



#8740

# GRASSLANDS

Grade Levels: 9-12

46 minutes

BULLFROG FILMS, INC. 1999

## DESCRIPTION

Millions of acres of grasslands in North America, from Saskatchewan to the Rockies to middle America, thrived under extreme conditions of heat, drought, and cold, supporting an immense variety of life above and below ground. The loss of these prairie lands continues to have repercussions for today's modern agriculture. Examines plants and animals that still live in complex interdependency in the fragments of native grasslands that are left. Video is divided into two segments.

## INSTRUCTIONAL GOALS

1. To describe the diverse characteristics of North American grasslands including native flora and fauna.
2. To review the history of the prairies in North America.
3. To evaluate the effects of humans on the grasslands.
4. To present ways prairies can be protected and restored.



## VOCABULARY

- |                    |                           |
|--------------------|---------------------------|
| 1. bacteria        | 12. grassland             |
| 2. cacti           | 13. industrial technology |
| 3. conservationist | 14. metre                 |
| 4. defecation      | 15. native                |
| 5. diversity       | 16. niche                 |
| 6. dormant         | 17. pedestrian            |
| 7. drought         | 18. prairie               |
| 8. ecosystem       | 19. protozoa              |
| 9. entomologist    | 20. soil                  |
| 10. fungi          | 21. specie                |
| 11. germinate      |                           |

## BEFORE SHOWING

1. Locate the following places associated with prairies and grasslands on a map of the world.
  - a. North America
    - 1) Rocky Mountains
    - 2) Indiana
    - 3) Illinois
    - 4) Pennsylvania
    - 5) Saskatchewan
    - 6) Alberta
    - 7) Mexico
2. Make a list of known facts about prairies and grasslands. Consider flora, fauna, climate, and value and human influence.

## AFTER SHOWING

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### Discussion Items and Questions



1. Discuss the characteristics of the grasslands.
  - a. Why is one of the last large unfragmented stretches of grassland along the eastern slope of the Rocky Mountains?
  - b. How do ranchers use the land near the Rocky Mountains?
  - c. Why have the grasslands near the Rocky Mountains changed very little in the last century?
  - d. Why is the major change in grasslands near the Rocky Mountains the encroachment of trees?
  - e. Why is it almost by default that the grasslands near the Rocky Mountains remain intact?
2. Discuss the flora of the grasslands.
  - a. Why are many of the forbes and grasses rare or endangered species?
  - b. How does the thick blanket of vegetation create its own microclimate?
  - c. What is the intimate relationship between insects and plants?
  - d. What valuable services do insects provide to plants?
3. Discuss the fauna of the grasslands.
  - a. Why do many animals live underground in the prairies?
  - b. Why are slews important for migratory birds?
  - c. Why are grisly bear sightings in the Rocky Mountain areas less than they were? Why are these bears threatened?
4. Discuss the history of the prairie.
  - a. Who were the nomadic First Nations?
  - b. What were buffalo jumps?
  - c. Why did the indigenous people of the prairie had to be totally in tune with their environment to survive?
  - d. What were the results on the prairies of the introduction of horses by the Europeans?
  - e. Why were the buffalo virtually extinct on the Canadian prairies by 1879?
  - f. How did the virtual extinction of the buffalo effect indigenous people's livelihood and economy?
5. Discuss the effects humans have had on the grasslands.
  - a. Why does the monoculture of modern farming provide habitat for very few insect species?
  - b. How do many insects manage to survive even in a limited habitat?
  - c. Why have native species disappeared?
  - d. Why has the soil been degraded?
6. Discuss ways that the prairie can be protected and restored.
  - a. How could imported crested wheat grass limit the establishment of other native species?
  - b. Why will it take centuries to restore even a fragment of the grassland?
  - c. How is the degradation of soils being slowed?
  - d. How are prairie soils being protected?
  - e. Why is one of the main sources of native seed in pioneer cemeteries?

## Applications and Activities

1. Investigate the grassland flora. Determine their habitat needs, physical characteristics, behavior, and their current status (endangered, threatened, extinct).
  - a. Determine how to protect each species.
    - 1) Starlet strawberry grass
    - 2) Rosen wood grass
    - 3) Great blue stem grass
  - b. Determine the effects of each of the following imported species.
    - 1) Queen Anne's Lace
    - 2) Crested wheat grace
2. Investigate the grassland insects. Determine their habitat needs, physical characteristics, behavior, and their current status (endangered, threatened, extinct). Determine how to protect each species.
  - a. Milkweed beetles
  - b. Daddy long legs
  - c. Spider wasp
  - d. Farm aphid
3. Research occupations of those involved in prairie preservation. Determine training and education needed, job opportunities, job descriptions and salary.
  - a. Entomologist
  - b. Conservationist
  - c. Range scientist
  - d. Soil scientist
  - e. Archaeologist
  - f. Rain scientist
  - g. Prairie conservationist
4. Evaluate how well the following statements about life on the prairie apply to human beings, especially teenagers and young adults.
  - a. One of the worst places for a seed to fall and grow up is right in the shadow of its parent because it will never catch up.
  - b. Something must "...provide a valuable service by carrying the seed away from its parent to a place where it's more likely to germinate successfully."
5. Investigate historical and modern hunters and gathers. Consider the Kuhn bushman in the Kalahari Desert of southern Africa.
6. Imagine living in the North American grasslands when sixty million buffalo roamed across half the continent. Write a fictional letter or diary entry from the following perspective.
  - a. An indigenous person
  - b. A European settler seeing the prairies for the first time
  - c. A 21<sup>st</sup> century time traveler

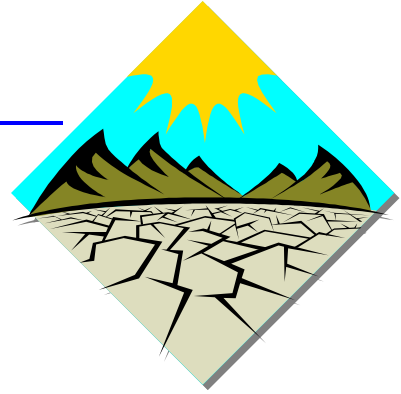


## RELATED RESOURCES



### Captioned Media Program

- Making a Difference: Restoring the Earth Around Us #3054
- The Western Canadian Provinces #3681
- Homesteading: Seventy Years on the Great Plains #2667



### 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.

- **ENDANGERED SPECIES PROGRAM**

<http://endangered.fws.gov/>

This U.S. Fish and Wildlife site includes species information, laws, policies, contacts in your area, The Endangered Species Bulletin and more.

- **KNOWLEDGE INTEGRATION ENVIRONMENT (KIE)**

<http://www.kie.berkeley.edu/KIE.html>

Designed to help middle and high school students develop an integrated understanding of science and a critical eye toward the complex resources found on the Web.

- **NATIONAL ENVIRONMENTAL EDUCATION**

<http://www.blm.gov/education/index.html>

This Bureau of Land Management site presents information about the life cycle of salmon, the diversity of native western wildflowers and the migratory patterns of neotropical birds.

- **ENVIRONMENTAL PROTECTION AGENCY SECTION FOR KIDS AND TEACHERS**

<http://www.epa.gov/epahome/students.htm>

Fact-sheets, interactive games, and more, with specific sections for teachers and students.