

# Coral Reef Ecology Program

**Grade Level:** All

**Summary:** The coral reef ecology program is a part of MarineLab's core curriculum. Corals are the key component to the Florida Keys' ecology and economy. Students discuss coral reef ecology with a MarineLab instructor before boarding the boats to snorkel one of the coral reefs off of Key Largo. Usually, students have the opportunity to snorkel two different sites/snorkel trip. MarineLab staff will be in the water and on the boat to lifeguard, point out marine life, and discuss observations. Level 1 (grades 5-8) and Level 2 (grades 9-12) curriculum used accordingly (same concepts; varied classroom teaching methodology).

**\*\* service learning option available (This option includes data collection and analysis. Suited for advanced students.)**

**\*\* advanced option using research techniques and "second year" option available**

## Program Objectives:

- With a better understanding of coral reef ecology, we want MarineLab students to leave with a solid understanding of proper snorkeling etiquette at the reef that they can share with friends and family

## Concepts Covered:

- three types of corals
- coral morphology
- ecological and economical importance of coral reefs in the Florida Keys
- mutualistic relationship between coral and zooxanthellae
- Coral reproduction
- Abiotic conditions necessary for healthy coral reefs
- Disturbances to corals in the Florida Keys
- Coral reef protection efforts in the Florida Keys
- Fragility of the coral colony and proper coral reef snorkeling etiquette

**Vocabulary:** ecology, hexacoral, gorgonian, octocoral, spur and groove bank reef, patch reef, mutualistic symbiosis, zooxanthellae, coral bleaching, salinity, diversity, polyp, nocturnal, oligotrophic, mooring buoy, fragmentation

**Procedures:** The program begins with a classroom discussion covering the concepts and vocabulary listed above. **Elementary students will be presented the same information via a trivia game utilizing individual white boards.** The students are then taken snorkeling, usually at two sites, to gain to view the coral reef habitat with a MarineLab staff biologist guide.

**Extensions:** Ask staff about our efforts in collaboration with the Coral Restoration Foundation (<http://www.coralrestoration.org/>) and Mote Marine Lab (<https://mote.org/research/program/coral-reef-science-monitoring/bleachwatch>). Students can also participate in the "second year coral reef ecology" program.



© MarineLab Environmental Education  
A Marine Resources Development Foundation Program  
PO Box 787 Key Largo, FL 33037  
(800) 741-1139 Fax (305) 451-3909  
[www.marinelab.org](http://www.marinelab.org)  
Last Updated: 6/12/2016

**Resources:** <http://floridakeys.noaa.gov/corals/welcome.html>



© MarineLab Environmental Education  
A Marine Resources Development Foundation Program  
PO Box 787 Key Largo, FL 33037  
(800) 741-1139 Fax (305) 451-3909  
[www.marinelab.org](http://www.marinelab.org)  
Last Updated: 6/12/2016