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Special School Photocopy Master Edition

Oceans Alive Resource Book



Image courtesy Microsoft Design Gallery

by Sandy Tasker



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The Wonderful World of Oceans

Where in the world is the highest mountain? The deepest valley?
Where in the world live mysterious creatures that glow in the dark and an animal that is bigger than the dinosaurs were?
The answer to all these questions ... the ocean!

The ocean covers 71% of our planet – that's almost three quarters! Although humans have explored most of our Earth's dry land, the ocean is another story.

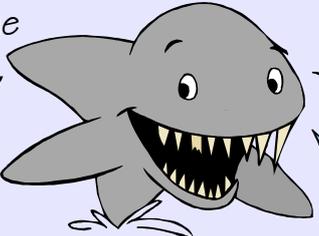
For many years, humans have been fascinated by the mysteries of the deep blue sea. Why not join the club of ocean explorers and dive in to this book?

Don't forget your snorkel!



Image courtesy Microsoft Design Gallery

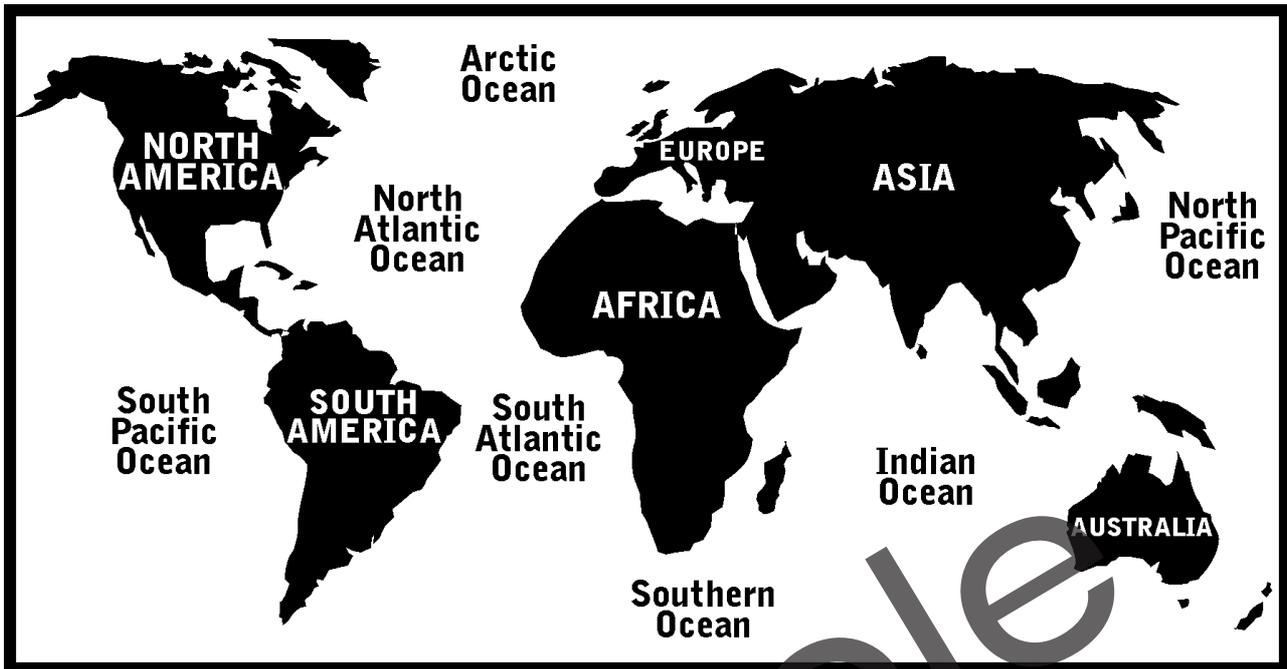
READ ALL ABOUT IT

- Ocean jobs for everyone
 - The underwater landscape - valleys and volcanoes
 - The ocean in motion – currents, tides and waves
 - Chill out on an iceberg
 - Pass the salt – why is the sea salty?
 - Subs and SCUBAS – see the sea
- 

- Tiptoe through a tide pool
 - Creatures of the reef
 - Meet the mammals – dolphins, whales and seals
 - Size up a shark
 - Marvel at the mysterious creatures of the deep
 - Plant life – an underwater garden
 - Stick your beak into ocean bird-life
 - Fun in the sun



Map it Out



The ocean is actually one massive interconnected body of water called the **World Ocean**, but it is divided up into five smaller oceans:

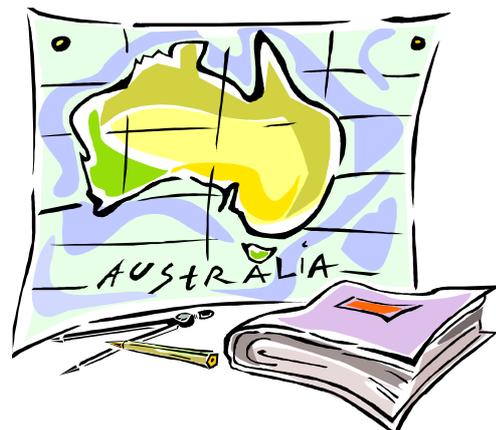
- **Pacific Ocean**
- **Atlantic Ocean**
- **Indian Ocean**
- **Southern Ocean**
- **Arctic Ocean**

Smaller areas of the ocean are called **seas**, **gulfs** and **straits**. These areas of water are partially surrounded by land.

LOOK AND SEA:

Check out a map of Australia and find:

- Coral Sea
- Tasman Sea
- Arafura Sea
- Timor Sea
- Bass Strait
- Torres Strait
- The Gulf of Carpentaria



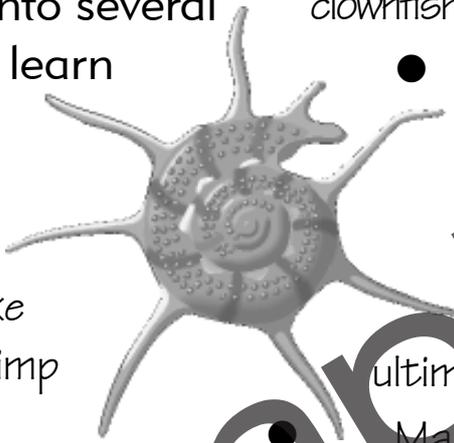


Oceans Alive

As you can probably imagine, the ocean is full of amazing ecosystems. The plants and animals adapt to the type of ocean environment they live in. Read about the different types of ocean habitat on Page 8.

Marine animals and plants can be divided up into several categories. You will learn more about these later in the book:

- Crustaceans – Crusty creatures like crabs, lobsters, shrimp and barnacles
- Echinoderms – Spiky sea stars and sea urchins
- Cnidarians – The surprising lives of corals and sea anemones
- Sponges – Spectacular animals that look more like plants
- Sea Worms – Not your everyday garden worm
- Molluscs – With or without shells? Introducing mussels, clams and the wonderful squid and octopus
- Fish – See a rainbow of colour with clownfish, angelfish and seahorses
- Mammals – Make friends with graceful whales, dolphins and seals
- Sharks – The ultimate hunting machine
- Marine Reptiles – Tag along with a turtle
- Microscopic Creatures – Get up close with plankton and krill
- Sea birds – Take flight with seagulls, pelicans and heron
- Algae and seaweed
- Kelp Forests



In an ecosystem, the plants and animals *interact* with each other and with their environment.

A *habitat* is the natural environment in which animals and plants live.



Ocean Environments

In this book, you will learn all about different ocean environments. Here is a summary of the plants and animals that you might find in each.

Ocean Habitat	Location	Description	Animals	Plants
BEACHES	All over the world, where the ocean meets the shore	Strips of sand or pebbles – can be wide or narrow	Sea birds such as seagulls, pelicans, sea lions, crabs, turtles	Washed up seaweed, spinifex grass, pigface, guinea flower
TIDE POOLS	All over the world on rocky shores	Rocky areas on the beach where waves are caught in rocky pools	Sea anemone, sea star, crab, barnacles, sea urchin	Mainly algae and seaweed, phytoplankton
CORAL REEFS	Found in warm seas between the Tropic of Cancer and the Tropic of Capricorn	Colourful habitat with a large range of marine life living amongst colonies of coral and sponge	Coral polyps, sponges, sea anemones, tropical fish, crustaceans	Phytoplankton algae, seagrasses, seaweed
KELP FORESTS	Cool coastal waters where sunlight can reach (fairly shallow)	Giant seaweed rising up from the bottom and floating on top	Sea urchins, sea cucumbers, sponges, fish and eels, lobsters, jellyfish, sea otters	Phytoplankton kelp (seaweed)
OPEN OCEAN	All over the world, away from the coast	Open areas of ocean with various depths	Whales, sharks, rays, dolphins, sea lions. Fish: tuna, herring and mackerel	Phytoplankton algae, seaweed, seagrass
DEEP OCEAN	From 3000 feet to the ocean floor (up to 11 kilometres deep in some places)	Dark, cold, lots of pressure, not as much marine life	Angler fish, gulper eel, hatchet fish, lantern fish and sea cucumbers, worms, crustaceans	Plants cannot survive due to lack of light

Ocean Industries – Fishing

It has beautiful beaches and amazing creatures but that's not all! The ocean is also a place where many people go to work each and every day.

Fishing is one of the world's biggest ocean industries. Fish, lobster, crabs, prawns, abalone, mussels, oysters, octopus, squid and shark are all popular types of seafood.



An industry will produce goods, like seafood or oil, or services, like recreation and leisure.

Seafood is healthy and delicious, eaten by people all over the world. Have you ever tried any of these dishes?

- Fish and Chips
- Tuna Patties
- Chilli Mussels
- Squid Rings
- Seafood Pizza
- Spaghetti Marinara
- Sushi

There are many ways that fish can be caught, including rod and line fishing, spear fishing, fishing with nets, diving for shellfish, fish trapping and using cray-pots.

As well as fishing being a large industry for professionals, it is also a hobby for people all over the world. Some people enjoy catching fish and letting them go, others catch a small number of fish for family meals.

