

Activity 27



GROWING PLANTS



STUDY QUESTION: How long does it take for a seed to sprout and what can I do to help it grow into a healthy plant?

THE ACTIVITY: In this activity children plant seeds in two different soils and tend the seeds as they grow into plants.
This activity is recommended for March/April.

SUBJECT AREA: Science

CURRICULUM CONCEPTS:
GRADES 2-5
SCIENCE Plant growth.

LANGUAGE ARTS Recording and conferencing.

GR. 5 Emphasis on plant structure and function.

AGRICULTURE CONCEPTS: Germination; plant growth; crop production.

PURPOSE To introduce children to the concepts of plant growth and crop production.

To give the children the opportunity to further develop their language skills while they learn.

MATERIALS REQUIRED: Information sheet on crops of Alberta and student log sheet. Supplied in this activity.

Packets of seeds; soil; containers.
(ice cream pails/cottage cheese containers/ coffee tins)

TIME REQUIRED: To Start: One class period.

During Growing Period: 15 minutes per class.

To Finish: One class period.



PROCEDURE

Part One

Introduction

Survey the class to see how many students have plants grown in their home and how many families grow gardens. Ask them to list (orally) what things are done to grow plants and what stages growing plants go through.

Part Two

Preparation

Distribute log sheets for growing plants and review the steps listed.

Divide the class into groups. Give each group a pot of soil and a packet of seeds to plant and tend over a number of weeks.

Equipment

If ordinary garden soil is used, rather than sterilized potting soil, it may be important to provide a product such as Damp-off to counteract soil fungus. Provide plant food if possible and allow the children to decide in their groups whether they want to use it in growing their plants.

Part Three

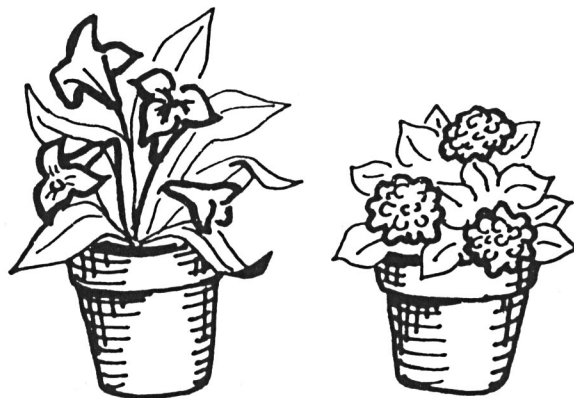
Seeding Recording

Have the children plant their seeds and record on their log sheets what they did. Have them also write in the farming steps corresponding to their own.

Part Four

Conclusion

Briefly discuss daily maintenance encouraging each group to work closely together on a daily basis to care for their growing plants. Identify and post a date (5-6 weeks) for a class conference when the groups will report on their crops.



Part Five

Follow-up

At the appointed time for the conference have the groups display their plants and share their progress in caring for them. Note differences in size and appearance of plants and in the appearance of the soils. Briefly discuss possible reasons for these differences, emphasizing the importance of good soil, adequate moisture and sunshine, and weed control in crop production.

FOR DISCUSSION

How did you care for the plant?

What conditions are necessary for plant growth?

What is germination?

What did your plant produce?

How did you know when the plant was mature?

EVALUATION STRATEGIES

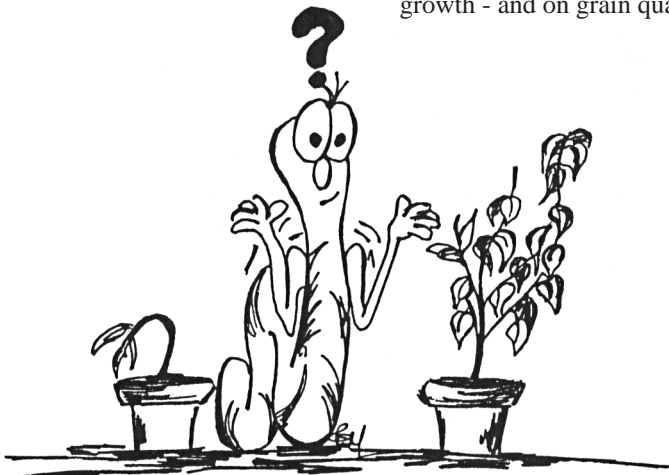
Have children draw a picture of their plant showing what it was like at the beginning and at the end.

Use the log sheet as a method of evaluation.

Have children write a short story about how Slide is affected by plant growth.

RELATED ACTIVITIES

1. Obtain samples of several different types of soil - e.g. garden soil, potting soil, sand, clay. Have the children compare them visually and by touch when they are dry and wet. Briefly discuss the likely influences of these differences on plant growth - and on grain quality and price.



Crops of Alberta

Potatoes

Largest vegetable crop in Alberta.

50% used for processing:

- fries
- dehydrated granules
- chips
- canned potatoes

Carrots

Second to potatoes; an expanding industry

Peas

Alberta a major exporter of processed peas

Small Fruits

- Strawberries
- raspberries
- saskatoon

Special Crops

- Corn
- Beans
- Mustard

Other Vegetables

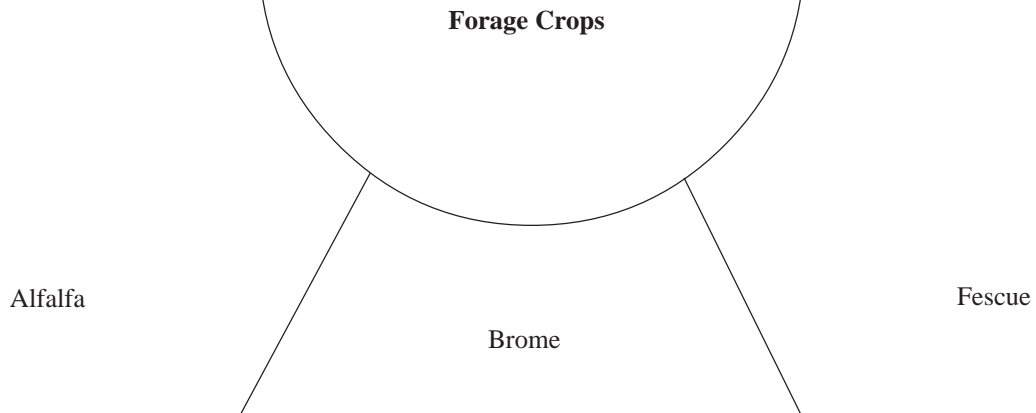
- Cabbage
- Onions
- Lettuce
- Parsnips
- Beets
- Rutabaga
- Mushrooms
- Tomatoes
- Cucumbers

Vegetables and Special Crops

- A variety of vegetables are grown commercially by market gardeners and greenhouse operators.
- Some crops are produced by contracts between growers and processors.
- Major potential is in increased demand for fresh vegetables. Many are sold at farmers' markets or at farm gates. Many are sold to retailers and wholesalers and to processors.
- Greenhouse produce mainly bedding plants, flowering plants, and seasonal specialties such as poinsettias and lilies.



Crops of Alberta



Although bales of hay are a common sight in many parts of Alberta, large amounts of forage crop seeds are produced in the northern areas of the province, especially in the hilly areas of the Rockies.

Forage crops are used primarily for animal feed and for pasturage after the seed is harvested. They make up 70 - 80% of food rations for ruminant livestock.

Forage crops also restore valuable nutrients to the soil and thus help farmers maintain the productivity of their soil.

In addition, some of the forage seeds and crops are produced for sale to other countries.



Crops of Alberta

Cereals and Oilseeds

Wheat

- Major Alberta crop.
- Uses about 20% of Alberta's occupied farmland.
- About 25% of total crop cash receipts.
- Several classes of wheat grow best in different areas and are used for different purposes: bread, pasta, baking, flour.
- The Canada Wheat Board controls quotas and deliveries to elevators and sells the wheat

Barley

- 2nd largest acreage
- 2nd highest crop cash receipts; about 15% of total.
- About 50% used as live-stock feed.
- 2nd main use: malting
- Some also used as a soup cereal and for flour.

Oats

- Minor cash receipts but imp. crop.
- Most used as feed for livestock.
- Best used for race horses and making oatmeal.

Rye

- Small cash receipts.
- 2nd to wheat as source of flour for bread making.
- Also used for producing Alberta whiskey.
- Used in some cereals e.g. Sunny Boy.
- Main use is for animal feed.

Flax

- Uses small proportion of Alberta farmland.
- Mainly oilseed flax grown in Alberta: for linseed oil. (Fibreflax, for manufacture of linen, may be grown in future.)
- Linseed meal, a by-product of oil extraction: popular livestock feed.

Canola

- 3rd highest crop receipts; about 10% of total.
- Mainly valued for its edible oil; accounts for much of edible oil used in Canada
- vegetable oil, margarine, shortening.
- Valuable by-product of oil extraction is a high-protein meal for animals.

STUDENT RESOURCE

Log Sheet: Growing Plants



Keep a diary about your plants as they grow. Write down what you do and what you notice. Also, write your thoughts about the project - how do you feel as you watch your plants grow?

Growing My Plants

Step 1: Loosen soil

Step 2: Prepare holes, plant seeds, cover seeds

Step 3: Care for plants - water, food (fertilizer), sun, weeding

Date:

Date:

Date:

Please continue!

