

Florida Bay Survey Program

Grade Level: All (but all students in the group must have already participated in our seagrass and mangrove ecology core programs)

Summary: The Florida Bay survey program is a citizen science program that builds on the snorkeling expertise gained during the seagrass/mangrove ecology core programs. This is a 3 hour program where students will collect water quality data and work in buddy pairs to conduct underwater surveys. Students will record the abundance of seagrass, macroalgae and Florida Bay animals they learned to identify during the seagrass/mangrove ecology programs. All data is entered into MarineLab's long term database.

Program Objectives:

- Students will return to a seagrass and mangrove habitat with a better understanding of how to snorkel in Florida Bay waters and how to identify the Bay's inhabitants
- Students will gain experience in underwater research techniques and serve as citizen scientists
- Students will collect water quality data
- Students will conduct an in water survey to determine the abundance of common seagrass, macroalgae and invertebrates

Concepts Covered:

- distinguishing characteristics of algae and grass
- unique Florida Bay habitat
- common marine phyla, the characteristics of each phylum and examples of species of each phylum
- water quality
- underwater survey techniques

Vocabulary: ecology, estuary, calcareous, substrate, obligate halophyte, autotroph, heterotroph, biotic, abiotic, sessile, prop scar, rhizome, salinity, dissolved oxygen, salinity, temperature, ammonia

Procedures: Students board the vessel to return to a Florida Bay seagrass/mangrove habitat. Once at the snorkel site, students will be briefed on proper techniques to measure water quality data. Once water quality data is collected, instructors will explain to students how to properly conduct the survey. Each buddy pair will be given an underwater data sheet to fill out during the snorkel. Once on the boat, data will be discussed and compared.

Extensions: long term data collected by MarineLab students is available for analysis before or after your MarineLab program

Resources: www.seagrasswatch.org, <http://seagrass.fiu.edu/>, <http://floridakeys.noaa.gov/plants/seagrass.html>, <http://floridakeys.noaa.gov/plants/mangroves.html>, <http://mangroveactionproject.org/>, <https://marinelabresearch.wordpress.com/2012/10/15/mangrove-restoration-update/>



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