

ENVIROKIDS WORKSHOPS



THE GREAT BARRIER REEF



The Great Barrier Reef - One of Australia's most remarkable natural gifts to the planet is the Great Barrier Reef, blessed with the breathtaking beauty of the world's largest coral reef. The reef contains an abundance of marine life and comprises of over 3000 individual reef systems and literally hundreds of tropical islands with some of the world's most beautiful beaches. Its one of the world's natural wonders.

Home to some fabulous creatures. 1,500 species of fish as well as 200 species of birds. The barrier reef is also a World Heritage Area since 1981, the first ecosystem to be recognised by UNESCO, protecting all the wildlife within the region.

The size of the Reef is immense and can be seen from space. It runs along the east coast of Queensland in Australia and it's 2,300km in length. An ecosystem and its inhabitants, the reef is home to around 600 types of hard and soft corals. Hard corals form the 'backbone' of the reef, providing a living home for a huge range of marine animals, from fish and molluscs to plankton and algae. The annual coral spawning is an incredible sight: when millions of coral release eggs and sperm into the sea to reproduce, ensuring the survival of the reef. In this issue we will take a closer look at a true wonder of the world **The Great Barrier Reef**.



The Barrier Reef

The [Great Barrier Reef Marine Park](#) is home to a complex yet fragile ecosystem that, with almost three million visitors each year, requires careful management and conservation strategies. Sustainability is key and tourism operators play a crucial role in protecting and advocating that coral and marine life are preserved. So, what is a coral, you ask? Corals are formed by tiny creatures called polyps that have a sac-like body with emerging tentacles. Corals gain their rock-like structure from the polyps as they use calcium and carbonate ions from the seawater to create a hard-outer skeleton to protect their soft bodies. These polyps survive due to their relationship with the algae that live alongside them. The algae absorb light from the sun and subsequently feed the coral. The algae also give the corals their bright colors. Corals are, in fact, nocturnal and it is under the cover of darkness that the polyps emerge from their outer casings to catch small creatures that pass by. When conditions are right, often after a full moon, the incredible phenomenon of coral reproduction takes place. An entire colony can synchronize, with each polyp releasing its genetic matter into the water creating a scene reminiscent of a snowstorm. This event can leave deposits on the surface of the water visible from space! Following this, new corals can form. Amazingly, it can take a single polyp to start a new reef. Whilst coral reefs thrive in warm, shallow waters, these are not always close to shore. A barrier reef is defined as a coral reef running parallel to the shore but separated by a large lagoon. Visitors to the reef may be surprised that their boat trip could take between 45 minutes and 2 hours to reach a coral site or a small sand island.



The Marine life in the reef is outstanding and the variety of fish and other creatures is a sight to behold. This is your chance for celebrity spotting! Nemo (otherwise known as clownfish) needs no introduction. Find Nemo in sheltered reefs or shallow lagoons hiding behind the stinging tentacles of anemones. In the reef you can go from Nemo to one of the biggest creatures in the ocean the largest of all rays, mantas are like the gigantic birds of the marine world, equipped with a wing span up to a ginormous 7 metres. Mantas are graceful, harmless creatures well known for their acrobatics both in and out of the water. There are 134 species of shark that frequent the Barrier Reef, some of these sharks like the Tiger shark and Hammerhead Shark are better known unlike the species of shark you might see in the Great Barrier Reef is the tasseled wobbegong shark (Below). These sharks grow from 4 feet long to a maximum of 10 feet. They can be identified by an unusual fringe along the front of their flat head, as well as their unique camouflage pattern. The tasseled wobbegong spends most of its time on the ocean floor where it hunts lobsters, crabs, octopus, and bony fish. They are nocturnal hunters and can swallow prey almost as big as themselves. Whale sharks are one of the must-see shark species of the Great Barrier Reef. These sharks grow up to 50 feet long and can be found around the surface of the ocean where plankton bloom. While they have 300-350 rows of tiny teeth, they use filter pads in their mouths to strain plankton out of the water for sustenance.



Who does not love seeing a Turtle, six of the world's seven turtle species reside in Great Barrier Reef? Instinct drives turtles together each year to mate in the waters and beaches all along the Great Barrier Reef, especially Fitzroy and Green Islands in north Queensland and Bundaberg, Lady Elliot and Lady Musgrave Islands in the southern Great Barrier Reef. The Great Barrier Reef is a marine playground for humpback whales and their calves. Their annual migration north from the Southern Ocean sees them tail slapping in the waters along the Great Barrier Reef, also the Minke whale can be seen in certain time of the year. Dugongs (Below), or **sea cows** as they are sometimes called, are marine animals which can grow to about three meters in length and weigh as much as 400 kilograms. They are the only marine mammals in Australia that live mainly on plants. One creature that is not welcome is **The box jellyfish** it can grow up to 38cm across the bell with up to 15 tentacles at each corner. The tentacles look flat but can extend up to 3m. Each tentacle is packed with stinging cells that contain a tiny harpoon attached to a venom-filled bulb. And with millions of tiny harpoons on each of its 60 tentacles, it can deliver a significant amount of venom at once, causing the victim intense pain when the tentacle attaches to the skin. A sting from a box jellyfish is very painful so not to be messed with.

Along the Great Barrier Reef is a scattering of fabulous sandy islands and the biggest of these is Frazer Island. The largest sand island in the world, it has over 100 freshwater lakes and home to 400 people. The island is roughly 2 times the size of Dublin and has rainforests, mangroves and huge sand dunes up to 250m in height. There are up to 150 Dingoes' (Wild Australian dog) living on the island as well as the 74 species of Reptiles (Snakes, Lizards) and the Bird species the island is a real nature reserve.



Great Barrier Reef Fun Facts

- The Great Barrier Reef is classed as the single largest living organism in the world, spanning a total distance of over 2300km
- The Great Barrier Reef is comprised of over 900 individual islands
- The widest sections of the Great Barrier Reef reach over 65 kilometres at their largest areas
- Over 1500 species of tropical Fish, 400 different types of Coral, 200 types of Birds and 20 types of Reptiles are just some of the lifeforms which inhabit the reef
- The Great Barrier Reef is one of the few Australian features that can be seen from space
- The Great Barrier Reef is a UNESCO World Heritage area and listed as one of the "Seven Natural Wonders of the World"
- The Great Barrier Reef covers an overall area that is larger than the size of Italy
- The Great Barrier Reef draws over a million international visitors each year
- The depth of the reef ranges from depths of 35 metres inshore to depths of 2000 metres on the outer reef.
- Around 10 percent of the world's total fish species can be found just within the Great Barrier Reef
- The Great Barrier reef is the largest reef in the world
- The Great Barrier Reef is larger than the entire country of Italy put together
- The Great Barrier Reef is the size of about 70 million football fields!
- Recycling is a great way to help places like the Great Barrier Reef stay beautiful and its fish stay healthy
- Over 1500 kinds of fish live in the Great Barrier reef. The smallest fish is called the Stout Infant Fish which is only 7 millimetres long, and the biggest is the whale shark which can grow up to 12 metres long!



Activities to do at home

You can do some searching online to discover the different Mammals to be found on the Great Barrier Reef, make a list for your scrapbook.

Paint or draw the most unusual colourful fish you can think of ?



Quiz

- 1, Where would you find the Great Barrier reef?
- 2, Name the largest sandy island that's along the reef?
- 3, How many species of shark can be found on the reef?
- 4, How long is the Great barrier reef?
- 5, Can the reef be seen from space?
- 6, Name the wild dog that can be found on the sandy island?
- 7, The Dugongs are better known as?
- 8, What type of fish was Nemo?
- 9, Whale sharks grow to what length?
- 10, How many species of turtle live on the reef?

All answers will be on our next issue (Our Carbon Footprint)

Last issue questions and answers (The Arctic & Antarctic)

Quiz

- 1, Name 2 countries that surround the Arctic? Greenland, Russia
- 2, How cold could the temperature get to in winter in the Arctic? - 60
- 3, How many times bigger than Australia is the Antarctic? Double the size.
- 4, What are the whales with the tusk called? Narwhal
- 5, Name 2 of the ethnic people living in the Arctic? Inuit and the Sami
- 6, The biggest single ice sheet is found in the Antarctic, how big is it? The size of France
- 7, What animal do the Sami people herd? Reindeer
- 8, The Antarctic ice can be how thick? 1.6 km or 1 mile thick
- 9, How long are the Winters in the Arctic? 9 months
- 10, Name some creatures that live in the Antarctic? Penguins and Seals



