



Teachers Mini-Module Lesson Plan

Underwater Symbiosis - Commensalism

Mini-Module Summary

This five-minute lesson introduces symbiosis and what it means for different organisms to be in a symbiotic relationship, with a special focus on commensalism in this mini-module. Using the video, students will be guided through differences of the three types of symbiotic relationships and how to properly identify them, whether they are found on land or in the sea. The CCMI educator will then take the students on a short underwater tour of a diverse coral reef, pointing out common examples of commensalistic symbiotic relationships. Teachers using this mini-module are encouraged to follow up the lesson with a nature walk or a brief snorkel to allow students the opportunity to discover and record their own examples of commensalism.

Curriculum Aim - Year 4

Learning objectives

- Explain symbiosis
- Define mutualism, commensalism, and parasitism
- Describe examples of both terrestrial and marine symbiotic relationships
- Recognize and identify “commensalism” in real-life scenarios
- Investigate potential commensalistic relationships in a local natural area (terrestrial or marine)

The Cayman Islands - Science National Curriculum Alignment

- Observe similarities and differences among animals and among plants (Year 4).
- Find out about other animals, including how they grow, feed, move and use their senses (Year 4).
- 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, *for example, classify minibeasts by observing the number of legs and note the conditions in which they were found* (Year 4).

Necessary materials

Internet connection, YouTube.com classroom account, computer, projector, speakers, note paper, pencils or pens, and activity sheet (one per student)

Useful resources

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



Teachers Mini-Module Glossary

Underwater Symbiosis - Commensalism

Commensalism - relationship between two organisms of different species in which one organism derives some benefit while the other is unaffected

Coral reef - marine structure composed of a layer of living coral atop coral skeletons, minerals, and organic matter

Ecosystem - naturally occurring system made up of organisms and their like environment

Mutualism - relationship between two different species of organisms where both organisms benefit

Nuclear hunting - commensalistic style of hunting or feeding between two organisms where one organism benefits and the other is unaffected

Organism - any living thing, such as a plant, animal, fungus, or bacteria

Parasitism - interaction between two organisms in which one organism benefits and the other is harmed

Predator - animal that hunts and eats other animals

Symbiosis - close associations between two or more different organisms of different species that may, but does not necessarily, benefit each member

Symbiotic relationship - interaction between two organisms where at least one of the organisms' benefit; however, the other may be harmed, be unaffected, or benefit as well



CCMI
REEFS GO LIVE

Teachers Mini-Module Vocabulary Assessment Underwater Symbiosis - Commensalism

Below is a list of 10 vocabulary terms used in the Reefs Go Live Mini-Module “Underwater Symbiosis - Commensalism”. Show the CCMI Educator that you understand commensalism and can match the definition on the right with the correct term on the left. Thanks for your help and good luck!

1. Commensalism: _____
 2. Coral reef: _____
 3. Nuclear hunting: _____
 4. Mutualism: _____
 5. Organism: _____
 6. Ecosystem: _____
 7. Parasitism: _____
 8. Symbiosis: _____
 9. Symbiotic relationship: _____
 10. Predator: _____
- a) interaction between two organisms where at least one of the organisms’ benefit; however, the other may be harmed, be unaffected, or benefit as well
 - b) animal that hunts and eats other animals
 - c) marine structure composed of a layer of living coral atop coral skeletons, minerals, and organic matter
 - d) commensalistic style of hunting or feeding between two organisms where one organism benefits and the other is unaffected
 - e) relationship between two organisms of different species in which one organism derives some benefit while the other is unaffected
 - f) any living thing, such as a plant, animal, fungus, or bacteria
 - g) close associations between two or more different organisms of different species that may, but does not necessarily, benefit each member
 - h) relationship between two different species of organisms where both organisms benefit
 - i) naturally occurring system made up of organisms and their like environment
 - j) interaction between two organisms in which one organism benefits and the other is harmed



CCMI
REEFS GO LIVE

Teachers Mini-Module Activity Sheet

Underwater Symbiosis - Commensalism

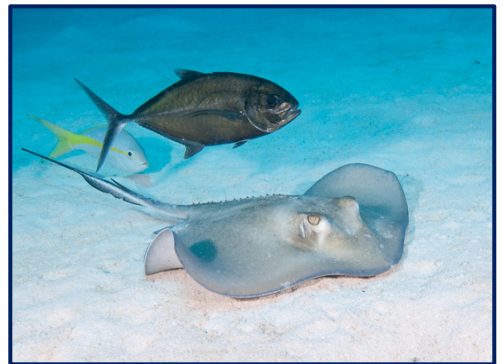
Today, you're the scientist! We need your help to investigate, describe, and record commensalistic symbiotic relationships found on a snorkel or nature walk. Below are a few examples of commensalism that you may come across; however, there are many more out there! Use the spaces below to illustrate and record information about at least three other mutualistic symbiotic relationships that you discover. Thanks for your help and enjoy your scientific investigation!



Christmas tree worms and corals



Birds nesting in trees



Southern stingray and barjack

Organism 1: _____

Organism 2: _____

Describe the relationship:

Organism 1: _____

Organism 2: _____

Describe the relationship:

Organism 1: _____

Organism 2: _____

Describe the relationship:
