

Adapting to Seasonal Changes in the Environment

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Summary

Students apply knowledge of seasonal adaptations to create seasonal dioramas.

Grade level

Fourth

Time required

Five hours

Materials

Resources such as books, web sites and videos to aid student research
Diorama making materials - cloth, clay, paint, papier mache, craft sticks, etc.

Goals

By completing this lesson, students will

- 1) apply their knowledge to create an interdependent seasonal environment,
- 2) develop process skills in conducting research, working cooperatively, and presenting their work to others and
- 3) deepen their awareness of the typical traditional lifestyle of a Colville person.

Science standards addressed

National Science Standards

- Abilities necessary to do scientific inquiry
- Changes in Earth and sky
- Organisms and environments
- Systems, order and organization

American Indian Science Standards

- The innate properties of objects and materials that were (and are) recognized by traditional Native American cultures in the manufacture and use of specific tools and material objects that capitalize upon those properties
- Objects in the sky as exemplified by historical American Indian lunar calendars, traditional stories, and knowledge of weather patterns, constellations and the habits of birds

Teacher tips

This lesson is the culmination of the lessons on climate and seasons and how they influence organisms. Students can draw on past work, as well as do research, to find enough information to create their diorama.

The lesson provides an excellent opportunity for students to develop cooperative learning, research and planning skills for a major project. Work with your librarian to assist students in gathering research resources. Contact elders and tribal agencies that would be able to provide students with information about traditional Colville lifestyles. There are many web sites that provide historical pictures of Colville people that would also be useful.

Background information

Like other organisms, Colville people adapted their traditional lifestyles to the seasons. For example, they lived in subterranean houses during the colder months, and switched to tipis during warmer months. They wore animal furs to stay warm during colder months. They collected plants and hunted animals as they were seasonally available also.

Procedure

Engagement

- 1) Facilitate a discussion about how plants and animals, including humans, adapt to climate and seasonal changes. Use relevant vocabulary in context. Ideas include
 - Migrations, changes in diet, changes in hair coats, etc.
 - Changes in plant growth
 - Housing and clothing differences

Exploration

- 1) Divide the class into four groups. Instruct groups that they will each be making a diorama representing life during one season for Colville people living a traditional lifestyle.
- 2) Assist students in conducting research to gather information for making their dioramas. If time permits, the following places are valuable fieldtrips that provide examples of animals in different seasonal environments: Colville Tribal Museum, Grand Coulee, Washington; Well's Dam, Pateros, Washington; and Cheney-Kols Museum, Spokane.
- 3) Provide materials for groups to create their seasonal dioramas.

Explanation

- 1) Ask each group to deliver a presentation briefly explaining their seasonal dioramas. Encourage them to use vocabulary in context.
- 2) Have students present their dioramas to younger students.

Elaboration

Invite elders to view the dioramas and to tell stories of their lives as children. Ask them how they changed to adapt to each season.

Evaluation

- 1) Assess students' process skills proficiency by observing their research habits, their cooperation, and their presentations.
- 2) Assess students' content knowledge by observing their dioramas and presentations.

Vocabulary

habitat

camouflage

predator

prey

adaptation

competition