

THE GREAT BARRIER REEF

Have you ever heard of The Great Barrier Reef? It is the biggest coral reef in the world and one of the world's greatest wonders, and the biggest living organism any human has ever come across. It is an amazing place and when you see it you feel like you have just dived in to a new planet, a new universe, it's amazing.



What is The Great Barrier Reef and what lives in it?



The Great Barrier Reef is a massive coral reef. It is made up of around 3,000 coral reefs squished up close, and has over 600 islands. About 100 different types of coral grow and thrive in this outstanding natural habitat and so do millions of fish, turtles, coral, barracoota, and just about any other sea animal you can think of. It even has its occasional shark. There are 1,500 species of fish, 411 species of hard coral, 1 third of the world's soft coral, 134 species of sharks and rays, 6 of the world's 7 species of endangered turtles, and more than 30 species of other marine animals.

Location:

Between the Queensland Coast and the Western edge of the Pacific Ocean, Australia, is where this amazing organism grows and shows off its natural wonders. Next time you go on a holiday why not visit The Gold Coast and then travel up the Queensland coast and look over The Great

Barrier Reef.



A map of the Great Barrier Reef.

Why is the Great Barrier Reef important?

The Great Barrier Reef is very important. Much more important than you think. It does not just entertain you and give a beautiful home to sea creatures, but it also absorbs *carbon dioxide*. *Carbon dioxide* is a horrible gas humans release when we burn *fossil fuels* and when we breathe out. So in another way the ocean helps us stay alive because it is not good for humans to breathe in carbon dioxide. But when the ocean absorbs carbon dioxide it creates *Ocean Acidification*, which is NOT good.

What is Ocean Acidification and how does it affect The Great Barrier Reef?

Down in the ocean, any animals with hard shells like clams and coral feed on things called *carbonate ions*. Carbonate ions help make the animal's shell or the coral's skeleton hard and protective. Just like when you eat your veggies, you grow big and strong.

Ocean Acidification is when humans release carbon dioxide goes into the ocean and you would think that is that. But when carbon dioxide enters the water it releases little things called *hydrogen*. Hydrogen takes all of the carbonate ions, (the good guys,) away. Then once they have 'completed their mission' they make the ocean more *acidic*.

When the ocean gets acidic and coral can't feed on carbonate ions to make their shells stronger and the animal and coral die, affecting the food chain. And if the ocean gets too acidic the animals can't live there so they will die too. Soon (if people don't do something,) the whole ocean, including the Great Barrier Reef will be not only colourless but also lifeless:



This is what The Great Barrier Reef will look like if we don't stop ocean acidification and climate change.



This is dead coral. It is what the ocean will soon be full of.

Pollution

The Great Barrier Reef's threats do not end there. There is another big threat that humans have created for The Great Barrier Reef called; Pollution. *Pollution* is when humans leave rubbish on the ground, on a seat, anywhere. Then the wind blows and the rubbish falls down a drain, and enters the sea. Turtles think plastic bags are jellyfish, and eat the plastic bags. Then they will choke and could die. But that is just the beginning. If more, and more rubbish enters the ocean than even more animals will get curious. Which means even more animals could die.



This is a poor turtle stuck in a fishing net.

Can people help save The Great Barrier Reef?



We have to take a stand and help save The Great Barrier Reef before it is too late. The Great Barrier Reef is slowly, but surely dying. To help save this amazing organism we have to stop ocean acidification and climate change. But to do that all humans must; find new ways to create electricity like solar and lunar panels, stop littering, shrink our carbon usage, recycle rubbish, food and water, and take more walks or rides and use your car less.



This is part of The Great Barrier Reef.

Facts:

- The Great Barrier Reef is around 500,000 years old.
- If we do not stop ocean acidification and *climate change*, the Great Barrier Reef might only last another 10 years! 😞
- If the Great Barrier Reef dies, humans will lose some of their most essential food sources and supplies, carbon dioxide will not be recycled, and the ocean will be lifeless. 😞😞
- Some prehistoric fish survive in only these conditions so we must not lose the Great Barrier Reef.
- Did you know, coral only spawns once a year!
- The Great Barrier Reef can be seen from outer space!
- The Great Barrier Reef is the size of 70 million football fields!
- Around 10% of the world's fish can be found in the Great Barrier Reef

Videos:

- <https://www.youtube.com/watch?v=6SMWGV-DBnk>
- <https://www.youtube.com/watch?v=kxPwbhFeZSw>
- <https://www.youtube.com/watch?v=tBUCjiXkOzE>
- <https://www.youtube.com/watch?v=J2BKd5e15Jc> -at least watch till 2.30, it's really interesting.
- <https://www.youtube.com/watch?v=UyaGjSMEjsA>
- <https://www.youtube.com/watch?v=kfjSrLzBPt0>

Websites:

- <https://greatbarrierreef.org/>
- <https://www.nasa.gov/feature/jpl/nasa-begins-study-of-australias-great-barrier-reef>



This is life in The Great Barrier Reef.

Dictionary:

The words in blue italics e.g. *Climate change* are the words included in the dictionary.

Acidic - When something contains lots of acid the term acidic is used. If an animal's habitat is too acidic the animal will die.

Carbonate irons - Carbonate irons are little creatures that get eaten by little animals such as crabs, clams and coral. Carbonate irons help the creature's bones and shell. If animals don't eat carbonate irons they will not survive and coral will just die.

Carbon dioxide - A gas humans create when we burn fossil fuels, and create when we breathe out.

Climate change - A change of climate created by not just the burning of fossil fuels, but even just the usage of fossil fuels.

Fossil fuels - A natural fuel such as coal or gas.

Habitat - A home or common surrounding for any form of life.

Hydrogen - Hydrogen is released from carbon dioxide when it enters the water. They hydrogen takes away carbonate irons and makes the ocean acidic.

Ocean Acidification - Is when carbon dioxide enters the water and releases little things called hydrogen which competes with carbonate irons that help fish, clams, turtles and coral grow. Then they make the ocean more acidic.

Organism - A single celled life form.

Pollution - Pollution is when humans litter. In this case it is when humans litter and the rubbish goes down the drain and into the sea.



These are some of the incredible sightings people see whilst diving in The Great Barrier Reef.