



Dive 4 - “Cayman’s Reefs Over Time: Responses and Actions”

Module Summary

This module is a live dive highlighting some of CCMI’s recent research on the changing coral reef ecosystems of the Cayman Islands. Students and teachers are familiarized once again with the Reefs Go Live team and how to interactively ask questions throughout the live lesson. They are then taken on a guided dive with our CCMI underwater educator, where they will explore the differences between a healthy coral reef and a degraded coral reef. Students will be given an in-class activity to assist with their understanding of the stressors this environment is facing and how each of them can help minimize those stressors. Near the conclusion of this live lesson, students will also be asked by the CCMI underwater educator and host to prepare a letter of suggested solutions to the stressors discussed to their local government.

Year 4, 5, 6

Learning Objectives

- Understand the changes to Cayman’s coral reefs over time
- Recognize the differences between a healthy coral reef and a degraded coral reef
- Appreciate the importance of a healthy coral reef ecosystem
- Identify the stressors facing Cayman’s coral reefs
- Prepare a list of solutions to these stressors to present to local government

Science National Curriculum Alignment

- Investigate a local habitat, including the relationship between the animals and plants found there, and develop skills in classifying animals and plants by observing external features. (Year 4)
- Observe similarities and differences among animals and among plants. (Year 4)
- Investigate the conditions necessary for the growth of familiar plants including light, heat and water. (Year 5)
- Learn about the structure of the earth. (Year 6)

Description of Live Lesson

This 45min live dive will take place over two areas of a coral reef ecosystem surrounding Little Cayman, Cayman Islands: One of which is a pristine healthy reef system that is rich with marine life, the other being a degraded reef system that is devoid of abundant marine life. The CCMI underwater educator will communicate with the live lesson host (who will be topside on the boat) and with the engaged remote classes. The educator will take the students through a series of reviewed fun facts and learning objectives (listed



above) regarding these local changing complex environments, all in alignment with the Science National Curriculum of the Cayman Islands targeted for students in year 4 - year 6. Students outside of this age range can still enjoy our live dive experience and are encouraged to interact with our underwater educator and host or ask questions should they have them. 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 may be used to show the diversity and complexity of this changing coral reef, should these processes not be discovered naturally throughout the broadcast.

Live broadcast outline (45 mins)

- 00:00 - 03:00 Host welcomes students and outlines the lesson
- 03:00 - 05:00 Host introduces the Educator and the in-class activity sheet
- 05:00 - 10:00 Educator explains the importance of a healthy coral reef ecosystem
- 10:00 - 15:00 Educator describes a healthy coral reef and how we measure reef health
- 15:00 - 18:00 Questions
- 18:00 - 25:00 Educator describes a degraded reef
- 25:00 - 30:00 Educator identifies the stressors facing Cayman's coral reefs
- 30:00 - 37:00 Educator discusses with students how to prepare a list of solutions to these stressors which they can present to local government
- 37:00 - 40:00 Questions
- 40:00 - 45:00 Host recaps the live lesson and concludes the module

In Class Materials Needed

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

Useful Additional Resources

- www.reefresearch.org/reefs-go-live
- www.doe.ky
- www.education.gov.ky/education/curriculum
- www.nationaltrust.org.ky/
- <https://www.guyharvey.com/ocean-foundation/>
- <http://www.darwininitiative.org.uk/project>