



Welcome to the reef

Background reading for teachers

This reading gives you the background for each slide, with sources you can check.

What is a coral reef?

Reefs are built mainly by hard corals, colonies of small animals called polyps that lay down limestone skeletons. Covering less than one percent of the ocean floor, coral reefs support an estimated 25% of all known marine species.¹ Estimates of reef area vary with the method, from about 0.1% to 0.5% of the ocean floor, so the slide uses the round figure of about a tenth of one percent.

The Coral Triangle

The Coral Triangle covers about 6 million square kilometres across six countries. It holds 76% (605) of the world's 798 known coral species, 37% (2,228) of the world's reef fish species and six of the seven marine turtle species.² About 363 million people live in the Coral Triangle countries, and the reefs support the food and incomes of more than 100 million people.^{2, 3}

Why reefs matter

Reefs protect coastal communities from storm damage, support fisheries and tourism, and attract divers.⁴ Reef organisms also contain unusual chemical compounds that are being studied for medicines.⁵

Dive signals

The signals on slide 8 are standard recreational diving signals. The most important one to get right is thumbs up, which means go up or end the dive. Divers use OK to ask and answer whether everything is fine.

The dive animals

All the animals on the dive slides were photographed in Negros Oriental. The facts are simplified for students: parrotfish produce sand by grinding up the coral and rock they scrape while feeding; anemonefish are protected from their anemone's stings by a mucus coat; frogfish use a modified fin spine as a fishing lure; mimic octopuses imitate other animals to avoid predators.

Sources

1. NOAA, Florida Keys National Marine Sanctuary. Coral reef biodiversity. floridakeys.noaa.gov/corals/biodiversity.html
2. WWF. Coral Triangle facts. [wwf.panda.org/discover/knowledge_hub/where_we_work/coraltriangle/coraltrianglefacts/](https://www.panda.org/discover/knowledge_hub/where_we_work/coraltriangle/coraltrianglefacts/)
3. Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security. sdgs.un.org/partnerships/coral-triangle-initiative
4. NOAA National Marine Sanctuaries. Coral reef background for teachers. sanctuaries.noaa.gov/education/teachers/coral-reef/background.html
5. E.O. Wilson Biodiversity Foundation (2024). Coral lesson 2 background. eowilsonfoundation.org

