

SYNOPSIS:

This program takes an in-depth look at ecology and conservation. We will travel from South Florida, where rare crocodiles are being helped, to Alaska where caribou populations and migrations are being monitored with light aircraft and satellites. We also see how non-native plants have disturbed the natural ecosystems in different parts of the country, and what is being done to restore these areas. Many rare and beautiful plant and animal species are also featured.

CURRICULUM UNITS:

Biology
Earth Science
Ecology
General Science

CAREER OPPORTUNITIES:

Agricultural Education
Biologist
Conservationist
Ecologist
Environmental Chemist
Environmental Engineer
Environmental Planner
Farmer/Rancher
Forester
Naturalist
Wildlife Ecologist
Waste/Water Treatment

PROGRAM OVERVIEW:

To stimulate interest in wildlife conservation and ecology, take the class on a nearby state or national park where there is a nature trail. Explore the area and make notes on the variety of different plants, animals, and insects seen. Ask the park ranger to help identify some of the species found in this area. Are any threatened or endangered? Are any non-native?

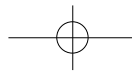
Ask the class to bring in magazine and newspaper clippings about national and international environmental/wildlife conservation subjects. Discuss these stories with the class. Are the events that are reported in these stories something good for the environment, or are they problems that still need to be solved?

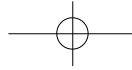
Ask each student to prepare a report on the current status of any endangered or threatened plant or animal species that inhabit the local area, or a local environmental problem.

ISSUES AND CRITICAL THINKING:

Although there are millions of different forms of life on Earth. The number of extinct species continues to rise. Have each student pick an extinct species (preferably one that became extinct in the past 50 years) and prepare a report on the reasons why it may have disappeared.

How might the extinction of a plant or animal affect its ecosystem? Should all species be protected from extinction, including those that might be considered pests, such as "weeds," mosquitos or rats?





GLOSSARY:

AQUATIC MACROINVERTEBRATES- Small animals that live in water. An important part of the food chain, they feed on microorganisms, and are themselves food for many types of fish and birds.

BIOMASS- The weight or volume of plant or animals, in which all of the elements to sustain life are present, including a complete food chain.

ECOSYSTEM- A complete environment with plants and animal, in which all of the elements to sustain life are present, including a complete food chain.

ENDANGERED- A classification given to plant or animal species that are in danger to becoming extinct.

EUCALYPTUS- Any of a genus of mostly Australian evergreen trees or shrubs that are widely cultivated for their gums, resins, oils and wood.

EXTINCTION- When a plant or animal species is unable to continue the normal reproductive cycle and all members of that species die.

HABITAT- The area or environment in which a plant or animal naturally or normally lives and grows.

HERBICIDE- A chemical agent used to destroy or inhibit plant growth.

PESTICIDE- A chemical agent used to destroy or inhibit the growth of pests, most frequently insects pests.

PHOTOSYNTHESIS- A natural process used by green plants to convert carbon dioxide and water into food substances and oxygen.

PHRAGMITES- A reed-like aquatic weed that sends out long horizontal vines and vertical shoots every few inches. These plants create a very dense, almost impenetrable cover.

RIPARIAN- The areas along river, stream and lake banks.

SPARTINA- A water plant, native to the east coast of the United States, that grows in almost perfect circles.

THREATENED- A classification given to plant or animal species that are threatened with extinction. This classification is less serious than endangered.

The Wonders of Ecology & Conservation



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MAKING THE RIGHT CHOICES



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