



Teachers Mini-Module Lesson Plan

Underwater Symbiosis - Parasitism

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 parasitism 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 parasitic 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 parasitism.

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 “parasitism” in real-life scenarios
- Investigate potential parasitic 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 - Parasitism

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

Host - an organism that harbours another organism in a symbiotic relationship, often providing it with food and shelter

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

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

Parasite - an organism that is adapted to live on or inside a host organism and causes harm to the host

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

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

Terrestrial - of or relating to land



Teachers Mini-Module Vocabulary Assessment

Underwater Symbiosis - Parasitism

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

- | | |
|----------------------------------|---|
| 1. Commensalism: _____ | 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 |
| 2. Coral reef: _____ | b) an organism that is adapted to live on or inside a host organism and causes harm to the host |
| 3. Ecosystem: _____ | c) marine structure composed of a layer of living coral atop coral skeletons, minerals, and organic matter |
| 4. Mutualism: _____ | d) of or relating to land |
| 5. Organism: _____ | e) relationship between two organisms of different species in which one organism derives some benefit while the other is unaffected |
| 6. Parasite: _____ | f) any living thing, such as a plant, animal, fungus, or bacteria |
| 7. Parasitism: _____ | g) close associations between two or more different organisms of different species that may, but does not necessarily, benefit each member |
| 8. Symbiosis: _____ | h) relationship between two species of organisms where both organisms benefit |
| 9. Symbiotic relationship: _____ | i) naturally occurring system made up of organisms and their like environment |
| 10. Terrestrial: _____ | j) interaction between two organisms in which one organism benefits and the other is harmed |



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Teachers Mini-Module Activity Sheet

Underwater Symbiosis - Parasitism

Today, you're the scientist! We need your help to investigate, describe, and record parasitic symbiotic relationships found on a snorkel or nature walk. Below are a few examples of parasitism 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 parasitic symbiotic relationships that you discover. Thanks for your help and enjoy your scientific investigation!



Isopod and blackbar soldierfish



Caterpillar eating leaves or plants



Damselfish and staghorn coral

Organism 1: _____

Organism 2: _____

Describe the relationship:

Organism 1: _____

Organism 2: _____

Describe the relationship:

Organism 1: _____

Organism 2: _____

Describe the relationship:
