

## CORAL REEFS

### What is a Coral Reef?

The simple definition is it is a bar of rock, sand, coral, or other material lying beneath the surface of the water. But that doesn't begin to tell you what a coral reef is.

### Here's a little more information:

Coral Reefs are made up of tiny coral "polyps" that branch out and connect to each other. These polyps secrete calcium carbonate (limestone) which build these "rock-like substances." Tiny polyps live inside the coral structures. When these tiny coral skeletons fuse (bind) together this ultimately creates the coral reefs.

25% of all marine species come together as a community and rely on coral reefs for protection, shelter, nursery, spawning, food, and life. Coral reefs support more than a million different species but they make up for less than 1% of the ocean floor.

Approximately 70% of earth's oxygen is produced by the ocean. Coral Reefs are CRITICAL in this balance of life.

Because coral polyps grow on top of their ancestors' exoskeletons, growth patterns reveal things that happened millions of years ago.

Coral Reefs protect coastlines from damaging effects of wave action and tropical storms.

When hard corals break down this creates sand. Every grain of carbonate sand on beaches used to be a living animal or plant.

They are often referred to as the rainforests of the sea because they are so complex and have been around for about 500 million years.

## CORAL REEFS (CON'T)

Three non-profits which we recommend for more information are listed below:

### **The Ocean Agency**

[www.theoceanagency.org](http://www.theoceanagency.org)

"We're a different kind of nonprofit. We use a combination of creativity, technology, and powerful partnerships to raise the awareness and support necessary to help fast-track ocean conservation action."

The key word in their description of what they do is the word *Creativity* and stress that problems can be solved with this one word. We agree!

The Ocean Agency produced "Chasing Coral" an award-winning documentary which debuted on Netflix in 2017. This is one example of how they are imaginatively teaching the world about underwater issues and providing education and directives to humans on their responsibility to protect and care for our oceans. This is a great resource for parents, educators, and students to learn more about what can be done. Follow the link above and dive in!

### **Coral Restoration Foundation**

[www.coralrestoration.org](http://www.coralrestoration.org)

The Coral Restoration Foundation is headquartered in Key Largo, Florida. Founded in 2007, they began working to build up stock of staghorn and elkhorn coral and transplanting tree structures on to the ocean floor. CRF was able to collect clippings and broken fragments of coral from the remaining wild populations of staghorn and elkhorn in south Florida through collaboration and permits with the Florida Keys National Marine Sanctuary. "Building a genetically diverse portfolio of coral proves to be critical for CRF's™ current restoration work.



## **CORAL REEFS (CON'T)**

Their goal to restore the genetic diversity of wild coral populations rather than rely only on corals with perceived – but scientifically unproven – strengths was forward-thinking and innovative.

### **Coral Reef Alliance (CORAL)**

[www.coral.org/aboutus](http://www.coral.org/aboutus)

CORAL works alongside local people, communities and partners, from fishers and government leaders to SCUBA divers and scientists to protect and reduce reef threats. Over twenty-five years ago this non-profit galvanized the SCUBA diving community to take action to protect coral reefs. This small group of coral enthusiasts learned early that in order to make a difference — they needed to expand. When climate change started to impact reefs, CORAL realized to achieve its mission to save coral reefs, it needed to act locally as well as globally. They created an innovative approach called Adaptive Reefscapes that “facilitates the environment to allow corals to adapt in the era of climate change.” Their goal is to establish 45 Adaptive Reefscapes around the world by 2045.

**For children who enjoy watching when they learn – check out these two you tube videos.**

### **What are Coral Reefs and what's their purpose?**

[www.youtube.com/watch?v=elul2ObvKV8](http://www.youtube.com/watch?v=elul2ObvKV8)

### **National Geographic Coral Reefs 101**

[www.youtube.com/watch?v=ZIULxLLP32s](http://www.youtube.com/watch?v=ZIULxLLP32s)

