The Sea

Chapter 1 What is the Sea?

Two thirds of the world is covered by oceans of water.

The ocean is not the same depth all over.

Underneath the water there are rocks and mountain ranges, some as big as the ones we can see on land.

The deepest point of the ocean floor is Mariana's Trench which is 10.5kg deep in the Pacific Ocean.

A lot of the oceans are still unexplored and so the sea still holds many secrets.

The place where the ocean meets land is called the seaboard.

The Shoreline

The shoreline is the harshest place to live. Weather and conditions change and the tides expose some creatures to their predators. Most animals bury themselves into sand, mud and under rocks for protection. Plants developed tough rubbery leaves and deep roots to help stop them from drying out.

Mangrove trees are an important part of the shore in Australia, giving sea creatures a habitat and protection and they also stop the shoreline from eroding.

Chapter 2 Types of Seas

Tropical Seas

The water in tropical seas is not as rich as cooler oceans but the sun and warm conditions provide a rich place for different types of fish to live.

The fish in tropical seas are brightly coloured and live among the coral refs. The water is rich in plankton and decaying plants which provide food for the fish.

Coral reefs are found in tropical seas. They form a living community. Coral likes brightly lit clean warm water. The Great Barrier Reef is one of the largest coral reefs in the

world. Coral is not really a plant or a fish, but it is a combination of different elements which are all dependent on each other to survive.

Invertebrates are animals without a backbone like jelly fish. They also include crabs, squid, octopus and mollluscs which live in the warmer waters.

Cool Seas

Also known as temperate seas, conditions are much cooler than tropical waters. Fish have adapted to survive to the cooler conditions. Two environments in these waters are rocky seabed and sand.

Fish here are less colourful and there are fewer varieties. There is a lot more food available so although there are fewer varieties, there are more of each fish.

Most of the world's commercial fishing happens in the cooler seas, catching Herring, Cod and Flatfish.

Corals live here as well but they are different from those in the tropical seas.

Invertebrates that live here include abalone, which are very popular.

Polar Seas

Even colder water here but life still survives here including herrings, cod and blue whiting.

Starfish, soft corals and crabs can also be found under the ice caps.

Aquatic mammals include seals, walruses and killer whales.

Penguins are also found in Polar regions eating on the plentiful fish in the seas.

Chapter 3 Creatures of the Sea

Sea Mammals

Whales and Dolphins live only in the sea. Whales have very good senses and a thick layer of blubber which keeps them warm in the cooler waters. Some whales don't' have teeth, instead they have thick fibers which they use to filter the plankton they eat. Other whales have teeth which they use to eat larger fish and squid. Dolphins also have a layer of blubber which helps them to stay in the water. Both animals enjoy coming to the surface and playfully jumping around.

Seals sometimes come out of the water and live on rocks or close to the shore but mostly they live in the sea. Like whales they have a thick layer of blubber but are much

furrier. They can spend months at sea but come back to land to breed and shed their fur for a new coat.

Sea Snakes

Some reptiles returned to the sea and the sea snake is a good example of a reptile adapting to where it lives. Sea snakes are found in the Indian Ocean, next to the Pacific Ocean near Australia. There are many different types. Their tales are thinner than land snakes, letting them swim like eels. Their heads are smaller which let them dig into the sand better. They still breathe air but can stay underwater for about an hour.

Sharks

The shark is complex and not easily defined. It is a mammal, a fish and a vertebrate (an animal with a skeleton and backbone). The shark is thought to have been around for 400 million years. Instead of gills it has Pharyngeal slits. These slits or gills allow it to breathe. Its skeleton is made of tough gristle instead of bone. Sharks are sensitive to vibration and taste. Their noses have sensitive nerves which allow it to sense prey by picking up shock waves of other distressed animals. They hone in on blood in the water.

Chapter 4 The Future

We now have better technology which allows us to gain a better understanding of the sea and its creatures.

The impact that we have had on the oceans by dumping rubbish into it is now becoming fully understood.

Over-fishing has led to some species being threatened with extinction and new laws and limits are being looked at. We want to make sure that the oceans and all its life forms, will continue to survive and provide us with food and rainfall for many years to come.

Additional Resources

www.seaworld.com.au

www.seaworld.org

www.wikipedia.com