



Why are Coral Reefs so Colourful?

Module Summary

This module is an exploration dive to discover the different functions of colour on coral reefs. Colour is used by all organisms on the reef, but for different reasons; camouflage, distraction, warning, reproduction, and counter-illumination. Students will be given an in-class activity to complete and an opportunity to discuss with the underwater educator why different fish have evolved to be a particular colour.

Year 6

Learning Objectives

- Identify color loss on the reef at various depths.
- Describe why there is color loss on the reef at various depths.
- Explain how colour is used by some animals on the reef to avoid predation.
- Differentiate how colour is used during reproduction for male versus female fish.
- Summarize countershading or counter-illumination.

Science National Curriculum Alignment

- Discuss the use of colour in the natural environment, *for example, in camouflage, talk about how animals adapt to their surroundings* (Year 6).

Description of the live dive

The dive will take place on a colourful and pristine coral reef. The underwater educator will communicate constantly with the live lesson host (who will be on the boat) and with the engaged remote class. The educator will take the students through a series of fun facts and learning objectives regarding our colourful coral reefs, all in alignment with the Science National Curriculum of the Cayman Islands. Students will have an in-class activity to complete during the live lesson, which they are welcome to ask questions about to our underwater educator at any time during the duration of the broadcast. Pre-recorded footage and images will be used to show the diversity of different colours and functions on the coral reef, should they not present themselves naturally during the broadcast. The live lesson will conclude with an interactive game of “Why is that fish that colour?”.



Live broadcast outline (45 mins)

00:00 - 03:00	CCMI host on the boat welcomes students and outlines the lesson
03:00 - 05:00	CCMI host introduced in lesson activity to along with the educator
05:00 - 10:00	Fish that use colour for distraction e.g. Four-eye butterfly fish
10:00 - 15:00	Fish that use colour for camouflage e.g. Nassau grouper
15:00 - 20:00	Questions
20:00 - 25:00	Fish that use colour for warning e.g. Lionfish/Blue Tang
25:00 - 30:00	Fish that use colour for reproduction e.g. parrotfish/Nassau grouper
30:00 - 35:00	Student Game: Why is that fish that colour?
35:00 - 40:00	Questions
40:00 - 45:00	CCMI host on the boat recaps the live dive and concludes the lesson

Materials

Internet connection, laptop, projector, speakers, paper, pencils/pens, CCMI activity sheet, and CCMI fun fact sheet.

Useful resources

- www.reefresearch.org/reefs-go-live
- www.projectaware.org
- www.oceanservice.noaa.gov/kids/
- www.education.gov.ky/education/curriculum
- www.doe.ky