

# Habitat: Open Ocean

- Area of deep water away from the continental shelf
- Some of the smallest & largest animals of the ocean are found here from tiny plankton to enormous blue whales, sharks and manta rays
- Important migratory pathways for large animals
- Also called the pelagic zone
- Food chains can be found out in the middle of the open ocean: small bait fish eating plankton, bigger fish eat the bait fish, sharks and some whales eat the bigger fish
- Some enormous whale species like blue whales eat tiny plankton
- Many animals, such as sperm whales, travel to great depths but also spend time close to the surface
- Water temperatures vary greatly, with warmer water near the surface and very cold water in the deep ocean



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FACTS



## Habitat: Seagrass

- Mainly found growing from mud or rocks in shallow waters 3-5m deep in bays and estuaries
- Reaches a height of 60 metres
- The only flowering plant in the word that can live under water comprising roots, stems, veined leaves, flowers & seeds

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- Important food source for animals like turtles, dugongs, sea urchins and fish
- Main food source for dugongs and crucial to their survival
- Algae that grows on seagrass provides food for water birds & molluscs
- Important energy pathway for the food web
- Acts as an animal nursery- trapping food and providing shelter

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# Habitat: Sandy Beach

**TWO TYPES OF SAND** 

Mineral Sand - formed from weathered mineral rock

**Carbonate Sand** - containing parts of animals such as sea stars, coral fragments, bones of dolphins, whales & dugongs, sea urchins, crustacean & mollusc shell, fish & shark teeth

- An important food-energy zone which links the ocean to the land
- Inhabitants:
   Small animals: eg. worms, sand fleas, crabs, rats, lizards Larger animals: snakes, wallabies and kangaroos Crucial habitat for turtles to nest in
- Provides a buffer zone for land vegetation, protecting it from ocean movement.
   Gentle water movement may deposit sand onto beaches, whilst strong water movement during a storm can dramatically erode sand from beaches



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### Habitat: Rocky Shore

 Includes various micro-environments and ecosystems that provide safe living habitat for many creatures

- Algal grazers such as sea urchins and filter feeders such as mussels and crabs live here
- Rocks provide nutrients and are a valuable food source for microscopic organisms such as diatoms

& marine plants like algae

- Rocky shores act as nursery for many juvenile sea animals
- Act as a buffer zone, protecting vegetated foreshores from erosion

A large diversity of animals live on the rocky shore:

Molluscs: oysters, limpets, chitons, barnacles Crustaceans: crabs, prawns, lobsters Echinoderms: sea stars, sea cucumbers, sea urchins Many species of fish Some dangerous animals such as the Blue Ringed Octopus and the Cone Shell!



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#### Habitat: Mangrove

- Tough trees and shrubs that can survive the salty waters of the intertidal zone
- Extremely important habitats that provide protection for millions of marine animals and filter and clean the water and the air
- Protect the land from erosion
- Provides a nursery for many animals
- Provides an oxygen/carbon exchange to ensure we all have clean air to breath.
- Provides a nesting area for birds
- Protects species humans rely on for a food source 75% of commercial fishing has a direct link to mangroves

FACTS

#### Common animals found in mangroves:

Molluscs: mangrove snails Species of fish: mangrove jack, bream, moses perch, whiting, mullet & flathead Wading birds: herons, pelicans, cormorants, curlews & egrets Crustaceans: mud crabs, fiddler crabs, prawns (jointed legs, hard shell, no backbone)



**OLE'S FAST** 

FACTS



#### Habitat: Coral Reef

- A collection of many single organisms called polyps living together as one large mass
- Corals live with small plants called algae in a 'mutualistic' relationship this means the
  organisms both benefit:
  - The algae (zooxanthellae) lives inside the coral and is protected by the coral's tough shell
  - In order to survive, coral needs the zooxanthellae in its tissue

(The algae also gives the coral its beautiful colours)

- Coral reefs provide a home (shelter, space and food) to millions of creatures and plants 25% of earth's marine species live in and around coral reefs
- There are many species of hard and soft coral that's why coral varies in size, shape and colour
- Reefs act as nurseries for large numbers of marine creatures
- Reefs act as a barrier, protecting land foreshores, habitats and our homes!
- Coral is essential to the food chain and ecosystem. Without it marine animals would not survive - from sharks right down to the smallest algae
- Ocean water needs to be clean and healthy and maintain a certain temperature for corals to thrive - pollution and climate change harm coral

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