



EXPLORE Marine Biology

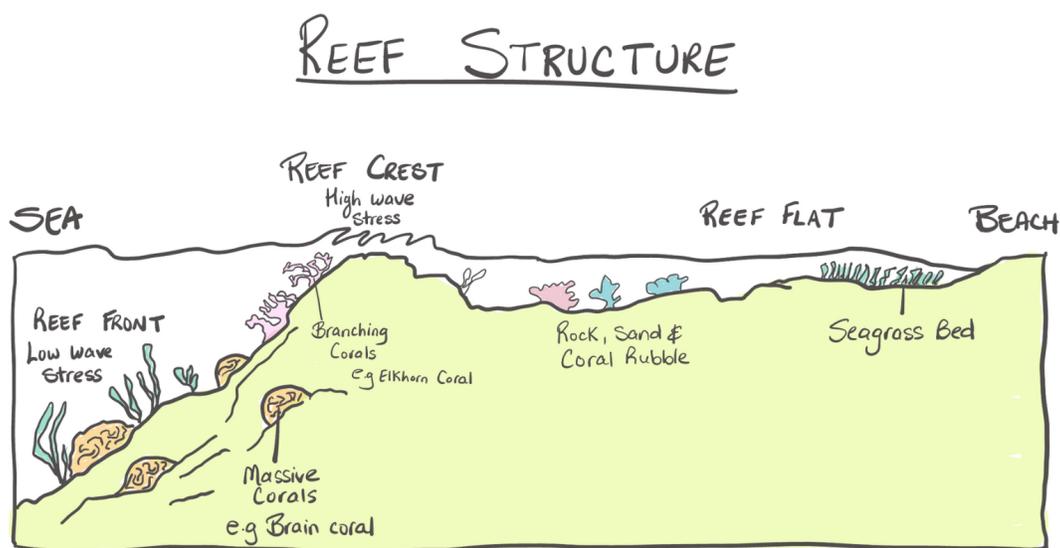
Illustrated Marine Biology Tutorials

Structure of the Coral Reef

Prepared by
Explore Marine Biology

Structure of the Coral Reef

Although there are different types of coral reefs, they do have something in common, which is the structure of the reef. The diagram shows a typical reef structure.



Different areas have different environmental conditions. Therefore, it can support different species of coral reefs.

To the left, we have the sea, and to the right, we have the beach. Rising up from the lower depth of the ocean to the water level right near the surface of the water is an area called the **reef front**.

The slope of the reef front can be steep or gentle. This is a low-stress area, which means there's not a lot of wave action, and it's relatively calm. Corals like the brain coral and the pillar coral usually settle in this area.

As we move further up, we encounter the **reef crest**, which can sometimes protrude out of the water.

Now this area has very high wave stress, and the corals that grow here are usually branching corals like the elkhorn coral, which can diffuse some of that strong wave action.

As we move further toward the beach area, we also encounter an area called the reef flat. The reef flat is also called the back reef and it is found behind the reef crest. It can be short or several hundred meters long. The water can be shallow or it can be several meters deep.

The bottom of the flat usually consists of rock, sand, coral rubble, or some combination of these. You'll also find sea grass growing there in the reef flat.

The reef flat of atolls and barrier reefs descend into the lagoon, whereas the reef flat of fringing reefs ends at the shoreline.

One thing to take note of is those different areas have different environmental conditions, and because of this, it supports different types of coral reef species.