The Ecology of Kelp Forests
The Living Oceans

Grade Levels:
Intermediate
Junior High
High School

Subject Areas:
Biology
Life Sciences
Environmental Education

Synopsis:

Live-action underwater photography reveals the height and structure of undersea kelp forests inhabited by garibaldi, sea urchins, senorita fish, octopus, moray eels and sea otters, which exist in predator/prey relationships as well as a state of mutualism. At the seaward edge of the kelp forest the predator/prey relationship continues between mantis shrimp and octopus, with pike blenny warfare, and with the nocturnal dance of batrays. A final sequence films winter storms detaching kelp from their holdfasts to provide floating nurseries for another generation of fish and other marine animals.

Learning Objectives: Students will:

- Provide examples of predation in the world's oceans.

- Explain why sea otters are dependent on kelp forests.

- Understand that detached kelp forests provide floating nurseries for several species of fish.

Vocabulary:
regenerate, canopy, fronds, gregarious, parasite, mola mola

Pre-Viewing Discussion:

What is meant by the term predator or predation?

What is a cleaner fish? Why are they important in marine ecology?

What is kelp? Where is it found?

Does kelp play an important role in marine ecology?

Post-Viewing Discussion:

How tall can kelp forests grow?

Why are kelp deposits found on California beaches during the winter? Do these deposits play a role in marine ecology?

Why are sea otters dependent on kelp forests? How much food do sea otters consume per day?

Who are the natural predators of the octopus?

Further Activities:

Do further research on any of the species mentioned in this program.

Investigate the uses of kelp deposits washed on shore in America or England.

Find out how biologists at the Monterey Bay Aquarium are protecting the lives of sea otters.

Find out if there are any marine animals that are a nuisance in Monterey Harbor.

Related New Dimension Media Titles:

Biological Classification (Series)