

Coral Reef Ecology II: A closer look

Grade Level: 7th and above (all students in the group must have already participated in the core coral reef ecology program)

Summary: This program was created for students that have already participated in MarineLab's coral reef ecology program; the concepts build on the concepts introduced during our core coral reef ecology program. After a powerpoint discussion, students have the opportunity to snorkel two different coral reef sites with a checklist of specific organisms, behaviors and items to look for. MarineLab staff will be in the water and on the boat to lifeguard, point out marine life, and discuss observations.

Program Objectives:

- Review the basic concepts and vocabulary covered in our coral reef ecology program
- Students will be encouraged to make close observations and ask more questions during their coral reef snorkel in order to make sense of why we see specific coral species, diversity, morphotypes and behaviors in various reef habitats
- Students will further analyze interactions of abiotic and biotic as they pertain to coral throughout the Key Largo waters

Concepts Covered:

- Horizontal zonation of reefs in the Keys
- Vertical zonation of spur and groove bank reef
- Varying morphology of coral species dependent on depth
- Coral reef community symbioses
- Spatial competition amongst the coral reef benthic community
- Effects of predation in the coral reef habitat
- Sounds of the coral reef
- Anthropogenic impacts on the Florida Keys reef system

Vocabulary: zooxanthellae, mutualism, polyp, colonial, hardbottom, zonation, reef, patch reef, bank reef, diversity, zonation, backreef, forereef, reef crest, buttress zone, morphology, excavation, corallivore, spongivore, mesenterial filaments, sweeper tentacles, allelopathy, territoriality, cleaning station, ocean acidification

Procedures: The program begins with a classroom discussion covering the concepts and vocabulary listed above. The students are then taken snorkeling to observe specific organisms, symbioses, and behaviors discussed.

Resources: <http://floridakeys.noaa.gov/corals/welcome.html>,
<http://coralreef.noaa.gov/aboutcorals/coral101/symbiotalgae/>,
http://ccma.nos.noaa.gov/ecosystems/coralreef/fl_mapping/FLClassScheme.pdf



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A Marine Resources Development Foundation Program
PO Box 787 Key Largo, FL 33037
(800) 741-1139 Fax (305) 451-3909
www.marinelab.org
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