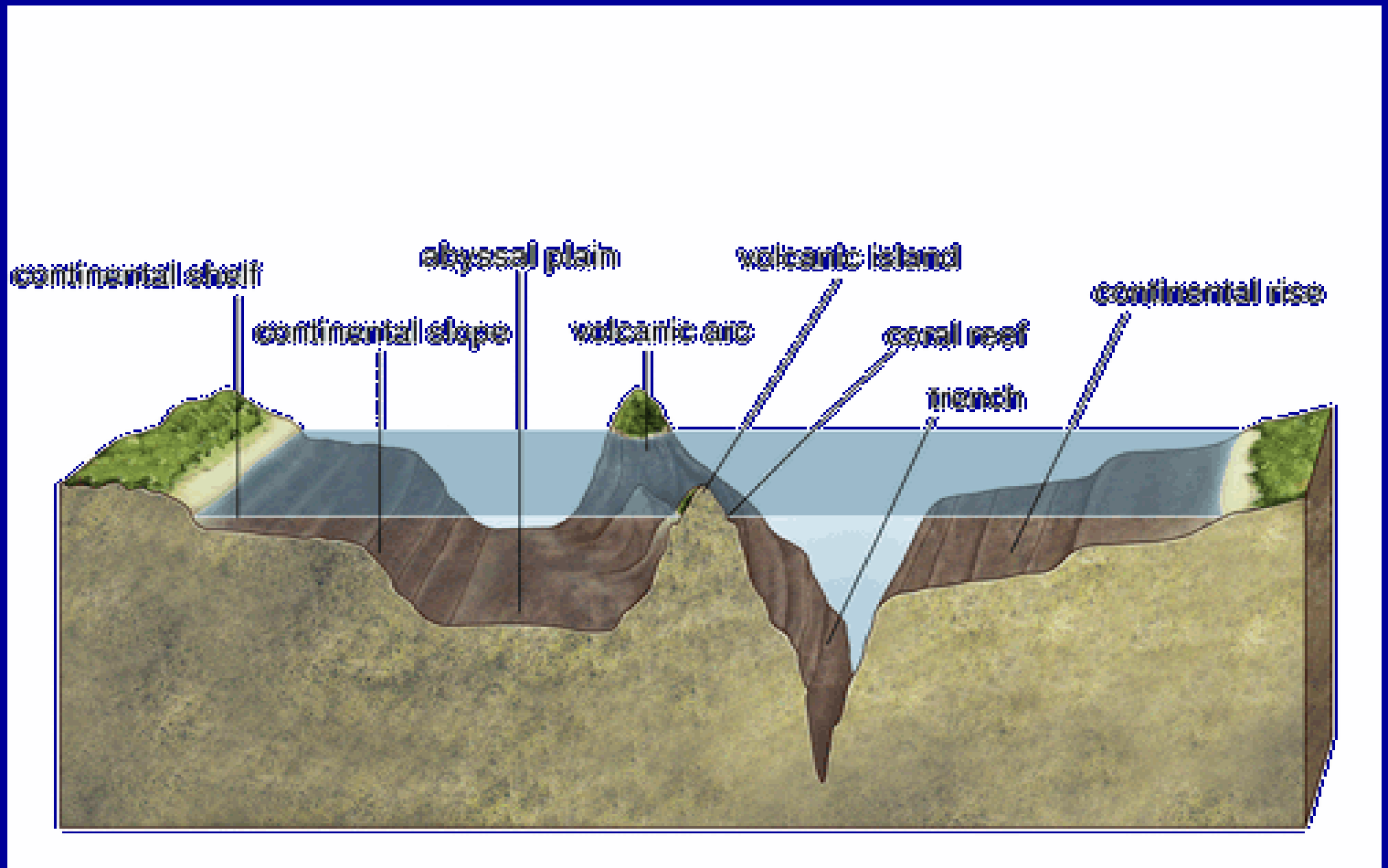
Continental Shelf

Continental Slope

Abyssal Plain

The Ocean Floor

Scientist now know that the ocean's floor is not flat.



Intertidal zone

Includes highest line of tide to the lowest line of tide (the highest the water ever rises to the lowest the water ever rises)

Intertidal Zone

Intertidal zones can look like sandy beaches:

Intertidal Zone

Or rocky shores:

Intertidal Zone

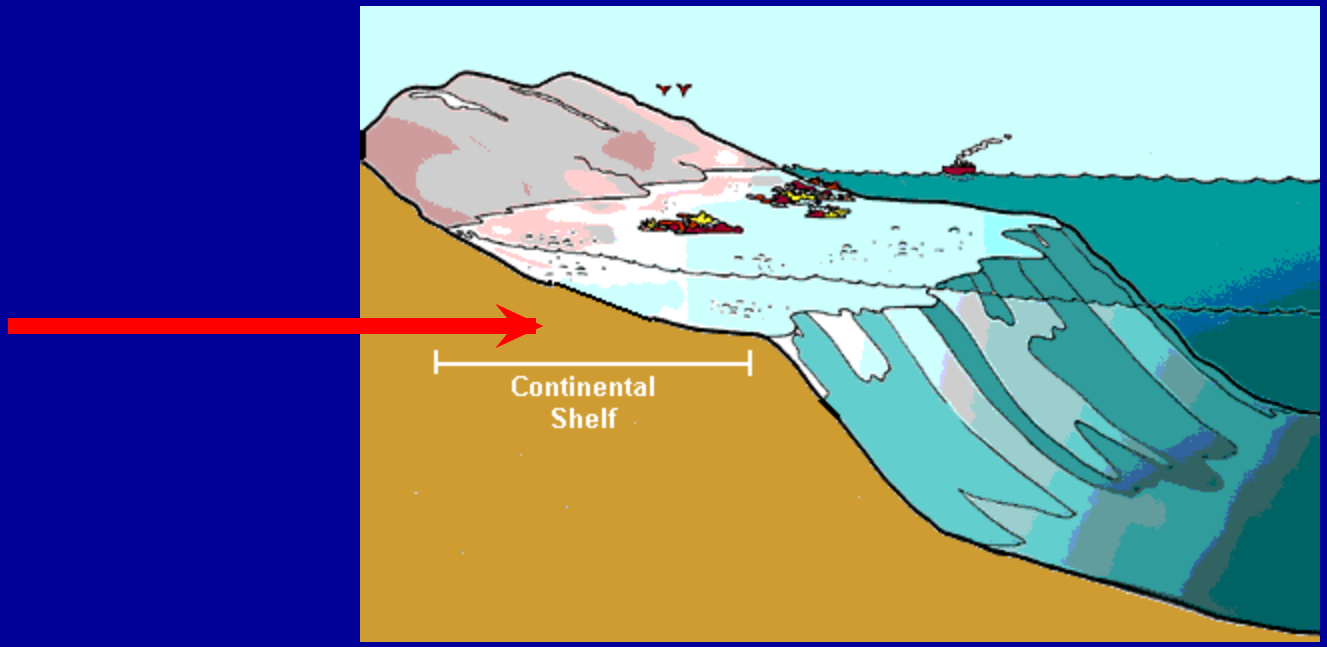
Organisms that live in the rocky intertidal zone must be able to tolerate the pounding waves and changes in salinity (saltiness) and temperature.

Intertidal Zone

They must also withstand periods of being underwater and periods of being exposed to the air.

Continental Shelf

A gently sloping, shallow area of the ocean floor that extends outward from the edge of a continent.



Continental Shelf: Neritic Zone

The Continental Shelf is also called the Neritic Zone. The Neritic Zone is full of life!

Continental Shelf: Neritic Zone

The shallow water over the continental shelf receives sunlight and a steady supply of nutrients washed from the land into the ocean.

The Continental Shelf

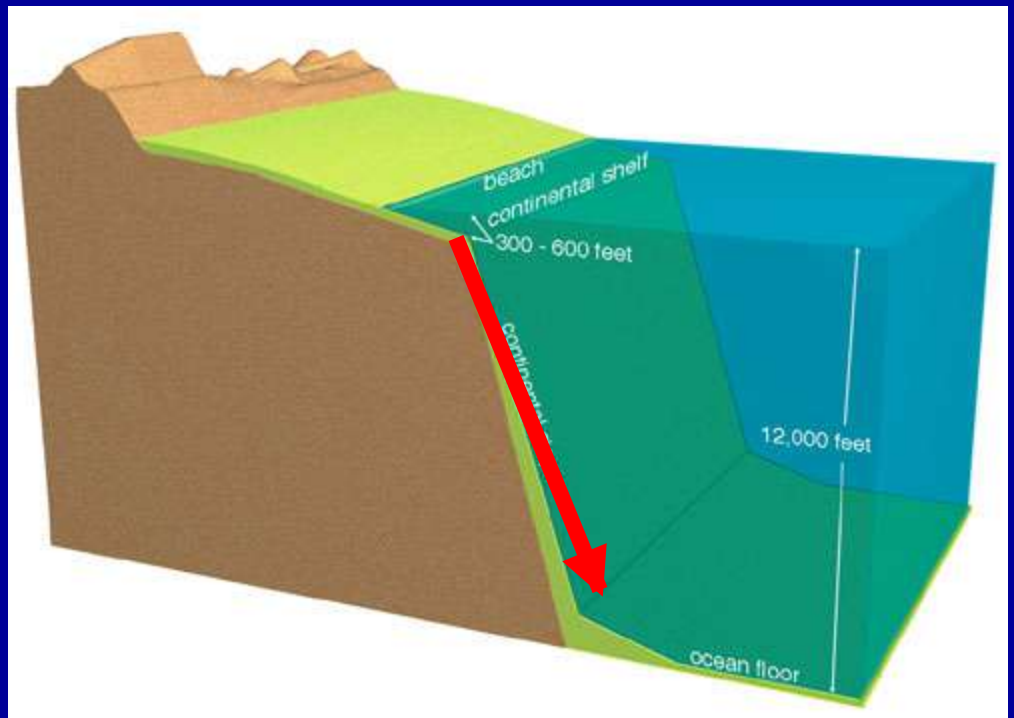
The Continental Shelf is home to the coral reef.

Many animals live around coral reefs and this is a popular place for people to scuba dive.

The Continental Slope

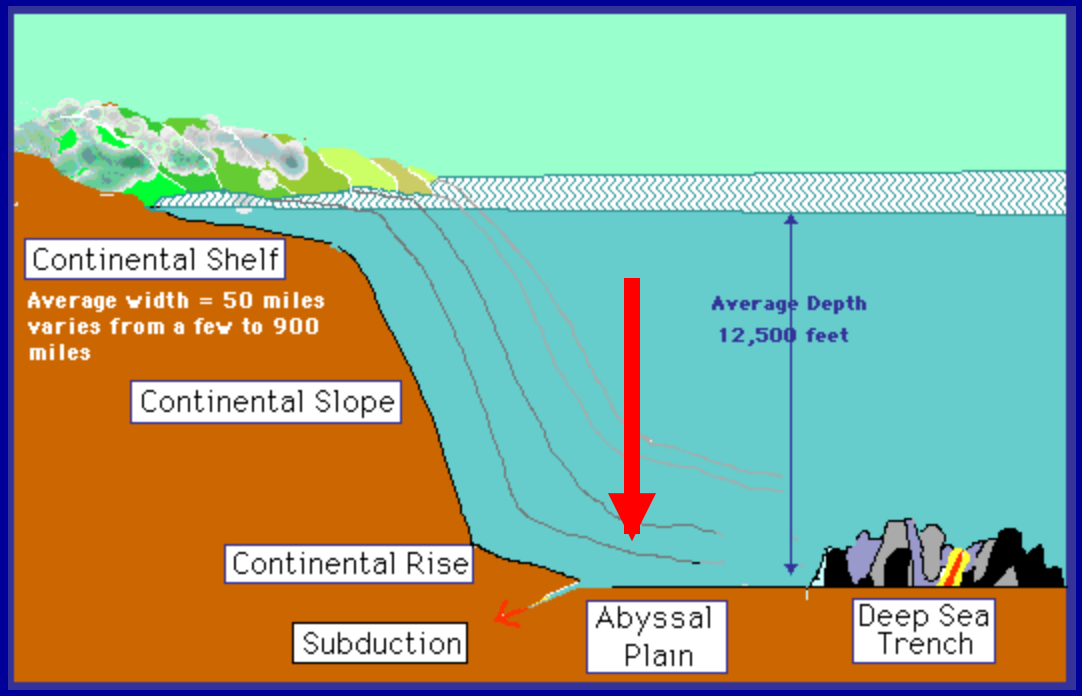
The drop or slope at the end of a continental shelf is called the continental slope.

This is where the Neritic Zone ends.



The Abyssal Plain

The smooth, nearly flat region of the ocean floor.



The Abyssal Plain: Open Ocean

The Abyssal Plain is also known as the Open Ocean.

The Open Ocean is divided into two levels:

A. The Surface Zone

B. The Deep Zone

Abyssal Plain: The Surface Zone

The only part of the ocean that receives enough sunlight to support the growth of algae.

The Abyssal Plain: The Deep Ocean

The deep regions of the ocean where sunlight cannot reach.

Often compared to a desert due to its harsh conditions.

Few organisms live in this cold, dark, wet place.

Deep Zone Life

Deep Zone Life

Organisms often create their own light. This is known as bioluminescence.