

Post Visit Activities

Life on the Edge



Objectives: The students will identify environmental factors that can cause a species to become endangered. The students will present persuasive argument for the protection of a particular species.

Materials: A copy of the Student Page, list of endangered or threaten species for the state.

Background: Fossil records show us that the number and type of species that live on the Earth have changed regularly and continuously through time. There have been several periods of mass extinction in the Earth's history. In these events, individuals of a species were not able to adapt to large-scale changes such as climate change. The geological record shows that species extinction has been nearly as common as species origination.

It is difficult to determine if the extinction rate we are observing today is normal or a sign of a global problem. While we know change is natural process, some people think many of the changes brought about by humans are causing larger numbers of species to become extinct, and at a faster rate than is healthy for the planet.

In most places where species are threatened with extinction, it is because of habitat destruction. A habitat is made up of both living and non-living components. Habitat loss is the single greatest obstacle to helping many endangered plants and animals recover. Scientists are working to find out more about the habitat that each species needs to survive, how we can restore habitats that have already been lost, and how we can balance human needs with the needs of other life on the planet. Other threats to plants and animals and their habitats include air pollution, destroyed watersheds, herbicides, pesticides, as well as exotic species that are introduced and that out-compete native species.

A lot of attention is focused on endangered animals, but we should not overlook endangered plants. Plants form the basis of ecosystems, and people directly depend on plants for food, clothing, building materials, medicine, and much more. Most of the world's plant species have not yet been identified or studied.

As the students experienced or learned at the park, the welfare of one species of plant or animal is likely to have a direct effect on other species, as well as on the functioning of the entire ecosystem. Many times, just removing the problem that threatens an endangered species allows it to recover on its own. But sometimes the survival of an endangered species requires more extensive human intervention. Today efforts are being made in the form of habitat protection, habitat restoration, and zoos and botanical gardens that nurture and breed animals and plants to preserve genetic diversity.

Procedure: Read the background information to the students. Discuss the definition of endangered, threatened, and rare species on the Student Page. Provide the students

with a copy of the Student Page and a list of rare, threatened, or endangered species. Divide the students into groups of 3 or 4 people. Ask each group to research a species from the list. Instruct them to gather as much information as they can and put together a profile for that species. As they investigate, have them consider the questions on the Student Page.

Have the groups take the role of an advocate for the species they selected. Have them imagine that they work for a public relations or advertising firm that has been hired to communicate to the public that the species is endangered and that the public needs to take action. The teams of students create a campaign that might include slogans, posters, TV commercials, etc. Have the teams present their campaigns to the rest of the class and, if possible, to the school.

The following are listed on the endangered species list in South Dakota:

American burying beetle
Crane, whooping
Curlew, Eskimo
Eagle, bald
Ferret, black-footed
Plover, piping
Shiner, Topeka
Sturgeon, pallid
Tern, Interior Least
Wolf, gray



The following are threatened in South Dakota:

Black Bear
Fringe-tailed Myotis
Martin
Mountain Lion
River Otter
Swift Fox
Baird's Sparrow
Osprey
Peregrine Falcon
Blanding's Turtle
Eastern Hognose Snake
False Map Turtle
Lined Snake
Northern Redbelly Snake
Short-horned Lizard

Spiny Softshell Turtle
Banded Killifish
Central Mudminnow
Finescale Dace
Longnose Sucker
Northern Redbelly Dace
Paddlefish
Pearl Dace
Plains Topminnow
Sicklefin Chub
Sturgeon Chub
Trout-perch
Dakota Skipper Butterfly
Tawny Crescent Butterfly
Regal Fritillary Butterfly

There is no official listing of endangered or threatened plants in South Dakota at this time. Check with a Forest Service Office or the Nature Conservancy Office for updated information.