



Teacher's Corner Lesson Plans

*Helping Teachers and Students Make the Most of
their Outdoor Classroom*

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Amazing Agriculture of Alberta^{*†}

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Grade level: Grade 4.

Provincial curriculum links: Alberta.

Subject: Science, Social Science.

Keywords: Agriculture, Alberta, plants, growth, grain, seeds, geography.

Description

Students will discuss the various geographical aspects of land in Alberta (both human and physical geography). They will focus on the importance of agriculture to Alberta and experiment with planting and observing the growth of different grains.

Curriculum Framework

Science: Topic E: Plant Growth and Changes

- Describe the importance of plants to humans, give examples of plants as source of food (4-10.1)
- Recognize plant growth requirements (air, light, water, nutrients) (4-10.4)
- Recognize that a variety of plants are found within local areas (4-10.6)
- Nurture a plant through a complete life cycle - from seed to seed (4-10.9)

Social Science: Topic A: Alberta our Province

Physical and Human Geography of Canada

Value the natural environment of Canada by:

- Demonstrating care and concern for the environment through choices and actions

^{*}Source of Lesson Plan: Margo Warren with references to the Alberta curriculum.

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- Appreciate how land sustains communities and the diverse ways that people have of living with the land
 - Locate, identify and describe the physical attributes of Canada (4.1.1)
 - Identifying and comparing major geographic regions, vegetation zones
 - Analyze the interaction of humans with their environment (4.1.2)
 - how landscapes and climate affect seasonal activities in various regions of Canada
 - examining how natural resources are used and exchanged

Specific Lesson Goals

- To build on the students' understanding of agriculture and demonstrate links to Alberta as an agricultural province.
- To create an awareness of the types of grain grown in Alberta.
- To learn how grain is sown and follow this through a full life cycle (seed to seed).
- To monitor and record the growth of the grain and create a graph using a computer spreadsheet.

Preparation

Preparation time: 3 hours

The teacher must be familiar with aspects of human and physical geography of Alberta as well as the different crops of grains and other food crops grown in their area of the province.

Length of lesson: Discussing and planting seeds as per this activity will take 2 hours. However, this broad topic could be introduced and studied over the course of several weeks. Lessons could be planned around the topics of:

- Physical and human geography of Alberta (2 hours)
- The importance of agriculture in Alberta (1 hour)
- Discussion of different grains, their importance and growth patterns (1 hour)
- Planting the grain seeds (1 hour)
- Observation of seeds (10 minutes of observation each weeks for 10 weeks)

Resources required:

- Books about human and physical geography of Alberta
- Books about agriculture and its importance to a society
- Native plant seeds for different types of grain
- Garden area to plant seeds
- Spreadsheet program to record and plot seed growth

Procedure

1. Review Alberta's landforms and natural regions. Discuss how landforms and natural regions could affect a homesteader's choice of livelihood (i.e. ranching vs. farming or mixed farming). Ask what the word agriculture means and record children's ideas on the board. Have children realize that urban dwellers depend on the rural community for food. Compare this to the homesteader's way of life.
2. Ask what types of plants a homesteader may have grown and compare this to what is grown today. (Use various resources that mention crops, such as text books, internet and novels).
3. Locate and look at various grains and let children guess what crop the seeds might grow. Identify the names of the crops (rye, wheat, oats, barley, canola).
4. In groups, have students go to the outdoor classroom garden, with guidance, sow the grain and water.
5. Over the next few weeks have the students monitor the growth of the grains and create a graph using a computer spreadsheet.

Discussion and Questions

See Procedure above.

Student Evaluation

Observe students during activity and see how well they can orally relate what they observe. Collect individual graphs for evaluation at the conclusion of the activity.

Enrichment and Extension Activities

Students could also do several Science experiments looking at growth variables -light, water, fertilizer, etc.