



Activity 9

TAKE A WALK ON THE WEED SIDE



STUDY QUESTION:

Where are the best places for weeds to grow? What factors contribute to weed growth?

THE ACTIVITY:

Students will go out around the vicinity of the school collecting weed samples, and making note of where weeds are growing. Then, students will plant weed seeds in milk cartons trying to simulate conditions they found outdoors.

CURRICULUM FIT:

DIVISION TWO - SCIENCE

● Living Things and the Environment - observing, inferring, predicting, manipulating variables, constructing

AGRICULTURE CONCEPTS:

Weeds are spread by seed and can grow in many places; weeds can affect the outcome of a crop.

PURPOSE:

- To have students observe that weeds grow in areas disturbed by man or animals.
- To have students discover the many kinds of seeds and review adaptations of plants especially concerning seeds.
- To help students identify variables which might affect weed growth.

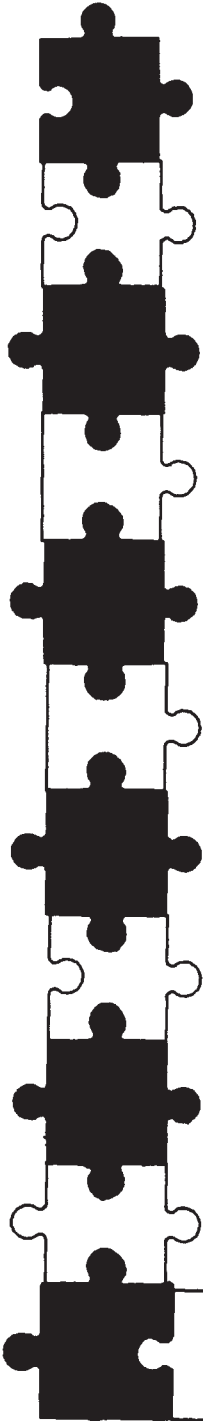
MATERIALS REQUIRED:

Collecting bag or pail for weeds, 1 hula hoop for each group of 3 or 4 students, potting soil, milk cartons (cut in half), weed seeds, grass seeds, other garden seeds, potting tools.

TIME REQUIRED:

One class period for “weed walk”; several class periods for rest of lesson.

NOTE: The best time to do this lesson is probably late spring.



BACKGROUND - For the Teacher

A weed can be described simply as a plant that grows where it is not wanted and that crowds out more desirable plants. In agricultural areas, as well as in urban areas, weeds cause a lot of problems. They cause a loss of income for farmers, affect the growth of other plants, are unsightly and cause fire hazards in some areas as well. Students need to become aware of why weeds grow where they do, the damage that is caused and what can be done about the problem. Weeds tend to grow in areas disturbed by machinery or animals, including man. On the undisturbed land there are very few weeds. On a healthy lawn also, weeds have a difficult time getting started. On the other hand, weeds flourish in cultivated areas that are without a natural vegetation cover. This lesson will take a look at local areas around the school where weeds grow well and compare this to areas where weeds do not. By observation, inference, experimenting, interpreting data and hypothesizing, students may develop an awareness for this topic and may even be able to propose ways to control weed growth. Students will:

- 1) Discover that weeds are plants that are very well adapted for survival.
- 2) Develop an appreciation for the uniqueness of all plants, including weeds!
- 3) Develop a responsible attitude towards the care of our land.
- 4) Improve skills in group work.

NOTE: Before beginning this lesson, students should have studied plant adaptations, in particular, the way in which seeds are dispersed and structured for dispersal. Instructors should also familiarize themselves with various types of local weeds.

PROCEDURE

Part 1

Preparation

1. Before class begins, stake out areas around the school to take the students to. Pass out the notebooks that the students can make in art class.

Have students bring to class cut-off milk cartons (show them a sample). Have on hand potting soil, water, potting tools, grass seeds and other seeds, magnifying lenses.

Part 2

Introduction

2. Review plant adaptations studied in the previous unit.
3. Brainstorm, as a class, the names of plants that grow where we don't want them to. What are these plants usually called?
4. Set out the purposes for going outside to collect and observe weeds.
5. Divide into groups of 3 or 4. Pass out one hula hoop to each group of students. Use this to count the number of weeds in different areas. We will count each separate plant as one weed and record numbers in notebooks.

Hand out plastic grocery bags for collecting weed samples.

Part 3

Activity

6. Head outdoors to selected locations. Note areas with; a) lots of weeds, b) a few weeds, and c) no weeds. After finding these areas, toss the hula hoop down and count the weed plants within the hula hoop. Record in notebook. Make a note of where the weeds grow best.
7. Collect some weed seeds and whole plants.
8. Return to class. Use magnifying lenses and resource materials to try and identify our seeds. (Have students keep the weeds in plastic bags and keep for art class where they can make bouquets).

9. Discuss question, "Where did you observe weeds growing?" Go over data collected and decide how we could simulate these conditions in the classroom.

Go over the idea of controlling the variables in an investigation.

- a) Use same soil for each sample
- b) Use same kind of seed for each sample
- c) Give the same growing conditions for each.

Decide which variable we will change to answer the question best.

Have the students plant their weed, grass and garden seeds and record what they have done so far.

10. Have the students arrange an area to leave their milk cartons, complete with recording materials, charts to be filled in, etc. We will check on progress at intervals over the next couple of weeks.

Part 4

Conclusion

11. Once the weeds are growing in containers, have the groups get together again and get rid of the weeds. Discuss types of weed control.

DISCUSSION QUESTIONS

1. Why are there lots of weeds in some places and not in others? Record what you think in your notebook.
2. Which container do you expect to grow the best weeds?

EVALUATION STRATEGIES

1. Provide a checklist to individual students for self evaluation of their record keeping, skills and attitudes.
2. Quiz on plant adaptations and seed dispersal.
3. Teacher checklist and anecdotal notes on the group work done.
4. Marks for art work and language arts activities.

RELATED ACTIVITIES

1. In Science Center leave some materials for students to explore on their own.
2. Interview farmers or agricultural fieldmen.
3. Summarize the results of your group's work in some form: poster, report, tape, etc.

INTEGRATING INTO OTHER SUBJECTS

ART

1. Construct a portable notebook with pencil holder from milk carton and drinking straws.
2. With clay, make small pots or envelopes for holding weed collections.
3. Choose weeds and make an arrangement to put in the clay work done previously.

LANGUAGE ARTS

1. Have fun with weed words - puns, alliteration, acrostics
eg. - Wily weeds wish wimps would wither.
- names like Dan D. Lion
- pick a weed and do an acrostic

RESOURCES AND INSTRUCTION AIDES

Alberta Agriculture Publications List and Audio Visual Catalogue (these may be in your school resource area. Or, they are available from Print Media Branch or Film Library at 7000 - 113 Street, Edmonton, Alberta T6H 5T6) For this lesson, the publication "Weed Seedling Identification" (Agdex 640-3) might be useful (although probably not in September)

Alberta Agriculture Factsheets (color) pictures on front, information on back

Green Immigrants. The Plants that Transformed America, Houghton, Clair Shaver, (Harcourt Brace Jovanovich, N.Y.) ISBN 0-15-137034-6,

Seeds and Weeds. A Book of Country Crafts, by Mary Alice Downie and Jillian Hulme Gilliland, (North Winds Press, Scholastic-Tab Publications) ISBN 0-590-71054-0

Wildly Successful Plants - A Handful of North American Weeds, by Lawrence J. Crockett, (MacMillan Publishing Co., or Collier MacMillan Canada Ltd.) ISBN 0-02-528850-4

By Marilyn Knippshild