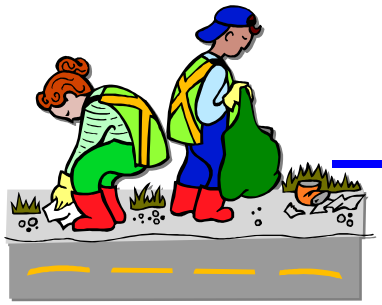


#8833

NATURE'S DELICATE BALANCE

Grade Levels: 3-8
14 minutes
ALLEGRO PRODUCTIONS 1996

DESCRIPTION

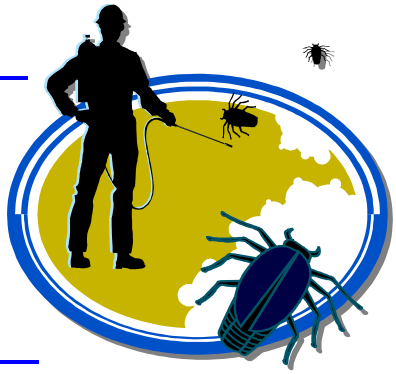
Every element of earth's ecosystem is needed to maintain the delicate balance that supports all life forms. Groups of people and organizations work to keep and even to restore this balance. Mentions often how life on earth is interconnected and that environmental responsibility is everyone's business.

ACADEMIC STANDARDS

Subject Area: Life Sciences

- Standard: Understands relationships among organisms and their physical environment
  - Benchmark: Knows ways in which organisms interact and depend on one another through food chains and food webs in an ecosystem
  - Benchmark: Knows that changes in the environment can have different effects on different organisms

INSTRUCTIONAL GOALS



1. To study the importance of the planet's ecosystem.
2. To realize that our well-being depends on the plants' needs.
3. To review the vocabulary words related to ecology.
4. To show some ways how science is helping to preserve natural habitats and ecosystems.

BACKGROUND INFORMATION

This program can heighten students' awareness of their environment and help them develop responsible attitudes and actions toward it. Introduces concepts related to the importance of our planet's delicate ecosystems and how they can be maintained.

The video explains how our planet is like one big ecosystem. For instance, trees and other plants are very important to most life on earth because they provide food and oxygen without which we could not survive.

Plants and animals develop adaptations that help them fit into their habitats and survive in their ecosystems. If its habitat is changed or disappears, an organism may not survive and its species could disappear forever. This could upset the balance in a

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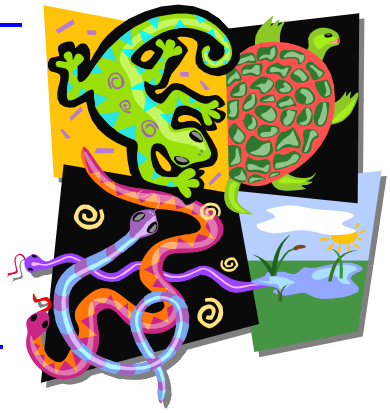
delicate ecosystem and cause its destruction. Habitats may disappear naturally, give way to expanding human population, or be lost as they are crowded by exotic or nonnative plants and animals which upset an ecosystem's natural balance.

The program also shows some ways science is helping government, industry, and others to use our natural resources while preserving natural habitats and ecosystems.

VOCABULARY

1. adaptation
2. ecologist
3. ecosystem
4. exotic
5. extinct
6. food chain
7. habitat
8. herbicide
9. nonnative
10. organism
11. wetlands



AFTER SHOWING

Discussion Items and Questions

1. What is the difference between a *habitat* and an *ecosystem*?
2. What is a *food chain*?
3. Why is it important to protect even the tiniest life form in an ecosystem?
4. If a plant or animal becomes extinct, how might it affect its ecosystem?
5. The program showed an *ecologist* collecting samples in a stream. What can be learned from the samples?
6. Introduce the terms *raw material*, *product*, *producer*, and *consumer*. Ask students to imagine that a tree is a factory. Just how does the "factory" produce the products we need to live? Show pictures of some of earth's ecosystems, and ask students to identify producers and consumers.
7. Should every species be protected from extinction, even those that might be considered pests (i.e., weeds, rats, etc.)? Ask "What good is a mosquito?"
8. Ask the class to recall the plants and animals shown in the video, and write them on the board. Discuss *adaptation*, and how each of these species is particularly suited to its habitat. What could be its place in the ecosystem's food chain? Discuss other examples of adaptations in plants and animals.

Applications and Activities

1. Recall the video's segments on Willapa Bay, the hills near the University of California, and Hook National Refuge. Review what can happen when nonnative or exotic plants are introduced to an area. How might nonnative species get into an area? Are they always harmful? Find out if any have become established in your area, how they have affected your ecosystem, and whether there have been any attempts to remove them.

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2. What kinds of wildlife live in your area? Research the kinds of animals that live and have lived there in the past. What may have happened to them?
3. Lead a discussion of the kinds of life forms that live in and around ponds. Help the class construct a simple diagram of the food chain for a pond ecosystem. What happens if any link in the chain is broken? Have students break into groups and use their imaginations to design their own ecosystem. Then have each group explain how the food chain in their created ecosystem is linked.
4. Have each student choose an extinct plant or animal and try to find reasons it may have become extinct.

RELATED RESOURCES

Captioned Media Program

- Earth Week: Seven Days to a Greener Planet #3027
- Making a Difference: Restoring the Earth Around Us #3054

World Wide Web

The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid-safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **ECOLOGY PROTECTORS SOCIETY**

http://www.eco-pros.com/

Explains the current conditions of the environment of earth. Also includes many related links.

- **NATIONAL WILDLIFE FEDERATION**

http://www.nwf.org/

Several topics to click on. Includes current news on a variety of wildlife-related topics.

- **PLANETPALS**

http://www.planetpals.com/foodchain.html

Explains many ecological terms. Click on "Home" to choose from several earth-related topics.

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