Coral Reefs

What is a Coral?

Well, corals are **animals.** However, corals make a **calcium carbonate skeleton** that looks similar to a rock and have **a symbiotic relationship** with plant-like cells called **zooxanthellae**.

Types of Corals:

Hard Coral- Hard Corals are the building blocks of Coral Reefs. Coral Polyps form Coral Colonies that group together under certain conditions to form Coral Reefs.

It is the hard coral skeletons created from calcium carbonate (limestone) secreted by Coral Polyps that form the 'Hard Coral'.

Soft Corals - Soft Corals do not have a hard skeleton, and are soft and bendable with a soft or leathery feel. These corals often have wood-like cores made of calcium (spicules) for support and fleshy rinds for protection. Known as non-reef building corals (ahermatypes) they do not always have the relationship with algae (zooxanthellae) like hard corals.

How do Hard Corals get their feed?

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The zooxanthellae living in the soft tissue of a coral polyp **use sunlight** to produce food through **photosynthesi**s and create a byproduct that the coral can use as food. Thus, zooxanthellae provide corals with food; in return, the coral provides the zooxanthellae with shelter and nutrients.

Corals also capture food. At night, they stretch out their **stinging tentacles** and catch the **microscopic organisms** that float in the water and digest them in their stomachs.

Threats to Coral Reefs:

Destructive fishing practices: cyanide fishing, blast or dynamite fishing, bottom trawling, and muro-ami (banging on the reef with sticks).

Overfishing: This affects the ecological balance of coral reef communities,

Careless tourism: Careless boating, diving, snorkeling, and fishing happens around the world, with people touching reefs, stirring up sediment, collecting coral, and dropping anchors on reefs.

Pollution: Urban and industrial waste, sewage, agrochemicals, and oil pollution are poisoning reefs. These toxins are dumped directly into the ocean or carried by river systems from sources upstream.

Sedimentation: Erosion caused by construction (both along coasts and inland), mining, logging, and farming is leading to increased sediment in rivers. This ends up in the ocean, where it can 'smother' corals by depriving them of the light needed to survive.

Coral mining: Live coral is removed from reefs for use as bricks, road-fill, or cement for new buildings. Corals are also sold as souvenirs to tourists.

Climate change: Corals cannot survive if the water temperature is too high. Global warming has already led to increased levels of coral bleaching, and this is predicted to increase in frequency and severity in the coming decades