


Oceans and Continents





Why are Oceans important?


The ocean is a happy-zone! Our temple, our life, our second home, our exhilaration place. It's where we swim, surf, sail, dive, relax and enjoy 


Experts predict that there are more than 300,000 different species underwater, and is still not clear how many of them we know 


76% of all USA trade uses some form of marine transportation. 

59.6 million people in the world were engaged in fishing on 2017. There are also millions of jobs such as: coastal tourism, aquaculture, renewable energy and shipbuilding 

The ocean produces over 50% of the world's oxygen. Phytoplankton, microscopic plants, are responsible for taking in carbon dioxide and releasing oxygen. 

When our face touches water, our heart rate immediately slows down. When we see, feel, hear, smell or taste water we are happy and at peace. 

Transports warm water from the equator to the poles, and cold water from the poles to the tropics. Without these currents, the weather would be extreme in some regions. 

The ocean is the number one source of protein for more than a billion people. Fish accounts for about 15.7% of the animal protein consumed globally 



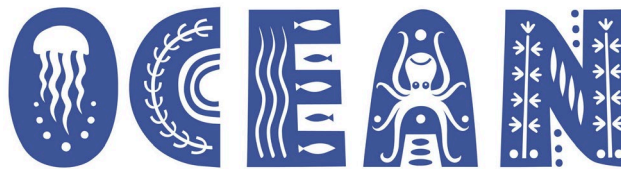
Atoll Reef



Barrier Reef



Fringing Reef



*Oceans are much bigger and deeper than seas.
Seas are smaller parts of oceans, usually found nearer land.*

Why have we not managed to explore the ocean floor?

- No sunlight – descent would be in complete darkness
- Descent would take 5+ hours and oxygen levels would be very low
- Temperature would be virtually freezing at 1 degrees
- Water pressure (would feel like 15 jumbo jets piled on top of you)

Why are coral reefs important?

Environmental:

- Reefs shelter land from harsh ocean storms and floods.
- Although coral reefs cover less than 1% of the Earth's surface, they are home to 25% of all marine fish species.

Social:

- At least 500 million people rely on coral reefs for food, coastal protection, and livelihoods.
- Coral reefs have been used in the treatment of cancer, HIV, cardiovascular diseases, ulcers, and other ailments.

Economic:

- Coral reef ecosystems support a variety of human needs. They are important for subsistence, fisheries and tourism.
- It is estimated that coral reefs provide \$375 billion per year around the world in goods and services.

But what is the ocean like?

Shore		Light with plenty of food.
Shallow seas		Very dark and very cold.
Open ocean		Very light. Sometimes wet, sometimes dry.
Deep ocean		Gets darker and colder as you go deeper.
Sea floor		Light, less food.

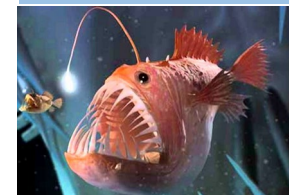
How have animals adapted to the deep ocean?

Barreleye Fish

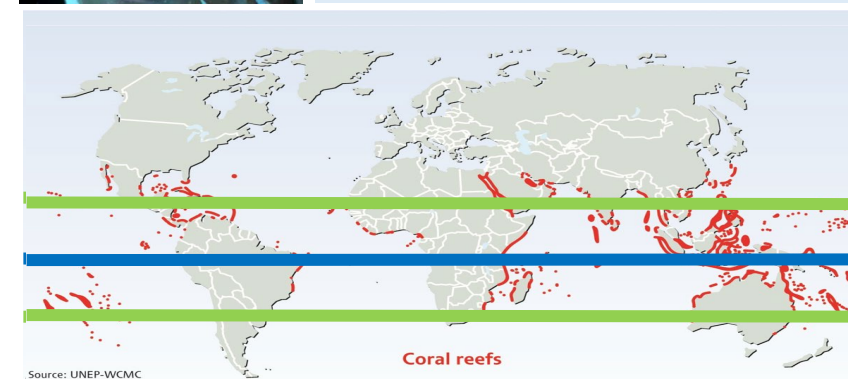


- Its head and eyelids are transparent so that it can look for prey both down and upwards! (although it cannot look sideways).
- They are ambush predators and stay completely still in the water until a prey swims near.
- One of the most incredible adaptations of the Barreleye Fish is that they have large and flat fins. These fins allow the fish to stay absolutely motionless in deep waters

Anglerfish



The **anglerfish** uses a shiny lure to bring prey within range of **its** sharp teeth. ... The **light** is a lure, wielded by our champion of the weird-the deep-sea **anglerfish**. The lure is created by bioluminescent bacteria that live inside the **angler**. It drifts through the water, flashing **its** beacon.



Source: UNEP-WCMC

Coral reefs