PARKS AND PROTECTED AREAS

The Un-Vacant Lot?







This publication is part of a series of field study programs produced by the Environmental Education Program of Parks and Protected Areas in Kananaskis Country and Fish Creek Provincial Park. These publications have been written to address the goals of Alberta Community Development and increase students' environmental awareness, understanding, interaction, and responsibility for the natural world in which they live.

The publications are developed in a close working relationship with teachers, community educators and program writers. Programs focus on the areas of environmental education, science, social studies, and language arts. They are also developed to emphasize elements of environmental literacy, lifestyle, and citizenship.

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For more information contact:

Environmental Education Specialist Parks and Protected Areas - Kananaskis Country Suite 201, 800 Railway Avenue Canmore, AB. T1W 1P1

Telephone: (403) 678-5508 (toll-free within Alberta 310-0000) Internet: www.cd.gov.ab.ca/parks/kananaskis

The Un-Vacant Lot

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1.0 OVERVIEW

1.1 AT A GLANCE

TOPIC

PROGRAM LEVEL

TIME REQUIRED

STAFF REQUIRED

BEST SEASON

SUGGESTED LOCATIONS

Communities and interdependence.

Focus on Grade 3, with modifications Grades 2-4

Pre - Field Study Activities - three class periods Field study preparation: 2 hours Field study: 2-3 hours Post - Field Study Activities - three class periods

1 instructor, several volunteers (a volunteer: student ratio of 1:6 is recommended)

early fall or late spring

a small, partially-overgrown clearing, containing several mature trees, preferably coniferous and deciduous, and having loose rocks and/or logs on the ground.

1.2 PROGRAM SUMMARY

The *Un-Vacant Lot* focuses on the topics of communities and interdependence. A community is a place where a number of plants and animals meet their needs. Interdependence describes the way a person, place or thing depends upon any other person, place or thing.

Every living organism on our planet lives in a community and depends on other living and non-living things for its continued existence; no organism can live without affecting or being affected by the environment. *The Un-Vacant Lot* may take place in the early autumn to serve as an introduction to the year-long study of communities.

The **Un** -*Vacant Lot* is an activity-based examination of interdependence and communities. The program is divided into three sections: pre-field study activities (conducted in the classroom) that centre on topics such as interactions, communities, and interdependence; a field study at a local vacant lot, where students discover that the vacant lot is in fact full of life; and in-class post-field study activities.

The main theme of the three Grade Three curriculum support programs is Interdependence. The programs can be used on a "stand-alone" basis, or combined with *My Community - Past, Present, and Future* to form an integrated unit of study. This latter program is an activity guide designed to help students explore, understand, and appreciate their community and its cultural history. Teachers travelling through the Canmore area may take advantage of the more site-specific program *Canmore - A Walk through Time*.

1.3 PROGRAM OBJECTIVES

Students will:

- demonstrate an ability to characterize a common community.
- demonstrate an understanding of a concept of a community
- be able to predict what they might find in a vacant lot community.
- identify and preserve some of the leaves they collect during the field activity.
- draw a comparison between human and natural communities
- be able to characterize a common community by describing the plants and animals that live there
- view the natural community that can be found in a vacant lot

1.4 CURRICULUM TIE-INS

These materials can be used to assist in fulfilling curriculum requirements in the following subject areas of the Grade Three curriculum:

| Subject | Topic Area - Curriculum Tie-In |
|----------------|---|
| Social Studies | <u>Topic A</u> My community in the past, present and future. |
| | Topic B • Communities Need Each Other |
| | <u>Topic C</u> • Special Communities |
| Science | • Properties of Objects |
| | • Living Things |
| | • Plants and Animals |
| | • Environment |

2.0 PRE-FIELD STUDY

2.1 ACTIVITY: NATURAL AND HUMAN COMMUNITIES

A community is a place where different species of plants and animals live and meet their needs together. In order to meet their needs of food, water, shelter, and space, animals and plants are constantly interacting with each other and their environment.

Objectives

Student shall

- 1. demonstrate an understanding of what communities and interactions are; and
- 2. explore similarities between human and natural communities.

Curriculum Tie-in

This activity meets the requirement of Social Studies Topic A: My community - past, present and future. Students focus on their own community as an analogy to a natural community.

Time Required

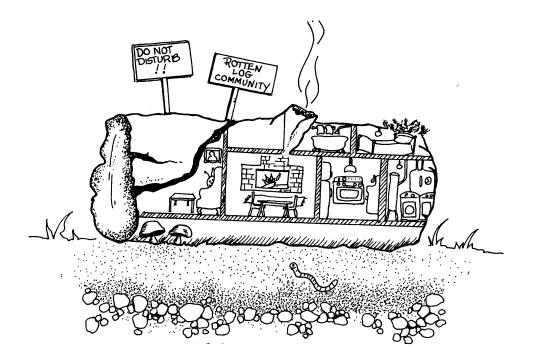
class period (40-60 minutes)

Materials

chalkboard

Instructions for the Teacher

- 1. *The Un-Vacant Lot* program can be used as an introduction to the study of communities. This activity leads the students to a discovery of what a community is by first observing a local natural environment. Students focus on the word **interact** initially before learning the concept of community.
- 2. Discuss the word **interact** with the students using the following example: a log decays (rots) because tiny plants, animals and water all interact. Interact means to do something to each other. Things that interact affect one another. The roots of the plants open spaces in the wood and animals chew holes in the log. The log will become soil because of the **interaction**.
- 3. Ask the students to close their eyes and imagine their walk to school that morning. Ask them the following questions. Accept all answers and write these answers on the board:
 - Did you see any places where many plants might live together?
 - Did you see any places where plants and animals might live together?



- Can you think of any places that you pass on your way to school each day where you can see plants and animals living and interacting together ?"
- 4. Beside the name of the place where plants and animals live together, you or the students should write the names of 2 or 3 plants or animals that live in that place (some animals, like earthworms, may not actually be seen but can be listed).
- 5. Tell the class that what they were looking at on their way to school was an example of what is called a *community*, a place where plants and animals live together and interact.

Most students will be aware of the town's or region's "Community Centre". An analogy between the natural and the human communities might be useful at this point: i.e., people live in places (communities) where their needs can be met, just as other living creatures do.

6. Have the class look at their list on the chalkboard again to decide if all the places listed are communities. Explain to the class that each community has **characteristics**, (you could define this word as "special features") belonging only to it. The characteristics of a community attracts plants and animals that are suited to live in that community. The place where something lives in a community is its *habitat*. A student's habitat would include not only their home but also the place where they play, where they go to school, etc.

Teacher's Notes

2.2 ACTIVITY: NAME THAT COMMUNITY!

A pond and a forest are two very different communities. The difference lies not only in the physical setting, but also in the characteristics of the plants and animals that live in these two natural communities. By characterizing a number of different communities using their physical and biological features, students will realize that communities can be very different from each other.

Objective

Student shall demonstrate an ability to characterize a common natural community.

Curriculum Tie-in

This activity meets the requirement of Social Studies - general community studies, and Science - Plants and Animals. Students are required to conceptualize an community.

Time Required

class period (40-60 minutes)

Materials

chalkboard

Instructions for the Teacher

1. Divide the class into groups of 3 or 4 students and assign one of the following "communities" to each group (Appendix III contains pictures of each of these common natural communities):

| Forest | Pond | Swamp |
|-----------------------|----------|-------|
| Prairie or Open Field | Desert | |
| River | Seashore | |

Have groups answer these questions about their community:

- "Each community has characteristics belonging to it." What characteristics or special features does your community have?
- "The plants and animals that live together and interact in a certain place form a community." What plants and animals live together and interact in your community?
- "The place where something lives in a community is its home or habitat." What places in your community are homes for plants and animals?

The teacher should let the groups share their answers with the rest of the class. Compare and discuss the different communities. The class should now understand the concepts of **community**, **habitat** and **characteristics**.

2.3 ACTIVITY: SO WHAT'S SO "VACANT" ABOUT A VACANT LOT?

In the first two activities, students explored the concept of a community and described some of the characteristics that communities may have. It is now time to focus in on a specific community, preparing students to answer the question: "What's so vacant about a vacant lot?"

<u>Objective</u>

Student shall demonstrate an understanding of a concept of a community by reviewing community characteristics. Students will be able to predict what they might find in a vacant lot community.

Curriculum Tie-in

This activity meets the requirement of Social Studies (general community studies), and Science (Plants and Animals) curricula. Our environment includes all of our surroundings, both man-made and natural. Human communities share many features with natural communities

Time Required

class period (40-60 minutes)

Materials

chalkboard

Instructions for the Teacher

- 1. Rewrite the list of communities that the students saw on the way to school in Activity 2.1.
- 2. Talk about the habitats in each of these communities. What makes each community listed on the board different from the others? What special characteristics does each have?

Ask the students to:

- **Divide the list into two groups: small communities and large communities.** Small communities - lawn, rotting log, garden; large communities - forest, pond, field, park.
- 3. After discussing the communities the students saw on the way to school, ask the class:

• Why would an animal prefer to live in one place and not another? There are different homes for plants and animals in every community. Living organisms choose communities where all of their needs can be met.

What have they learned about communities?

They can be large or small. Each community has characteristics or special features that attract animals or plants to that community.

Discussion

- 4. Explain that the class is going to explore a Vacant Lot community on a field study. There are plants and animals that live in this community because it has characteristics that attract the plants and animals. The Vacant Lot provides "homes" suited for those plants and animals.
- 5. Ask the students the following questions:

• What does the word "vacant" mean to you?

Vacant is defined as being empty of occupants. A house that is vacant is unoccupied; a lot that is vacant has not yet been built on.

• What special characteristics would a Vacant Lot community have?

Answers might include "a small area, an area disturbed by humans", etc.

• What different habitats ("homes") would be available in a Vacant Lot?

There might be rotten logs, holes in trees, shrubs for rabbits to crouch under, etc.

• What plants and animals might like to live in a Vacant Lot?

Occupants of a vacant lot community would have to be able to live in a limited area, would have to be tolerant of nearby human activity (in other words, no cougars or wolves!), etc.

Tell the class that they will be able to discover first-hand what lives in the Vacant Lot when they visit it themselves.

Teacher's Notes

3.0 FIELD STUDY: THE UN-VACANT LOT

There is no substitute for immediate, hands-on experience. Each student receives an "Explorer's Notebook" that guides the students through a number of field activities. By exploring a vacant lot and examining communities that live there, students will discover that the area really isn't so vacant after all!

Objective

Student shall explore a vacant lot and answer the questions in their *Explorer's Notebook*.

Curriculum Tie-in

The field study focuses on natural things and their physical properties (Science: property of objects topic). During the field study, students have "hands-on" experience with a number of living things (Science: living things topic).

Time Required

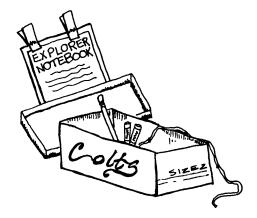
preparation time: 1-2 hours field study: 2-2.5 hours

<u>Materials</u>

Divide the class into pairs. Tell them that **each group of two** will need the following equipment for the field study:

1 shoe box or clean, used milk carton with fibre-tape handle (to hold the field study materials).

- 1 four metre string ruler; make in class (see Preparations, below)
- 1 pencil with eraser for each person
- 6 sheets of blank 22 x 36 cm (8.5 x 14") paper (blank newsprint also works well)
- 5-6 light and dark colour crayons
- clipboards (if possible, borrow



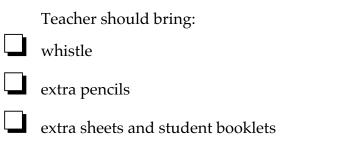
blackboard clipboards; otherwise, construct your own from cardboard and use 2 wooden snap-type clothespins or clips as paper holders)

hand lens (if available) - one per group, or share for the first activity.

one copy of the handout Some Common Trees and Shrubs of Kananaskis Country

two copies of *Explorer's Notebook* (one for each student)

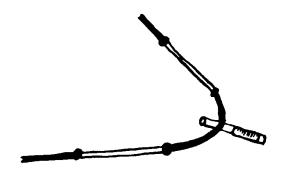
Each group can store their materials, except for the clipboards, in the shoe box. Have the materials made, collected, and stored several days **before** the field study.



Preparation

1. How to make a 4 metre string ruler: The string ruler will be used to mark off an area to explore on the field study. Demonstrate its construction, and allow the groups to follow along.

Give each group approximately 5 meters of string. Tie a knot at one end of the string. Measure 1 meter and tie the next knot. Continue until you have four 1-meter sections. Cut off the excess string. Next, use a dark crayon or felt pen to colour every other 1-meter section. Do this by drawing the string across a piece of crayon.



- 2. Photocopy enough copies of the *Explorer's* Notebook for each student to have their own copy. Hand these out and read through the activities with the class. They should understand the directions for each stop.
- 3. Photocopy copies of the *Explorer's Notebook* for the volunteers, so that each volunteer has their own. Send the copies home so that each volunteer can review it the day before the field study.

- 4. Prepare students for the field study by explaining the following:
 - dress properly (long pants, shoes, socks). Students will occasionally be on all fours at time so encourage them to wear old clothes.
 - Obtain necessary permission slips and enlist the aid of parents for the trip.
 - Groups of two are to work as partners and help each other during the field study . Try to have a parent : student ratio of at least 1 : 6.
- 5. Ensure that you vacant lot has the necessary ingredients for the field study: some mature trees, a variety of grasses and flowers, rocks and logs, and room for a class to gather. Preview the area a few days before your trip to ensure the site is ready for your visit.

Last-minute instructions and reminders:

- Briefings for the volunteers can be given just before the field trip and should take 15 20 minutes.
- Bring a whistle and have a pre-arranged signal to draw students together.
- If the vacant lot is on private land, ensure you have permission to use the area. Your schoolyard may have an area which can be used. Explore beforehand for an appropriate location.
- Emphasize to your class that they are visitors to the area and should not destroy vegetation, or harm any animals found here. They will be allowed to collect a leaf for their rubbing and flower petals for their paintings. Tell the students and volunteers the following:
 - only leaves and petals that are plentiful should be picked.
 - to minimize our impact, leaves and petals should be picked from different places on the tree or flower patch.

Instructions for the Teacher

- 1. Lead the students to the field study area.
- 2. Hand out the *Explorer's Notebook* to students and volunteers (in Appendix)
- 3. Stress to the volunteers that it is important not to help the students find the things they are asked for; if they give students examples of things that would satisfy the outcome of the exercise, the class would simply bring back their examples and not use their own.

- 4. To avoid overcrowding in one area, begin half the groups on Activity 1 and have them work through to 7; let the other half of the group begin on Activity 7 and work back to Activity 1.
- 5. Discussion of the answers to the questions in the *Explorer's Notebook* can be done back in the classroom. Some discussion questions are suggested below.

Discussion

- 1. Divide the class into groups of six students (3 field trip pairs). Have them compare their maps, leaf rubbings and notes to answer the following questions:
 - Look at the mapped area and the area under the tree (Activities 3 and 7 of the field study). In which area did you find the least number of different plants?
 - Why do you think this area has the least number of plants?
 - Look at all the leaf rubbings. Do you know the name of the plants the leaf is from?
 Some Common Trees and Shrubs of Kananaskis Country, contained in the Appendix can be used by the students here.
 - Make a list of the different animal homes found in the vacant lot. Think of other animal's homes that might be found in a vacant lot and add them to your list.
 - How many different animals did you find?
 - What was the biggest animal you found? The smallest?
 - What kind of animal did you find the most of? Why do you think there were so many in the vacant lot?

Teacher's Notes

4.0 POST FIELD STUDY

4.1 ACTIVITY: THEATRE IN A BOX

This activity centres on the concept of community and involves an interpretation of the content acquired during the field study. Using a theatrical mode of expression, students will access the information through the medium of peer teaching.

Objective

Students shall demonstrate a familiarity with the concept of community, and express this through a peer teaching exercise that involves drama.

Curriculum Tie-in

This activity meets many of the process objectives in both Social Studies, Art, and Science curricula.

Time Required

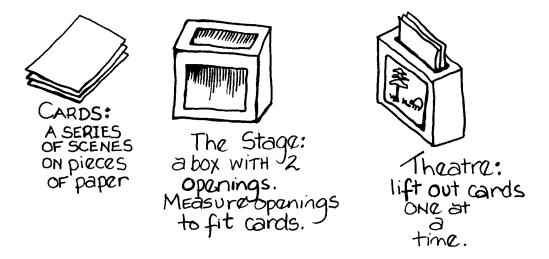
class period (40-60 minutes)

<u>Materials</u>

chalkboard

Instructions for the Teacher

1. Using all of the information from the field study, have each pair of students create a "Kamishibai", a theatre in a box. Alternatively, you could have each pair create one picture for the Kamishibai and bring all of the pictures together to create a "class" theatre in a box. The directions for making a Kamishibai follow. (Refer also to the diagram).



- 2. Obtain a box about 35 cm x 25 cm x 25 cm is a good size. Cut a large opening in the front for viewers and a long narrow opening in the top for your set of pictures.
- 3. Have the students draw pictures of all the things they saw during the field study; homes, plants, animals, leaves, etc. Mount these pictures on poster board so they do not bend.
- 4. Number the pictures and place them facing you in order of viewing. The first card should be the title: "The Un-Vacant Lot", "Our Field Study of a Vacant Lot", etc. Have students write, on a separate sheet of paper, an explanation of the picture they have drawn.
- 5. Number each picture/card on the back, since the person pulling the picture from the box will be behind the box. Have someone read the explanation of each picture as they are viewed on the screen.

4.2 ACTIVITY: MAKING A LEAF BOOK

What to do with all those leaves you collected? This activity focuses more on process and less on content. The finished leaf book can be displayed or taken home.

Objective

Students will identify and preserve some of the leaves they collected during the field study.

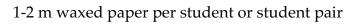
Curriculum Tie-in

This activity meets many of the process objectives in both Social Studies, Art, and Science curricula.

Time Required

class period (40-60 minutes)

<u>Materials</u>



clothing iron



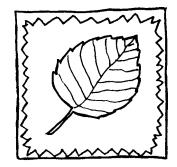
leaves (collected during field study)



folded unlined paper or poster board.



ribbon, yarn or string



Instructions for the Teacher

1. NOTE TO TEACHER: the leaf preservation technique works best with dried leaves. Leaves can be preserved and dried if kept between sheets of absorbent paper and subjected to pressure "pressed" for a few days.

- 2. Cut waxed paper sheets. Each sheet should be large enough to fold in half with the leaf inside. Spread newspapers over a work area for a pad. Open the waxed paper and place one leaf inside. Cover with one layer of newspaper.
- 3. Press with a warm iron. The waxed paper should seal together enclosing the specimen. Over-ironing will melt the wax too much. Cut out the pressed leaves from the excess paper. Display or make cards by gluing the pressed leaves to folded unlined paper.
- 4. You can make a class "Leaf Book" by binding together pages on which leaves have been preserved. Hole punch the pages and fasten together with ribbon, yarn or string. For a bookcover use cardboard box sides, poster board, or poster paper.



5. Paint or colour the book covers to finish your book.

4.3 SUGGESTED EXTENSION ACTIVITIES

- Make a class mural about the vacant lot. A mural is a wall painting composed of many parts. Each "small picture" in the mural helps to tell the "large" story. Brown construction paper can be used as the background. The finished mural can be placed either on the floor or the wall. Students may redraw some of their pictures from the field study making them larger and blending them with the other pictures on the mural. Emphasis can be placed on making the mural resemble the un-vacant lot community that was examined.
- Make a bulletin board of the rubbings, paintings, and maps. Cut out letters for a title.
- Let each pair display their mapped area and tell about "points of interest". Encourage them to share discoveries they made while exploring.
- Write a poem about your tree using the **describe**, **look**, and **feel** parts of Stop 7 in the *Explorer's Notebook*.

5.0 *THE UN-VACANT LOT -*Program Evaluation

Kananaskis Country Environmental Education materials have been developed to provide you with teacher-directed units of study. These are *living documents* that undergo changes on a continual basis.

The purpose of this questionnaire is to find out if these materials are meeting your teaching needs. Your comments are valuable to us. Please take a few minutes to complete this evaluation so that we may continue to improve your materials.

| | School name | Grade level taught | Your name (optional) |
|---|--|--|---------------------------------|
| | How did you hear abou workshop admin other (please specify | istration 🛛 in-service 🗳 | newsletter 🖵 fellow teacher |
| | Did you use all of the p | 0 1 | d why? |
| | If you answered <u>no</u> , wh | nich part did you <u>not</u> use an | |
| | | ow would you rate the prog | gram in the following categorie |
| _ | On the bar line below h | ow would you rate the prog grade level (✔) YES | gram in the following categorie |
| | On the bar line below here appropriate for | ow would you rate the prog grade level (✔) YES ⊢ ns ⊢ | gram in the following categorie |
| | On the bar line below he • appropriate for • clear instruction | ow would you rate the prog grade level (✔) YES ⊢ ns ⊢ ow ⊢ | gram in the following categorie |
| _ | On the bar line below he • appropriate for • clear instruction • text easy to foll | ow would you rate the prog grade level (✔) YES ms ⊢ ow ⊢ iculum ⊢ | gram in the following categorie |
| _ | On the bar line below he • appropriate for • clear instruction • text easy to foll • relevant to curr | ow would you rate the prog grade level (✔) YES ⊢ ns ⊢ ow ⊢ iculum ⊢ to use ⊢ | gram in the following categorie |
| | On the bar line below he • appropriate for • clear instruction • text easy to foll • relevant to curr • materials easy to • did you enjoy to | ow would you rate the prog grade level (✔) YES ⊢ ns ⊢ ow ⊢ iculum ⊢ to use ⊢ | gram in the following categorie |

| ★ | Approximately | how long did | it take you to com | plete these materials? |
|---|---------------|--------------|--------------------|------------------------|
| | | | | |

□ 1-2 weeks □ 3-4 weeks □ 5-6 weeks □ longer than one month □ program was spread over the year

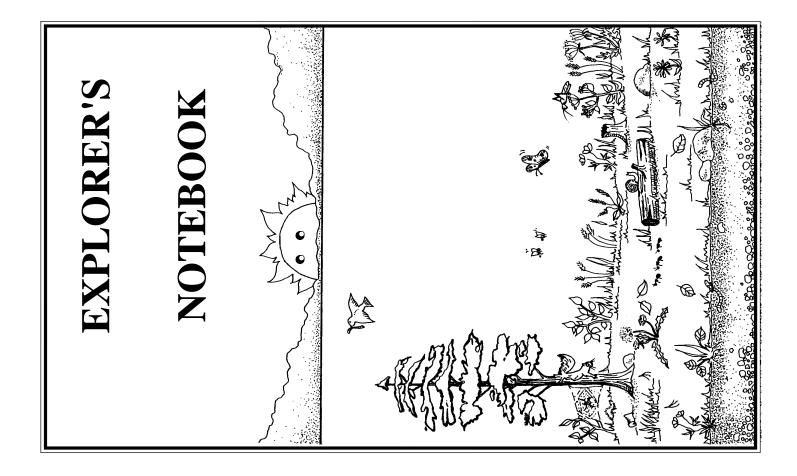
- ★ Were you satisfied with how these materials fulfilled the curriculum objectives?
 □ yes □ no
 If you were not satisfied, please elaborate:
- ★ Did you require any additional information to complete any part of the program?
 □ yes □ no
 If <u>yes</u> please tell us what was required:
- ★ Would you use these materials next year?
 □ yes □ no
 If you answered <u>no</u> please tell us why:
- ★ Any additional comments about the program in general?

Thank you for completing this questionnaire. Please place the completed questionnaire in an envelope and mail to:

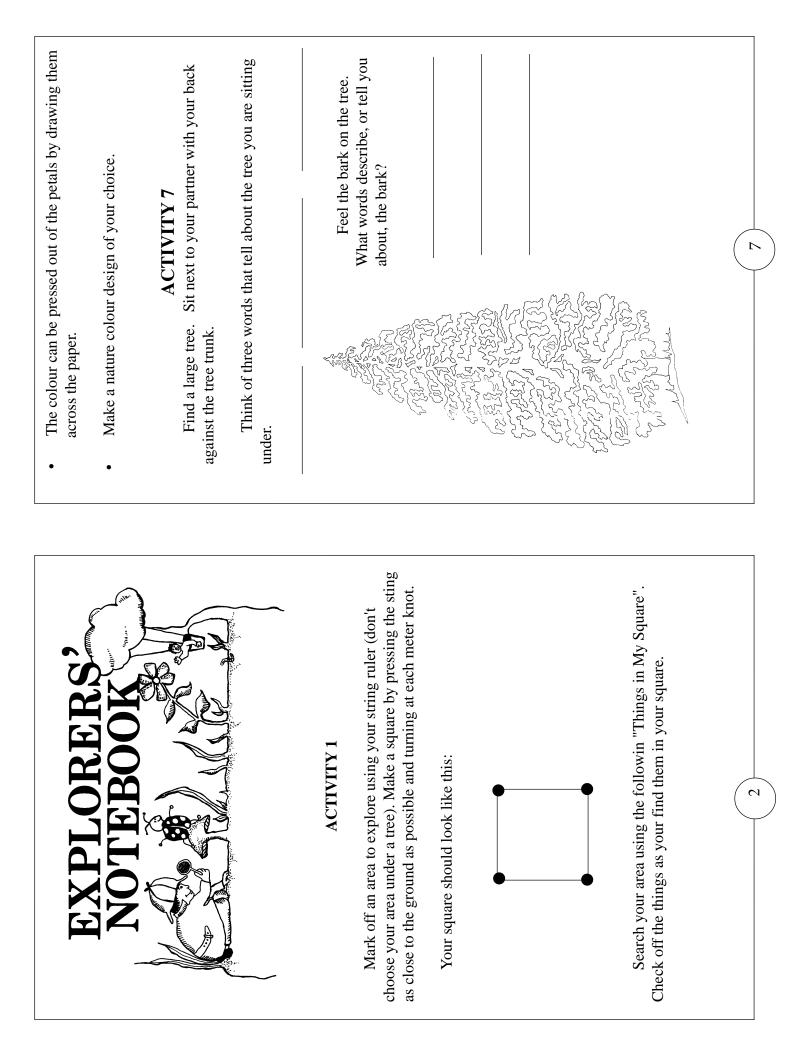
Environmental Education Coordinator Alberta Environment, Natural Resources Service Kananaskis Country Suite 201 - 800 Railway Avenue Canmore, Alberta T1W 1P1 PH: 403-678-5508 FAX: 403-678-5505

LIST OF APPENDICES

- I Explorer's Notebook
- II Some Common Trees and Shrubs of Kananaskis Country
- III Figures for Section 2.2: Name that Community!



| l about what j l about what j number of pl s the ground t e). | tree". When you finish, Bather all your materials and place them in your shoe box. Make sure you have your clipboard and drawings. Return to your teacher. 8 |
|---|--|
|---|--|



| Touch the area under the log or rock. Is it dry or damp? | THINGS IN MY SQUARE: |
|---|--|
| What does it smell like? | Dry Area Sick Plant Damp Area Litter |
| | Sunny Places An Animal Home |
| | Bushes Anthill |
| | Flowers Fallen Log |
| When you have finished at this stop, remember to put the | GrassRock |
| rock or log back exactly where you found it, so that the things you found living underneath will not die. | Insects Ground that has been stepped on |
| Go to the next activity. | Spiders Decay |
| ACTIVITY 6 Find an area in the vacant lot with flowers and grass. | ACTIVITY 2 |
| With your partner, take one petal from three different flowers. You may also collect one or two blades of grass. Gather carefully — do not pull up flowers or break stems or branches. | Use one of your blank sheets of paper to make a map of your square area. Show where each thing is located in your square. Use crayons from your box. Work with your partner and make one map. When you have finished, think of a name for the land you have explored and mapped. Write this name on your map. |
| Place the different petals and grasses on one of your blank sheets of paper. (Each partner may have one paper). | ACTIVITY 3 Count the number of different plants in your square. Work with your partner. |
| | There are different plants in our square. |
| | Draw 2 of the plants in your area. Each partner can |
| 9 | |

•

| ACTIVITY 5 ACTIVITY 5 Find a fallen log or a rock anywhere in the vacant lot. Carefully lift the log a few inches so that you can look underneath. | Do any animals live under the log or rock? (Remember, insects are animals too) | What did they do when you lifted the log or rock? What do you think would happen if you left the log or rock overturned? | IO |
|--|--|--|----|
| draw one plant. Use one of your blank sheets of paper for each drawing. Give your plant a name that you think describes it. | | Put the leaf, or a branch with the leaf on it, between the clipboard and the blank paper. Use the flat edge of the crayon and lightly rub it back and forth over the paper. If you found your leaf on the ground, you may place it in your box. Go to the next activity. | |

