

Coral Reef Bleachwatch Program

Grade Level: High School or above

Summary: The coral reef ecology program is a part of MarineLab's core curriculum. MarineLab's coral reef bleachwatch program was created for more advanced students and for groups interested in service learning/citizen science opportunities. Students will learn about the importance of this diverse habitat, snorkel multiple reefs, and collect coral bleaching data. Coral bleaching is a common disturbance to coral reefs and a local organization, Mote Marine Lab, has created a program for snorkelers to survey the corals while snorkeling. MarineLab staff will be in the water and on the boat to lifeguard, point out marine life, and discuss observations. Students will discuss data once on the boat and data will be entered into an online database used by scientists at Mote Marine Lab.

Program Objectives:

- Students will understand concepts covered in our coral reef ecology program
- Students will have the opportunity to collect necessary coral bleaching and disease data.
- Data will be discussed with MarineLab staff and submitted into Mote Marine Lab's online database.

Concepts Covered:

- Students will be introduced to three types of corals
- Students will understand the ecological and economical importance of coral reefs in the Florida Keys
- Relationship with coral and zooxanthellae
- Types of 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
- Mote's Bleachwatch protocols
- Differences between coral bleaching, paling, coral disease and coral predation

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

Procedures: The program begins with a classroom discussion covering the concepts and vocabulary listed above. The students are then taken snorkeling, usually at two sites, to view the coral reef habitat with a MarineLab staff biologist guide. Students will discuss observations once on boat and record data.

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>)

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

