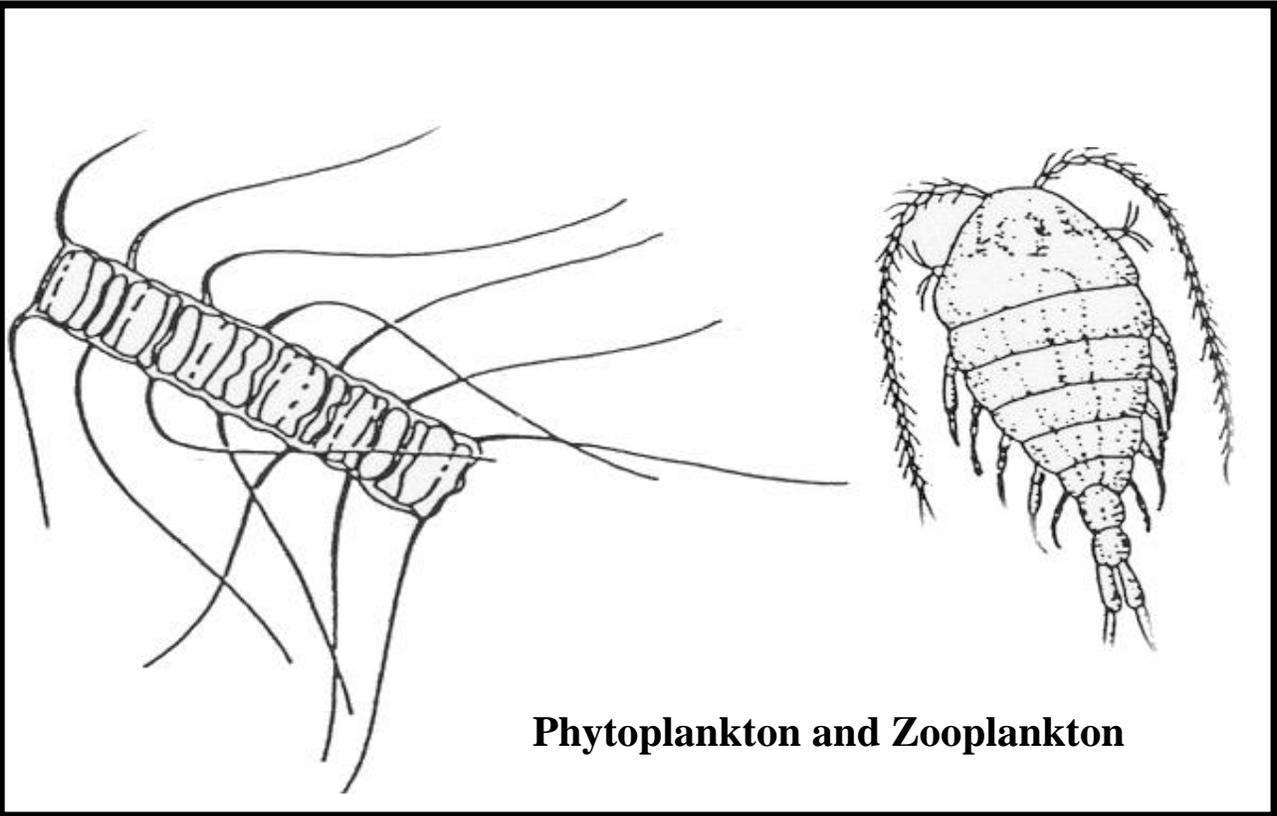




Merely Plankton

2018 - Driftwood Education Center



Phytoplankton and Zooplankton

Class Description:

Students will become part of an in depth study about both phytoplankton and zooplankton through hands on activities. Students will collect, observe, and identify living plankton in our microscope laboratory while learning the importance they play in an ocean ecosystem.

Appropriate for all grade levels

This program can be tailored to High School Students

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Merely Plankton

Table of contents and outline:

I. Pre-class set-up: (5 minutes)

1. Make sure plankton clay is ready.
2. Prepare for any games or activities
3. Be sure plankton nets are in the proper locations and are not broken.

II. Walking and Introduction (25 min.)

1. Assess what students already know about plankton. Why are plankton important?
2. Meroplankton Match-up Game

Concepts 1-3, Outcomes 1-3

III. Collection of Plankton: (20 min.)

1. Take students and two plankton nets out to dock: Teach about the plankton net and allow turns to collect samples.

Concept 2

IV. Using the Microscopes and Identification (25 min.)

1. Teach microscopes – hand out samples and ID sheets.
2. Have students write the names of plankton under categories on the dry erase board.

Concept 1 and 3 – Outcomes 1 - 2 and 3

V. Plankton Races: (15 minutes)

1. Pass out a piece of Sculpy to each student and have them create an object that floats.
2. Drop in and race. Then let Sculpty dry/

Concept 2

VI. Conclusions and Wrap-up (5 minutes)

1. Review keys terms and plankton identification.

VI. Clean Up

VIII. Additional Information and Activities

1. Additional terminology
2. Barnacle Game
3. Many books in library on plankton

Georgia Performance Standards met:

4th Grade:

S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem.

5th Grade:

S5L4. Obtain, evaluate, and communicate information about how microorganisms benefit or harm larger organisms.

7th grade:

S7L4. Obtain, evaluate, and communicate information to examine interdependence of organisms with one another and their environments.

Concepts:

Focal points of this class are:

1. Plankton plays a critical role in ocean ecosystems which depend on a stable food chain for species survival.
2. Plankton adaptations such as shape and size are key factors to their survival.
3. Classifying and identification is the first key to understanding.

Outcomes:

Upon completion of this class, students will be able to:

1. Identify several species of intertidal plankton and understand their role in an ecosystem
2. Develop proper skills to work a microscope.
3. Separate species of plankton into four major categories.

Next Generation Science Standards met:

MS-LS1-6: Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

MS-LS2-3: Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

South Carolina Standards met:

4th Grade:

4.L.5: The student will demonstrate an understanding of how the structural characteristics and traits of plants and animals allow them to survive, grow, and reproduce.

5th Grade:

5.L.4B.3 Construct explanations for how organisms interact with each other in an ecosystem (including predators and prey, and parasites and hosts).

6th Grade

6.L.4: The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive.

Florida Standards met:

SC.4.L.17.2: Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.

SC.4.L.17.3: Trace the flow of energy from the sun as it is transferred along the food chain through the producers to the consumers.

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.