



Teacher's Guide

Restoring H₂O Ecosystems: Saving Chesapeake Bay **Planet H₂O**

Grade Levels:

Intermediate
Junior High

Subject Areas:

Environmental Education
Life Sciences

Synopsis:

Students attending a leadership camp sponsored by the Chesapeake Bay Foundation get a first-hand look at the problem of diminishing blue crab populations in the bay. They learn that water runoff from homes and industry has depleted the oxygen in the water, causing many ecological problems. As they follow a team of marine ecologists restoring blue crab populations to the bay, they learn how baby crabs are tagged, raised in captivity and reintroduced into the bay. They also become enthusiastic supporters of efforts to restore the ecological balance in Chesapeake Bay.

Learning Objectives: Students will:

- Understand that we are all responsible for maintaining water quality.
- Describe the methods used by marine ecologists to monitor and reintroduce blue crab populations into Chesapeake Bay.
- Appreciate the contributions of marine ecologists to restoring the livelihoods of watermen on Chesapeake Bay.
- Gain an understanding of watersheds and their importance to ecology.

Vocabulary:

Scavengers, dead zone, industrial runoff, watermen, juvenile, tributaries, watershed

Pre-Viewing Discussion:

Why do so many people love to visit seashore areas?

What role do seashore areas play in the economy of these areas?

How do seashore areas become polluted?

What is a watershed? How can watersheds influence the lives of plants and animals in seashore areas?

Post-Viewing Discussion:

What was the main cause of the environmental problems in Chesapeake Bay?

Why were blue crab populations so diminished in Chesapeake Bay?

How were marine ecologists able to restore blue crab populations in the bay?

What is needed to make sure that the efforts of the scientists are not in vain?

Further Activities:

Find out if other species have been affected by pollution in the bay.

Investigate the effects of air pollution on the bay.

Find out how pollution has affected nearby rivers such as the Patuxent and the Potomac.

Find out if other coastal plains in North America have similar problems to those in Chesapeake Bay.

Related New Dimension Media Titles:

Estuaries and the Web of Life

Habitats I: Estuary

Ecological Biology

Water Environment (series)