

LESSON 8

# Plankton Observations

## KEY CONCEPTS

Plankton are divided into two major classifications: phytoplankton (plant) and zooplankton (animals). Phytoplankton have specific structures that enable them to float, holding phytoplankton near the surface so they continue to photosynthesize and reproduce, and zooplankton near their phytoplankton food source. Many of the zooplankton are larvae forms of common invertebrates that settle on the bottom or can be found on the beach: i.e., barnacles, crabs, snails, etc. Form and function are closely related in determining how well plankton stay near the surface.

## OBJECTIVES

Students will construct and use a plankton net.  
 Students will classify plankton using observable characteristics.  
 Students will construct, test and alter plankton models.

## PROCESS SKILLS

observing                      classifying                      predicting                      inferring

## KIT MATERIALS

- For Activity 1 (optional)
- a pair of pliers
- wire cutters
- copy of Plankton Net Procedure sheet
- nylon stocking (discarded panty hose work well)
- metal coat hanger
- needle and strong thread
- string
- small bottle with lid (baby food jars work well)
- For Activity 2 (the core activity)
- 17 sets of the plankton pictures (includes a set for use on overhead)
- Transparency #8A - *Paralytic Shellfish Poisoning*
- For Activity 3 (optional)
- one Discovery Scope to be passed around for all to use
- videotape from Monterey Bay Aquarium, living plankton segment
- For Activity 4 (optional)
- waterproof clay
- copies of a plankton picture guide
- bag of miscellaneous construction materials

## NON-KIT MATERIALS

- For Activity 2 - overhead projector
- For Activity 3 - a microfiche reader (if available)
- VCR and monitor

## VOCABULARY

- plankton - mostly microscopic water plants and animals in the water that move with the waves, tides, and currents
- plankter - a single planktonic organism
- phytoplankton - plant plankton found near the surface where they produce their own food through photosynthesis
- diatom - single-celled, yellow-green algae
- dinoflagellates - organisms that resemble both plant and animal plankton; they propel themselves using two, whip-like flagella (animal-like), but they also photosynthesize (plant-like)
- zooplankton - animal plankton that feed upon phytoplankton or other zooplankton
- permanent zooplankton (holoplankton) - animals that spend their entire lives in a floating condition
- temporary zooplankton (meroplankton) - exist as plankton for only a limited part of their development and later become bottom dwelling or free swimming organisms