Zooplankton Lab

Summary: Students will be introduced to plankton, with a focus on zooplankton, and the overall role of plankton in the ecosystem. A MarineLab instructor will lead a discussion discussing concepts below while another tows for plankton in Largo Sound. Bioluminescence is showed off and discussed, samples are filtered and slides are made. Students work in pairs with stereoscopes to ID zooplankton in their slide. Select slides will then be projected for all to see and discussed to confirm identifications.

Grade Level: All

Timing: 1 hour

Concepts Covered:

- phytoplankton vs. zooplankton
- holoplankton vs meroplankton
- Functions of bioluminescence
- Plankton's niche in food web
- Identification of collected specimens
- Phytoplankton's role in oxygen production
- Plankton adaptations
- Use of a stereoscope

Vocabulary: plankton, nekton, zooplankton, phytoplankton, holoplankton, vertical diurnal migration, bioluminescence

Extensions: Phytoplankton Monitoring Lab

MarineLab
Marine Resources Development Foundation
Marine Science education in the Florida Keys

Standards Supported:

Next Generation Sunshine State Standards

SC.5.L.17.1: Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

SC.6.L.15.1: Analyze and describe how and why organisms are classified according to shared characteristics with emphasis on the Linnaean system combined with the concept of Domains.

SC.7.L.17.1: Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.

Ocean Literacy Principles:

Principle 5. The ocean supports a great diversity of life and ecosystems.

a. Ocean life ranges in size from the smallest living things, microbes, to the largest animal that has lived on Earth, blue whales.

d. Ocean biology provides many unique examples of life cycles, adaptations and important relationships among organisms (symbiosis, predator-prey dynamics, and energy transfer) that do not occur on land.