



MarineLab
ENVIRONMENTAL EDUCATION

P.O. Box 787
51 Shoreland Drive
Key Largo, FL 33037

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Slow Racer: Plankton Morphology

MarineLab instructors will connect with students live from our MarineLab facility. Prior to the program, instructors will tow for plankton in the oceanside waters adjacent to our campus. Plankton will be discussed, the sample will be broadcasted, and students will discover and make sense of shared characteristics amongst the plankton community. With the understanding gained from viewing live plankton, students will then predict which of our plankton models will win our slowest sinker plankton race!

Grade Level: 4-12

Timing: 45-60 minutes

Materials: blank piece of paper and pencil, plankton ID sheets (not required)

STANDARDS SUPPORTED

Next Generation Science Standards:

Featured Science Practice → Developing and Using Models, Constructing Explanations, Engaging in Argument from Evidence

Featured Cross Cutting Concept → Structure and Function, Cause and Effect

Disciplinary Core Ideas → LS1.A. Structure and Function, LS1.B> Growth and Development of Organisms, LS4.C Adaptation

4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior and reproduction

MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively

MS-LS4-4. Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment



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MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

Next Generation Sunshine State Standards

SC.5.L.15.1 Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.

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.912.L.17.2 Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.

Ocean Literacy Principles:

5a. Ocean life ranges in size from the smallest living things, microbes, to the largest animal that has lived on Earth, blue whales

5d: 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.