Forests for the Future

Unit 5

A Sense of Place: Regional Identity, Informal Economy and Resource Management

by Cheryl Aman

Backgrounders
by Linda Mattson

A Sense of Place: Regional Identity, Informal Economy and Resource Management
by Cheryl Aman with Backrgounders by Linda Mattson

Forests for the Future, Unit 5

This is one of a series of curriculum materials developed as part of the Forests for the Future project, funded by Forest Renewal BC Research Award PAR02002-23
Project Leader: Charles R. Menzies, Ph.D
Information about the project is available at www.ecoknow.ca

Design and Production: Half Moon Communications

Acknowledgements:
Thanks to the Forests for the Future project team and all of the various teachers, students, community members, and others who have contributed to making this project a success. A special thanks to Ken Campbell for his work preparing for publication.

Thank you to Rebecca Leakey and Danny Dawson for their work conducting the interviews that this lesson plan relies upon (Fall 2002). A special thank you to Caroline Butler for her work, both as a researcher and local coordinator, on this project.

Linda expresses her gratitude to two individuals who offered their assistance and insights. Thank you to economist Dr. Ana Ferrer for enhancing my understanding of the distinction between informal and formal economies and for helping me construct the definitions concerning formal economic activities. Thank you to Cheryl Aman for her editing skills (L.M.)

Cheryl would like to thank: Veronica Ignas, Kimberly Brown, Linda Mattson, Caroline Butler and Charles Menzies for assistance and advice. Thanks also to Jarek and Tristan who tested several of the activities and provided feedback from the perspective of grade 6 boys.

Contents

A Sense of Place: Regional Identity, Informal Economy and Resource Management by Cheryl Aman

INTRODUCTION

Curriculum Areas
BC First Nations Studies
Social Studies 11 Resource
Sciences 11 & 12

Overview of Themes

The activities in this unit are designed to provide students with a sense of regional identity by providing information and experiences that emphasize the social, cultural and economic interdependence of residents and the natural resources of the Prince Rupert region. There are twenty activities in this unit. The activities are divided into five themes and there are some additional suggestions of closure activities. The themes are:

- Theme One: CREATING A REGIONAL SENSE OF PLACE
- Theme Two: IMAGERY, TOURISM, AND REGIONAL IDENTITY
- Theme Three: LOCAL ECOLOGICAL KNOWLEDGE
- Theme Four: USER GROUPS
- Theme Five: CONFLICTS OF INTEREST
- Suggested Concluding Activities

Activity Design: Active, Participatory, Experiential, and Local

The activities are designed with several purposes in mind. First, they seek to be active, participatory, experiential and based local content. Hopefully, learning experiences of this nature are intrinsically enjoyable! The activities give something for students to do -- to work in teams, play games, solve problems, work visually and finally, to effect changes. Second, these classroom activities will expose students to LEK (Local Ecological Knowledge) originating from local Prince Rupert residents. The actual interview data gathered for the Land and Resources Management Planning process is featured in some activities. Generally, the principal of collecting, valuing, and using this sort of knowledge base in research and planning is transmitted. Third, the students may develop a sense of competence by using primary data sources to ask questions and begin the process of uncovering answers. Many sources of information are available in the realm of everyday—concrete and visible, embedded in the community and natural landscape. Students will be able to draw inferences about complex relationships between industry and ecology by simply look-

ing around. Such observations can bring to light very complex research questions. Fourth, the interconnection of personal and economic forces in the region is communicated through maps, graphic representations and simulation games responsive to each particular group of students engaged. This sort of communal learning experience builds on the contributions of each student, and is dynamic and transformative.

Fits to Existing Curriculum

The activities were designed to complement existing BC First Nations Studies, Socials Studies 11, and Resource Science 11 and 12 Forests curriculum goals.

BC First Nations Studies

The rationale of the BC First Nations curriculum focuses on the cultures, histories and present realities of BC's Aboriginal peoples. Some key concepts involve the role of place to culture and identity. Because this unit is inspired by and incorporates LEK (Local Ecological Knowledge), it complements the insight of land being central to community well-being and identity. The activities presented here share a world view that situates knowledge as being experienced "from the land." Other themes that intersect with the BC First Nations curriculum rationale are: the evolution of events and environments, inter-relatedness and the goals of "balance," and the significance of being grounded in unique contexts. Objectives of the BC First Nations course are to engage in community consultation and provide "active, participatory, experiential learning and localized course content." These learning activities are designed on the same principal.

Detailed matches of activities to curriculum goals are available in Appendix B. Generally, this material will provide material and activities that supplement:

Skills and Processes

Many of these activities are active and interactive. They demand close attention to the contributions of fellow students. Critical thinking is often the result of examining values and beliefs. The research and presentation skills are predominantly visual—the creation and interpretation of maps. As well, many primary and secondary sources are featured.

Land and Relationships

The entire unit is focused on this theme. The concepts of land and resource ownership are not explicitly framed in a traditional, cultural, or general First Nations context, but that

context is directly relevant.

Contact, Colonialism, and Resistance

The examination of economies, particularly resource-based economies will be highly relevant.

Leadership and Self-determination

This unit challenges students to see contemporary economic and development issues in a specific local context – Prince Rupert and the North Coast region.

Socials Studies 11

The Social Studies curriculum draws from both social sciences and humanities and is a multidisciplinary subject. Broadly, the Social Studies 11 goal is to provide students with skills and information so they may consider multiple perspectives and make reasoned judgements. The students are encouraged to become active, thoughtful and responsible citizens. The content of this unit – economics, politics, resource use, geography, history, ecology, and psychology is certainly multidisciplinary. The underlying base of information in this regional identity unit, supports the method of inquiry, analysis and research that Socials Studies promotes. There are numerous opportunities presented here to draw values from multiple perspectives, construct new understandings, and access various primary and secondary sources.

Detailed matches of activities to curriculum goals are available in Appendix B. Generally, this material will provide material and activities that supplement:

Skills and Processes I

All unit activities involve an element of critical thinking, expression of appropriate responses and gathering of relevant information. Special care has been taken to widen the range of information sources beyond text-based materials and text-based responses to more concrete and local sources.

Skills and Processes 11

Many activities are participatory and demand respect for contributions of fellow students. Mapping skills, visual interpretation and communication, and the potential for mapping technology are a major component of the unit.

Consequences, connections, inferences, values, ethics, beliefs are focused on resource-use and management decisions in a regional context. Each of the learning processes and skills are present in this unit.

Economic Issues

The impact of resource-based industries (primarily, forestry) and other uses of the land in the Prince Rupert area is a main focus of this unit. This local context is strongly tied to the general aim of assessment of industrial and technological development and the identification of economic issues facing Canadians.

Environmental Issues

The information in this unit meets each component in this theme of the Social Studies curriculum. The information is ecological, related to economic activity, and is strongly geographical. The relevant geographic themes of location, place, movement, regions, and human interaction form the essence of this regional curriculum.

Resource Science 11 and 12 Forests

This unit is closely connected with the Forests 11 (more than Forests 12) curriculum goals. The Forests Grade 11 curriculum is based on a "resource sciences approach," yet crosses strict disciplinary boundaries by addressing social, cultural, and political interrelationships. The basic goal of evaluating a variety of perspectives on forests and how forests are managed is strongly supported in this unit. The Resource Science 11 and 12 Forests curriculum rationale promotes an understanding of the interaction of complex ecosystems, economics, and individual enjoyment of the forest resource. The management of forests has a direct or indirect impact of everyone in the province. This unit provides more opportunities for students to develop this understanding through hands on, problem-solving activities on ecological / social aspects. The problems addressed are relevant and local. The information derived from the local interviews has enormous potential for shaping the management planning process.

Appendix B provides a detailed break down of each activity and the match to Prescribed Learning Outcomes.

Forests and Society

The curriculum emphasizes developing a sense of the importance of forests to British Columbians, an awareness of a variety of perspectives and values related to forest use, and factors effecting forest-use decisions. This unit will provide extensive opportunities to develop this awareness in concrete and participatory activities. As well, this provides a direct source of information to derive perspectives, values, and factors by way of the subject matter of interview data collected

for the Land and Resource Management Planning (LRMP) reports.

Forest Ecology

The knowledge reflected in the interview data is directly related to ecology, ecosystems, and the effects of natural and human forces on the forest.

Forest Ecology

The knowledge reflected in the interview data is directly related to local animal species, habitat requirements as well as social and economic value of forest animals.

Measurements

This unit promotes the use of mapping and other visual communication of ideas related to forest-use. The use of satellite maps and other mapping technology is a relevant, but not extensive part of this unit.

Land-Use Planning

The activities in this unit are built upon and promote public (specifically local) involvement in land-use planning decisions. As such they demonstrate integrated approaches and an awareness of management processes.

Activity Flexibility

The activities have been designed in order to provide the maximum instructional flexibility. Most can be done as whole class activities, among small groups, or by individual students. The Blackline Masters can, in most cases, be used by the instructor to organize the activity, as class overheads, or for duplication and use by the students. Similarly, the "Backgrounders" provide information for the instructor and/or interested students. (As well, references are provided here for instructors who may be interested in further information on the topics addressed.) This package of activities seeks to be as complete as possible. Other suggested materials and supplies should be fairly easily available or constructed.

The Nature of the Activities

In keeping with the original research methodology, interview data provided by local residents is woven into many of the activities. In some cases, the information provided by these interviews is explicit, and in others, the knowledge and experience of locals indirectly informs the logic and direction of the activity. For example, each component of the simulation game "Hunt, Fish, Gather" is built on Local Ecological Knowledge (LEK). The information provided by residents with lifelong connections to the region should be

considered essential in any planning process or management of regional resources. By integrating the voices of local residents into their learning, students have a chance to evaluate this type of expertise and value their own regional knowledge. Students are also invited to examine concrete and visible aspects of their community (for example, local menus, web pages, people, businesses) as a primary source of information. In this way, research draws on knowledge students are already likely to have and inferences and implications can be open for all to discuss.

The activities have been designed to provide dynamic and transformative learning experiences. When possible the activities require active student participants and students can work together (often in teams). Many activities are designed to be visual, or involve interpretation and analysis of visual information, for example, but not restricted to, mapping activities. More traditional questions for discussion and worksheets are available and serve the function of voicing and recording student insights.

References

BC First Nations Studies 12 (2000). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Social Studies 11. (1997). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Resource Sciences 11 and 12 Forests (1997). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Unit Outline

SUMMARY OF NATURE OF ACTIVITIES

Type of Activity	Lesson Activities
Local Content	Theme One Activity #1: You Know You're in Prince Rupert . . . Activity #2: Brainstorm Local Products and People Activity #3: Placelessness Activity #4: The Local Menu Activity #5: Visit the Local Museum Activity #6: Large Regional Class Map Activity #7: Historical Maps Theme Two Activity #8: Prince Rupert on the Web Activity #9: Local Images Activity #10: Tourism Under Investigation Theme Three Activity #11: Hunt, Fish, Gather Theme Four Activity #14: LEK (Local Ecological Knowledge) Theme Five Activity #17: Icons on the Map Closing Activities Activity #18: Fill in the Blank Map Activity #19: Scavenger Hunt Activity #20: Celebrate Regional Identity
Interview Data	Theme Two Activity #10: Tourism Under Investigation Theme Three Activity #11: Hunt, Fish, Gather Theme Four Activity #14:
LEK (Local Ecological Knowledge)	Theme Three Activity #11: Hunt, Fish, Gather Theme Four Activity #14: LEK (Local Ecological Knowledge) Closing Activities Activity #18: Fill in the Blank Map Activity #19: Scavenger Hunt

Primary Data Source	Theme One Activity #3: Placelessness Activity #4: The Local Menu Activity #5: Visit the Local Museum Theme Two Activity #8: Prince Rupert on the Web . . . Activity #9: Local Images
Active / Game Field Trip	Theme One Activity #5: Visit the Local Museum Activity #6: Large Regional Class Map Theme Three Activity #11: Hunt, Fish, Gather Theme Four Activity #13: Balloons Theme Five Activity #16: Tug of War Closing Activities Activity #19: Scavenger Hunt Activity #20: Celebrate Regional Identity
Visual/ Graphic	Theme One Activity #6: Large Regional Class Map Activity #7: Historical Maps Theme Two Activity #8: Prince Rupert on the Web Activity #9: Local Images Theme Four Activity #12: Time Line Theme Five Activity #17: Icons on the Map Closing Activities Activity #18: Fill in the Blank Map Activity #20: Celebrate Regional Identity

Interactive	Theme Three Activity #11: Hunt, Fish, Gather Theme Four Activity #13: Balloons Theme Five Activity #16: Tug of War Closing Activities Activity #20: Celebrate Regional Identity
Creative	Theme One Activity #4: The Local Menu Closing Activities Activity #18: Fill in the Blank Map Activity #20: Celebrate Regional Identity
Problem-solving	Theme Two Activity #10: Tourism Under Investigation Theme Three Activity #11: Hunt, Fish, Gather Theme Four Activity #13: Balloons Theme Five Activity #15: The Big Balancing Act Activity #16: Tug of War
Mapping	Theme One Activity #5: Visit the Local Museum Activity #6 Large Regional Class Map Activity #7: Historical Maps Theme Three Activity #11: Hunt, Fish, Gather Theme Five Activity #17: Icons on the Map Closing Activities Activity #18: Fill in the Blank Map

Theme 1
CREATING A REGIONAL SENSE OF PLACE

Materials

- Yellow Pages
- Blackline Master 5-1: Chains vs. Local Businesses
- Backgrounder 1: The Significance of Place—Humans and Their Environments
- Take Out Menus from local restaurants (optional)
- Locally harvested food (optional)
- Pencils, blank paper (Activity 5)
- Blackline Master 5-2: Local Museum Use of Space

Introduction

Activities in this theme are designed to create a concrete awareness of the people, products, and regional features that are unique to Prince Rupert. It is hoped that students have extensive local knowledge. However, students may or may not have a strong sense of regional identity. To further this aim, it is helpful to look at what the town does, what and who the town is known for, and how it represents its identity.

Students will also be asked to consider the manner in which a place, even a very specific local place like the town of Prince Rupert, is anonymous and identical to other places across North America. The forces, psychology and extent of homogenization are important to consider, as well as to what this means for the management of the remaining wealth of the region.

These activities ask students to reconsider what they know about the natural setting of Prince Rupert. The vast land and water resources support industries and are valuable to multiple other user groups. As local citizens, students should sense how "ownership" of those settings is achieved by both individuals and large industries. The Large Regional Class Map is a pivotal activity. In constructing this map, a place is visually created for students. The map is the base to work out additional knowledge and the backdrop to all other activities in each theme.

Ultimately, it is hoped that knowledge and pride in the community and local setting will inspire students as they assess and develop a personal understanding of the place Prince Rupert is and will be in the future.

Major Understandings

- Prince Rupert is a specific and unique place
- The region is rich in cultural and industrial resources
- Communities in North America are becoming homogenized. This trend has a psychological and economic dimension. This trend is related to how regional resources are managed
- Foods that are locally available help characterize a region
- Local food that is gathered, harvested and processed may not be widely available locally for economic reasons
- Museums represent the region with visual and tactile displays of local culture, history, and geography
- Use of museum space reflects the value system of cultures and communities
- Creating a visual display of the region allows for ongoing discussion of resource-management issues, shared knowledge,

and a graphic demonstration of interconnections of geography, politics, economics, and environmental science
- Maps reveal social, cultural and economic value systems as well as geographic features

(See Appendix A for a detailed breakdown of Activities and Major Understandings.)

Activity 1. You Know You're in Prince Rupert . . .

Ask students to brainstorm characteristics of the town and region that are unique.

Activity 2. Brainstorm Local Products and People

Ask students to brainstorm a list of local products and local people who are associated with, representative of, or have achieved recognition beyond the region (for example, artists, writers, politicians, other professionals).

Activity 3. Placelessness

Background: Students will consider the degree to which homogenization of places has occurred in this region, as well as the psychological forces behind these trends. The presence of non-local businesses demonstrates interconnections and dependencies on global and North American economic structures. The diminishing of local and unique places in the community may be concurrent with or factor in to how regional resources are managed.

- Ask students to consider the businesses and eating establishments in town. (The Yellow Pages may be helpful). This activity can be a very basic counting exercise and still be informative.
- In contrast to people, products and features that are unique to Prince Rupert and possibly other towns in the region, what places of business are generic to almost any place in North America?

Activity 4.The Local Menu

Background: Foods that are locally available help characterize and a region and shape its identity. For example, salmon is considered by many to be the defining feature of the Pacific Northwest. Local food that is gathered, harvested and processed may not be widely available locally for economic reasons.

- Food is always interesting! Ask students to imagine an "Iron Chef"-like challenge where meals must be created out of strictly local foods. (See hunting, fishing and gathering icons

for ideas.) What recipes and dishes can students create?

- Ask students to conduct an informal survey of local food sources (stores, supermarkets, restaurants) in order to determine if any local food is locally used or for sale. Where and how can one get local food formally or informally? What prevents local food from dominating the local market?

Activity 5. Visit the Local Museum

Background: Museums try to represent the region with visual and tactile displays of local culture, history, and geography. How museum space is divided and used can reveal the relative importance (either historically or currently) of what is valued about a place. Students who have visited other museums or the BC Provincial Museum may add to this discussion by sharing their impressions. Comparisons of how other museums use space to represent places to the public may help students understand that that divisions of space reflect cultures and communities. They may not always reflect communities fairly or accurately. They may be more for tourists than locals. It is always interesting to explore what is not included in these displays, what is given too much space, or what should be more fully emphasized.

- Arrange for a class visit to the local museum. Students will create and analyze visual representations of the nature and size of the museum displays.
- What sort of items are prominent?
- What message is transmitted to a visitor?

Activity 6. Large Regional Class Map

Activity 6 Supplies:

- Overhead projector
- Transparencies
- Overhead markers
- Large sheets of paper
- Poster paints or felt markers
- Map of Prince Rupert Region / Forestry Map
- Blackline Master 5-4: Suggested Visual Icons

Students will create a large-scale map for classroom discussion and display. The map will convey a sense of animals, habitats, seasons, changes, locally familiar territory, and industrial resource use.

- Locate a map of the Prince Rupert region, ideally one that shows a large area of both land and marine features. A Forest Services map is ideal. Satellite maps are also a possibility.
- Photocopy the map onto overhead transparencies so that a very large scale map can be projected onto a window or wall.
- Have students trace the main features of the map, creating an enlarged mural of the region. This map will be the basis of numerous activities and a visual focus of student-generated information. The map should be large enough in scale to be visually dominant and open enough that students can add additional graphic and text information. If several classes are

working on this unit, this large map can also serve as a communal focus, or means of between-group "conversation".

Additional Map-Related Activities and Discussion Points

The following topics are structured to generate class discussion and conversation about the many dimensions to the area the map represents. If time permits, add visual material and information to the class map. Overheads and transparencies of the map will be of use for recording and displaying student ideas as they arise. In this manner, student observations are less verbal and abstract, and more visual and participatory. Issues can be discussed at a class or group level.

(1) What does it look like?

- Ask students to create sketches of identifiable, natural features or specific places within the region. Alternatively, students may share photographs of specific places. (These can be photocopied and therefore returned.)
- Can other students recognize these places? Where should they be placed on the large map?
- Generic images of trees, beaches, and skies may not be specific enough for other students to recognize and locate on the map, but they will still be good visual additions to the map.

(2) How much is "yours?"

- Ask students to comment or indicate on the map itself (or through an overlay on the overhead projector) how much of the area represented they feel is "theirs".
- What sort of land or water features lend themselves to this claim? Do personal experiences create a sense of ownership? Are students claiming the most valuable places, most accessible, most familiar?

(3) What has been altered?

- How much of the area represented by the map has been altered by human activity? What are the stories the land tells us about humans? What sort of activities (settlements, transportation routes, logging)? Who benefits from these alterations? How much of the area is pristine? Is there a recognizable pattern in what features and areas are altered as opposed to pristine? Who benefits from the pristine portions of the area?

(4) What changes over time?

- What changes in the region does nature create? Are there specific places where natural forces have altered the landscape?

What are the stories of places nature tells? What daily natural events create changes (tides, weather)? What would time-lapse photography of a specific place show us (seasonal changes, use of animals, lifecycles of trees and plants).

(5) Icons on the Map

- Students can develop a class set of visual icons on index cards or work with a set the teacher has constructed.
- Distribute the icons in class. The icons represent animals, plants and activities that local citizens have identified in the interview data. Where are suitable positions for these icons on the map? Some of these natural resources are for personal use, others are have commercial and industrial use. Many map areas will reveal how rich the area is in resources and potential conflicts between user groups.

Activity 7: Historical Maps

Locate maps of the area from different eras (Historical Atlas of Canada or BC or good sources). Early maps of the North Coast region typically show coastline details and navigation features, with many "royal" names reflecting a colonial preoccupation. Use the Blackline Master designation to label each map, duplicate for student use or on overhead transparencies. Maps reflecting First Nation cultural knowledge and map-making skill may also be available, and would be an excellent choice.

- Distribute copies of historical maps of the region.
- Students compare maps of the same region over time and observe how salient map features reflect social and economic values.

Backgrounder 1: The Significance of Place — Humans and Their Environments

Scholars in various disciplines, policy makers, and citizens are paying more attention to the relationship between humans and geography or more specifically, the effects humans have over their environments and, reciprocally the influences of their environments on them (Cheng et al. 2003; Roadman 1992; Robbins 2001). For example, natural resource social scientist Antony S. Cheng and his colleagues (2003:87-88) write that:

> *Phrases such as "sense of place" and "place attachment" are increasingly used to characterize the complex connections people have with the environments they encounter... Implied in these phrases are the rich and often powerfully emotional sentiments that influence how people perceive, experience and value the environment.*

Cheng and his colleagues use the words of Daniel Kemmis (1990), Community and the Politics of Place to explain one of the reasons for the current interest in place-based approaches in addressing natural resource issues, for example:

> *Places have a way of claiming people. When they claim very diverse kinds of people, then those people must eventually learn to live with each other; they must learn to inhabit their place together, which they can only do through the development of certain practices of inhabitation which both rely upon and nurture the old-fashion virtues of trust, honesty, justice, toleration, cooperation, hope and remembrance. [p. 119]*

Undertaking studies of places will serve various purposes. Studies of places and what they mean to the people who inhabit them can facilitate an understanding of how the places we live in shape our lives and how in turn we shape the places we live in.

For example, Prince Rupert is situated 920 km north of Vancouver and 65 km south of southeast Alaska, amidst high mountains, fjords, islands and forests. It is also a part of British Columbia, which is a part of a larger entity known as Canada. Descriptions of the city and the region also locate it in the Pacific Northwest or Cascadia. All these notions of place (i.e., Prince Rupert within BC; BC within Cascadia) are of consequence in shaping the city and surrounding area as well as its inhabitants. The region's residents, influenced by their sense of place, define and shape the region itself. This shaping of region is accomplished in various ways. Of particular consequence, are decisions a region's residents make in regard to land and resource uses.

To continue, anthropologist Margaret Rodman (1992:642) states that "studies of places, spatial relationships… and values attached to places and relationships" are in fact regional studies. Therefore, one way to begin to comprehend the relationship between humans and their geography in Prince Rupert, for example, is to undertake a study of place and the values attached to it.

In undertaking a study of a specific region or place (i.e., Prince Rupert) it is

important to take into account regional similarities and differences of adjoining communities. Historian William Robbins clarifies this further. In his article entitled Nature's Northwest: In Search of a Pacific Region, Robbins (2001:177) first explains why it is useful to examine the relationship between people-place connections, stating that it is "more than a descriptive exercise; it is an analytical tool for making sense of a seemingly incomprehensible and chaotic world." He then cautions that:

> *Regions exist in proximity to one another and they should never be studied in isolation. … For the Pacific Northwest, sharply diminished salmon runs and severe environmental restrictions on timber harvests have been harmful to traditional resource communities, contributing to economic dislocation and social disorder. In some case, it has pitted members of a community against each other; in still others, it has put urban and rural people on opposing sides of environmental issues. In the end, however, physical landscapes, cascading and meandering waterways, forested slopes, sprawling grasslands, sagebrush deserts, and rockbound seacoast, are the centerpiece of our regional iconography. [p. 177]*

In his concluding remarks Robbins (2001: 178) states that:

> *There is a common feature, an essential focus to this discussion of the Pacific Northwest, of its once prodigious salmon runs, and the region's trove of offbeat stories. It rests, I suggest, in the intimate association between humans and geography, the ties that bind people to a particular place. I use this relationship, what I call our affinity and affection for place, to underscore its potential as a moral force to guide and shape social and environmental policies.*

The greater Pacific Northwest or a Cascadia region, of which Prince Rupert and the surrounding area is a part of, is imagined as embracing southern British Columbia, northern California, Idaho, Montana west of the Continental Divide Oregon, and Washington "contiguous areas with comparable ecosystems and economies." (Robbins 2001:159). Alaska is also included in the classification (Robbins 2001:159).

Robbins writes that:

> *Human cultures of the Pacific Northwest are vivid expressions of the region's geography and history. Both natural events and cultural activity are interwoven across its vast landscape, initiating changes that were are only now beginning to understand. Because they possess geographical agency and are continually in the process of transforming the Earth, humans have always enjoyed a reciprocal relationship with the world around them. [p. 158]*

Undertaking a regional study of Prince Rupert will encompass examining the regions in proximity to it. However, it is important to be aware of the fact that:

> Each place has a unique history among its inhabitants and visitors. Personalities, partnerships, feuds, compromises, outmigrants, and newcomers make a place what it is. In turn, the place brings people in relation to one another in incomparable ways, thereby affecting the biophysical attributes and processes in incomparable ways.

Meanings assigned to a place are unique to that place and do not readily transfer to other places, even if the biophysical [e.g., climate, nutrient flows, predator-prey relationships, animal migrations] attributes are identical. This means that people-place connections are properties that cannot be readily discerned independently of the places from which they emerge. [Cheng et al. 2003:99-100]

Further on this matter, for each citizen, "a place has a unique reality, one in which meaning is shared with other people and places. The links in these chains of experienced places are forged of culture and history" (Rodman 1992:643).

References

Cheng, Antony S., Linda E. Kruger, and Steven E. Daniels (2003)
"Place" as an Integrating Concept in Natural Resource Politics: Propositions for a Social Science Research Agenda. *Society and Natural Resources* 16(87): 87-104.

Ching, Barbara and Gerald W. Creed (editors) (1997)
Knowing Your Place: Rural Identity and Cultural Hierarchy. New York and London: Routledge.

Goble Dale. D. and Paul W. Hirt (editors) (1999)
Northwest Lands, Northwest Peoples: Readings in Environmental History. Seattle and London: University of Washington Press.

Kemmis, D. (1990)
Community and the politics of place. Norman: University of Oklahoma Press.

Manning, Richard(2001)
Inside Passage: A Journey Beyond Borders. Washington and Covelo: Island Press.

Rodman, Margaret C. (1992)
Empowering Place: Multilocality and Multivocality. *American Anthropologist* 94(3): 640-656.

Williams, W.G. (2001)
Nature's Northwest: In Search of a Pacific Region. In *The Great Northwest: The Search for Regional Identity*, edited by William G. Robbins. Corvallis: Oregon State University Press, pp: 158-182.

Chains vs. Local Businesses

Question for Discussion	Student Observations
What proportion of Prince Rupert's businesses are "chain" businesses?	
How does the shopping or eating experience differ from to the one-of-kind local business?	
Which type of business is more vulnerable to economic downturns?	
Which inspire loyalty?	
What effect does the presence or absence of the chain businesses have on our perceptions of places?	

Local Museum Use of Space

1) Draw a floor plan of the local museum. Use the floor plan to indicate how the museum has organized their displays and where the different sections are located.

2) What are the dominant themes in the museum display? Arrange the themes in order of what takes up the most visitor attention and museum space.

3) What would the contents of the museum say to an outsider about what was historically important to this area?

4) How could the displays be re-designed to reflect what is currently important and unique about the area?

Prince Rupert Regional Map: Suggested Visual Icons

Industry:
Fish farming
Shellfish farming
Old growth timber
Oil and gas exploration
Tourism
Commercial Fishery

Outdoor Recreation:
Fishing
Camping
Kayaking
Boating
Family Picnics
Beach Combing
Rock Climbing
Safe anchorages
Hot Springs
Historical Sites
Black Flies

Hunting:
Ducks
Geese
Bear (black, brown, white, grizzly?)
Goats
Deer
Moose

Harvesting:
Seaweed
Clams
Berries
Mushrooms

Fishing:
Shrimping
Crabbing
Lake Fish
Salmon
Herring
Rockfish
Halibut
River fish

Conservation / Research /Threats:
Fish Hatchery
Soil Erosion
Water degradation/pollution
Habitat degradation
Loss of species
Species imbalance (Wolf)
Road Construction
Road Deactivation
Clear-cut logging

Pollution sources:
Pulp mill
City sewage untreated
Salmon farming
Logging

Trapping:
Marten
Mink

Backgrounder 2: What Maps Reveal About Their Makers

Scholars suggest that maps are cultural artifacts or objects that are shaped by the values and perceptions of the people who make them. Maps in turn reinforce the values and beliefs of their creators. To study the way in which a group or groups map their environment over time has the potential to reveal interesting information. Such a study could reveal a group's perception of the their natural environment as well as how they value certain aspects of that environment. For instance, forestry maps or maps detailing tourism activity could indicate a concern with such endeavours for economic or environment reasons (Anderson 1991; Fossett 1996; Rundstrom 1990).

Mapping, states geographer Robert A. Rundstrom, (1990:155) is "fundamental to the process of lending order to the world." He continues, explaining that:

Maps may be considered artifacts composed of signs that materialize a way of experiencing… By transforming a given way of thinking into material reality, maps simultaneously reflect and reinforce the world view or spatial thought of a culture. [1990:155]

In a more politicized historical account of the process of mapping Benedict Anderson (1991:163-164) suggests that maps profoundly shape the way in which the "colonial state imagined its dominionæthe nature of the human beings it ruled, the geography of its domain, and the legitimacy of its ancestry." Anderson (1991:163-185) writes that European-style maps are said to work on the "basis of totalizing classification." He continues his discussion of the implications of mapping:

Ever since John Harrison's 1761 invention of the chronometer, which made possible the precise calculation of longitudes, the entire planet's curved surface had been subjected to a geometrical grid which squared off empty seas and unexplored regions in measured boxes. The task of, as it were, 'filling in the boxes' was to be accomplished by explorers, surveyors, and military forces. [1991:16-185]

The idea that Anderson is proposing (in a somewhat complicated manner) is that political boundaries are arbitrary and fluid, and that a distinct community, nation, or region exists only when a significant number of people regard themselves as members of it. The maps we draw as members of community, or seek in unfamiliar territories silently show us cultural, psychological, and physical locations. The wall maps and atlas pages of our classrooms are now likely to reveal capital cities, towns, borders of countries and provinces: distances we travel, land features known and named.

References

Anderson, Benedict (1991)

Imagined Communities: Reflections on the Origin and Spread of Nationalism. London and New York: Verso.

Fossett, Renee (1996)

Mapping Inuktut: Inuit Views of the Real World. In *Reading Beyond Words*, edited by Jennifer S.H. Brown and Elizabeth Vibert. Peterborough: Broadview Press, pp.74-94.

Rundstrom, Robert A (1990)

A Cultural Interpretation of Inuit Map Accuracy. *Geographical Review* 80(2):155-168).

Theme 2
IMAGERY, TOURISM, AND REGIONAL IDENTITY

Materials

- Access to the Internet
- Backgrounder 3:
- Local tourist pamphlets
- Scissors
- Tape
- Tourist pamphlets from other communities within North Coast region (optional)
- Blackline Master 5-8: What they see / What they don't see
- Backgrounder 4: Mythology of the Pacific Northwest

Introduction

The following activities are designed to explore the impact and nature of tourism in the region. Students first consider how a town markets itself to tourists. What are the features of the region that are most spectacular, and unique? Information provided to tourists paints a picture that promotes the "image" of the region. This image, very literally evident in logos, photographs and graphic representations, reveals features residents both idealize and hope to capitalize on. Vast rainforests, huge ancient cedars, astonishing sunsets, natural beaches, and rushing rivers, totem poles, orcas and grey whales, and massive salmon (and perhaps even the rain) are all associated with Pacific Northwest. At a deeper level, these symbols of the coastal lifestyle reveal a mythology we hold dear. This mythology may be grounded in realities, it may be historical, or it may be more a socially-constructed "heritage." Students should consider the extent of the truth behind the image and how it may effect resource planning.

In addition this theme also highlights the paradoxes in tourist development and marketing the resources of the region. Profits may not impact the local communities directly. The tourist industries may upset the ecological balance. The personal, recreational, subsistence use and access of local residents is impacted by this competing user group.

Major Understandings

- There is an economic benefit to attracting tourists to the region
- Tourism impacts the social and natural life of a region in problematic ways
- Communities in the region will market the same features (salmon fishing, natural scenery, First Nations culture)
- How a region is known and marketed to outsiders reflects what is valued in the region
- Images and symbols of the region reveal a mythology of the region
- The mythology of the region potentially influences how regional resources are managed
- Tourist industries conflict and compete with both industrial and local use of the wilderness
- LEK has a role in creating resource management solutions
- Interview data is an important research tool

See Appendix B for a breakdown of Major Understandings associated with each activity.

Activity 8: Prince Rupert on the Web

Background: Students may perceive each town in the region promotes itself in a very similar manner. The natural resources of wilderness experiences and the presence of First Nations culture are likely to be emphasized. There is an economic benefit to attracting tourists to the region. As well, these same tourist industries conflict and compete with both industrial and local use of the wilderness.

- Students compare visual material on local and regional tourism web sites. See Blackline Master 5-7
- Have students compare and discuss how this community and other communities in the region market and sell themselves as tourist destinations.

Activity 9: Local Images

Students analyse the visual content of tourist pamphlets or other materials. Students provide a contrast between the ideal marketed features of the region and the reality for local residents.

- Distribute pamphlets and discuss what story the images, photos, slogans, and logos tell about the region. Is the story truthful or exaggerated? What are the distinguishing features to outsiders about the region? What is the attitude suggested about the wilderness and wildlife? Do insiders believe these stories too? If we believe our region is vast, inexhaustible, natural and plentiful how does our behaviour in the environment change?
- Have students cut out images from the tourist pamphlets. Students use these images to complete the Blackline Master or incorporate these on the Large Class Regional Map in order to display connections to tourist-related industries and resources.

Activity 10: Tourism Under Investigation

Bakcground: The concerns of the local residents can be divided into the following:

(1) Right to the resource
(2) Access
(3) Protecting ecological balance and preserving natural wilderness
(4) Ethics of resource use
(5) Anchorage
(6) Profit distribution
(7) Ethics

Tourism has economical benefits to the region. However, the nature of tourism demands protection of resources for tourist use at

the same time the resources are threatened and diminished by tourist use. The problems created by tourism are exposed wherever there is competition over the resources.

The interview data reveals the intimacy and experience local residents have with these resources. LEK or Local Ecological Knowledge may be a powerful method of describing and addressing problems.

- Students evaluate local interview data regarding threats and changes to resources where there are competing interests between tourists and locals. Use Blackline Master 5-11.

Backgrounder 3

Tourism – Promotion of Place

During the last two decades tourism has been one of the major revenue producers in the BC economy. One of the primary attractions is the province's "natural beauty." It is the fiords, mountains, and rivers that attract the provincial, national, and international visitors. Tourism has provided an alternative natural resource use for BC regions that traditionally have been dependent on forestry and fishing. However, as the tourism industry increases, so do concerns about the impact of tourism upon the environment (*Encyclopedia of BC* 2000:709).

Scholars, policy makers, and citizens recognize that tourism, once considered a "clean industry," has the potential to have a negative impact on the environment (Van der Duim and Caalders 2002:743). However, at the same time there is an awareness that tourism is able to add to the growing awareness of the value of land and resources and thus to garner public support for their protection. Tourism also provides employment and income for the local population. In 1997 tourists spent about $8.5 billion in BC. In 1998 the industry supported 113,000 direct tourism-related jobs (van der Duim and Caalders 2002:743-744; *Encyclopedia of BC* 2000:709). This desire to protect the environment on the one hand, and generate revenue on the other hand, contributes to lively discussions between different groups who have dissimilar definitions of what is considered "appropriate" for the environment. During these discussions "sense of place" and "place attachment" become relevant. The idea is that place, and human beings sense of place, is a "powerful social influence in natural resource politics" (Cheng et al. 2003:89).

Quick Facts

British Columbia's tourism revenues exceeded $9.2 billion in 2001.

Tourism directly employees almost 112, 000 British Columbians and accounts for one in every 13 jobs in the province.

In 2000, tourism was the third largest earner of export income in the provincial economy, after wood and energy products.

Source: Tourism British Columbia Canada: British Columbia Tourism Top Ten Facts (http://www.tourism.bc.ca/template.asp?id+10)/

Regionally, tourism is important to the economy of Prince Rupert and the surrounding area. A website focusing on Prince Rupert promotes the city and the environment within which it is located in the following way:

> *Picturesquely located on Kaien Island near the mouth of the Skeena River on British Columbia's north coast, the port city of Prince Rupert quickly impresses visitors with its extremely rich First Nations culture, unique north coast fishing history, surprisingly cosmopolitan attitude, spectacular coastal environment, and of course, classic Canadian hospitality.*
>
> *The city boasts a number of superb museums and attractions that provide visitors an insightful and provocative look into life on the north coast.*
>
> *But it is the allure of the natural environment that is the north coast's greatest asset.*

Surrounding the city you will find some of the most breath-taking scenery anywhere, as water, rain-forest, mountains and fresh air meet. There is a spirit that is the north coast. [www.tourismprincerupert.com/know.htm] [Emphasis added]

Such material has been described as "place promotion", addressing "specific target audiences, who have to be persuaded of a place's worth" (Schollman, Perkins and Moore 2001:300). However, conflicts can arise around different ideas about the value and meaning of particular places and their uses (i.e., for logging, tourism, and/or wild food harvesting purposes) (Cheng, Kruger, and Daniels 2003; Schollman, Perkins and Moore 2001; Trigger 1999).

Finally, related to conflicts around uses of particular places, are controversies around local identities and image management. Scholars who conduct research on tourism and identity find that many citizens take seriously the impression or image of themselves and their region that is created for tourists (Rogers 202:499).

As the region's residents debate the impact of tourism on the economy and the land and resources in this province they reveal how they perceive and value their environment. During these discussions regional identities are stated, argued about, and shaped.

References

Ateljevic, Irena and Stephen Doorne (2002)

Representing New Zealand: Tourism Imagery and Ideology. *Annals of Tourism Research* 29(3):648-667.

Cheng, Antony S., Linda E. Kruger, and Steven E. Daniels (2003)

"Place" as an Integrating Concept in Natural Resource Politics: Propositions for a Social Science Research Agenda. *Society and Natural Resources* 16(87): 87-104.

Francis, Daniel (Editor) (2000)

Encyclopedia of British Columbia. Madeira Park, BC: Harbour Publishing Ltd.

Rogers, Susan C. (2002)

Which Heritage? Nature, Culture, and Identity in French Rural Tourism. *French Historical Studies* 25(3):475-503.

Schollmann, Andrea, Harvey C. Perkins, and Kevin Moore (2001)

Rhetoric, claims making and conflict in touristic place promotion: the case of central Christchurch, New Zealand. *Tourism Geographies* (3)3:300-325.

Van der Duim, Rene and Janine Caalders (2002)

Biodiversity and Tourism: Impacts and Interventions. *Annals of Tourism Research* 29(3):743-761.

Trigger, David (1999)

Nature, Work and 'the Environment': Contesting Sentiments and Identities in the Southwest of Western Australia. *The Australian Journal of Anthropology* 10(2):163-176.

Author unknown

Get to Know Us. [www.tourismprincerupert.com/know.htm]

Web Search

	Visuals; photos, images, logos	The big draw, selling what?	Which local businesses might benefit?	Competes locals over which resources?
Prince Rupert www.tourismprincerupert.com/welcome.htm				
Terrace www.terracetourism.bc.ca				
Ketchikan (USA) www.alaskainfo.org/frames.on/ketchikan/item/				
Port Hardy www.ph-chamber.bc.ca/				
Queen Charlottes www.toursnorth.com/				

What They See—What They Don't See

What They See Ex: Sunny weather Natural Wilderness	**What They Don't See** Ex: Rain Clear cut logging

Backgrounder 4

How Do Our Stories Shape Our Actions?

What influence do the stories that people tell about themselves and their regions have on their identities, communities and planning for future development? How does history evolve into mythology? In an article entitled The Invention of American Tradition, M.J. Bowden (1992:3) writes:

> *Major American beliefs about the pre-American environment were all created successfully as myths after settlement of each ecological zone. Taken together, these beliefs constitute the grand invention of the pristine wilderness—a wild American nature, far tougher to conquer than it ever was in reality. To exaggerate the conquering American achievement further, the role of native Americans in transforming the pre-American environment was denied, as was their humanity and cultural adaptability. The conquering heroes were superhuman, self-glorifying Americans . . .*

In a Canadian, or a specifically British Columbian context, we can find numerous examples of the theme of transforming the environment and converting the landscape. Here are some examples from an article, copyrighted 1914 detailing the Prince Rupert possibilities:

> *The land-locked spacious harbor made this the indisputable port for a big terminal… Why was this magnificent harbor unknown before this time? …*
>
> *…John Knox, a lone prospector, secured a footing on the town site by locating a mineral claim. …*
>
> *Baconsville, Knoxville, and Vickersville represented the divisions and camps of the earlier residents of this now great and growing city. Baconsville, which took its name from James H. Bacon, Harbor Engineer for the G.T.P. Railway Company, included the railroad staffs and followers. Knoxville sheltered the independent pioneers and Vickersville took its name from the first provincial constable stationed here, the popular and kindhearted "Billy" Vickers. …*
>
> *The pioneers commenced the forbidding task of city building on the rock-grit island with optimism and determination…*
>
> *[www.tourismprincerupert.com/early_days.htm]*

The language suggests an unknown wealth of possibility in the land, awaiting discovery (and naming) by a European man of vision. Local histories, often written by pioneering residents, convey many of the same messages. The stories of towns

on the Western frontier are narrated in similar plot structure—we came, we saw, and we really put this place on themap. The "forbidding" and the "unknown" are to be settled and capitalized on. The wilderness is the frontier for future settlement. More recent chapters to the story could relay the boom and bust cycles resource-dependent towns of the West are vulnerable to, but rarely move beyond the glories of the "opening" events . . .

Another example set in British Columbia, has a more current, 1990's timeframe. In the following—a proposal for the protection of wilderness throughout British Columbia prepared by the Valhalla Society—suggests that "Canadians now wish rivers to be "left wild and free" from industrial expansion, for in the 1990s, people are "jaded" and "technology-sated" (in Trigger 1996:56-57). We still see the land around us as a wilderness. Whether or not this perception matches reality is unquestioned. How much "wilderness" is still in existence?

References

Bowden, M.J. (1992)
The invention of American tradition. *Journal of Historical Geography* 18(1):3-26.

Trigger, David (1996)
Contesting Ideologies of Natural Resource Development in British Columbia, Canada. *Culture XVI*(1):55-69

Author unknown (1914)
[www.tourismprincerupert.com/early_days.htm]

Backgrounder 5

Fishing and Hunting Regulations

	Resident	Non-Resident / Alien
Hunting License	$32.00	$75.00 / $180.00
Bear	$20.00	$180.00
Deer	$15.00	$125.00
Grizzly Bear	$80.00	$1000.00
Mountain Goat	$30.00	$350.00
Moose	$25.00	$250.00
Queen Charlotte Island Deer	$10.00	$28.00
Limited Entry Hunt	$6.00	$28.00

Source: http://wlapwww.gov.bc.ca/wld/documents/huntinglicensefees_2003non.pdf / Ministry of Water, Land, and Air

	Resident	Non-Resident
Adult Annual	$22.47	$108.07
Salmon Conservation Stamp	$6.42	$6.42

Source: http://www.-comm.pac.dfo-mpo.gc.ca/pages/sfg/licences_e.htm/ Fisheries and Oceans Canada

Competing Interests Interview Data

	Resource Competing For	*Valid concern? Yes/Maybe/No*	*Possible Solution*
"I have no problem with the guides but I wouldn't want to see us kicked out of the areas."			
The Gitnadoix River is classified water—you need a separate license to access that area. The guides wanted that to happen. The areas are reserved for guides."			
"Hunting and fishing and the resources we can all access should be available to every Canadian citizen and every landed immigrant of less than 5 years. The rest can pay for it. The fees for non-citizens should be higher than they are."			
"Fish farms, sports camps. Any coastal development that limits access or pollutes. These places are sensitive because they are major areas for salmon migration, holding, etc. There are limited anchorages on the coast and they would be impacted by development. Consider where the anchorages are!"			
"Sport fishermen. The more sporties, the more competition with the amount of fish we are allowed to take."			
"The guys with ATVSs are getting a hard time—the guides are on horseback and don't want ATVs around. But the ATVs are only allowed to go in as far as 400 m from the road anyway."			

	Resource Competing For	*Valid concern? Yes/Maybe/No*	*Possible Solution*
"On the water there is a confrontation with charters and lodges. They cork you. Most of the lodges are from out of town and don't buy locally or get work done locally. I think you should have to be local to do charters."			
"The problem with the charters is there is too many boats. Where we have access with local boats is important."			
"There are sports camps there too, these private interest groups burn their garbage on the beach and tell you can't anchor there. They say they have a lease for that area and that you must leave!"			
"I am not a trophy hunter. Everything I take, we eat."			
"Everyone of these river valleys I've hunted and fished up. They are beautiful. But the more we talk of ecotourism, the more we should protect these places. The more the rest of the world goes crazy, the more people will want to see our systems."			
"I don't like guides. That's the equivalent of pimping. If you can't get your animal yourself, you have to get someone else to find it."			

Source: Menzies C., Mattson L., and Butler, C. (2002). The place of the informal economy in the North Coast LRMP process. In Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. www: ecoknow.ca/

Theme Three
TRADITIONAL AND LOCAL ECOLOGICAL KNOWLEDGE

Introduction

This theme showcases the knowledge and skill generated by those who use the natural resources to obtain food or other materials. Interview data was collected the Coast Information Team (CIT) to assist in the North Coast LRMP (Land and Resources Management Plan) in bringing environmental expertise and community experience to support the development of ecosystem-based management plans. This interview data was gathered in and around the Prince Rupert region during the Fall and Winter of 2002 *. In this theme a single, but extended, simulation activity is constructed based on this data. The sources are residents with hunting, fishing, and other food gathering experiences. The cultural, social, psychological, and physical well-being provided by this use of local areas is tied to access to the resource. Such access over time relies on and develops an intimate understanding of geography, biology, and ecology.

Major Understandings

- Physical, social, and psychological dimensions to the desire to provide one's own food from the land and sea
- Individual talents of students are valuable in team settings and contribute to the team skills and knowledge
- Knowledge of local seasons is important
- Knowledge of local habitat and resource use conditions is essential
- Social networks are an important part of gaining access to the resources
- There is an economic component to the personal use of the land and water resource
- Local economies benefit from these activities
- Food is a valuable and social commodity
- Hunting, fishing and gathering activities are a desired and legitimate use of natural resources by residents.
- There is an economic benefit to the communities from individuals who maintain lifestyles where local food is harvested for personal use.
- These activities require time, social networks, skill and ecological knowledge.
- These individuals are sources of knowledge about regional resource uses.

Activity 11: Hunt, Fish, Gather

Students will have a complex, multi-dimensional experience. The game requires students to participate, observe, compete, co-operate, communicate, make connections, and celebrate specific talents and abilities of fellow students. The simulation game is broken up into distinct components and may be played by the teams over several class periods or all at once.

This simulation game is designed to create a sense of what is involved in using the land and water as a food-producing resource at a personal level. Students will gain an understanding of the personal attributes, money involved, knowledge and time needed for those who derive sustenance from the land. The concept of social networks in the accessing of the resources and the sharing of the food is also highlighted.

Two introduction activities to the simulation game are provided. Provide students this material on handouts or via the overhead to promote a brief discussion. It is important to note that these are direct quotes from Prince Rupert residents from interviews conducted as part of the Central Coast Land and Resources Management Planning (LRMP) process.

1. Background: What motivates people to hunt, fish and gather?
The local residents offer different views on whether hunting, fishing and gathering is more an issue of subsistence and providing food or a social and recreational opportunity. The activity itself is valuable. The passing down of traditions, skills and knowledge occur among families and others during these activities. Being able to provide a source of food is viewed as an instinctual and empowering skill.

- Using Blackline Master 5-12, have students analyse interview data to determinethe motivations for contemporary hunting, fishing and gathering activities.
- There are physical, social, and psychological dimensions to the desire to provide one's own food from the land and sea. Game meat is viewed to be healthier source of protein. Discuss the beliefs that interview subjects held of the health benefits of game meat. See Blackline Master 5-13.
- For more information see Backgrounder 6, Blackline Master 5-14.

2. Preparation for Simulation Game
This activity provides the structure for setting up student teams in order to participate in the following hunting, fishing and gathering challenges.

- Divide the class into food-gathering teams of 4 or 5 students

each. (If students are opposed to hunting, or unwilling to be active participants they may sit on the sidelines as a group of "Store-Bought, Packaged Food-Eaters".)

- Record the following roles for team members on the board. Or use Blackline Master 5-15: Roles in the Game.
  Gift Giver
  Personal Shopper
  Target Hitter
  Personal Accountant
  Navigator
  Scheduler
  Negotiator
- Teams must decide among themselves who best suites each role. A student can fill multiple roles, if so elected by his or her team members. Skills and attributes needed to fulfill each of these roles is noted if students wish to have more information about what each person will be doing.

3. Simulation Game

Part One: Start Up Costs

Who plays: Personal Shopper

Prepartion: Price is Right cards

Make cards with a big visual or label on one side and the price written on the back of the card.

Truck A (50,000)
Truck B (45,000)
Jet Boat (15,000)
Second hand Zodiac ($6300)
Boat Motor ($4000)
Survival Suit ($1200)
Rifle with Scope ($1200)
Rifles A and B ($800) (two cards)
Binoculars ($500)
Gortex Boots ($260)
Outdoor clothing (pants, jackets $450)
Fishing rods A and B ($200) (two cards)
Prawn Traps ($90) (two cards)
Crab Traps ($90) (two cards)

Teams will play a "The Price is Right" game and win big ticket items needed to access the wilderness. The students elected Personal Shopper for their teams will participate. The Personal Shopper most accurate in their guess will 'win" the item for their team. If students are nowhere near in their first guess, hint

Supplies, Part 1

- Price is Right Cards
- Blackline Master 5-16: Group Record Sheet

at the price range. A student volunteer can record the guesses in order to keep track of who has won the item.

- At the conclusion of the activity, record on the Blackline Master 5-16: Group Record Sheet whether groups can hunt, fish or gather based on the equipment the have won.
- At the conclusion of the activity students will notice that start up costs can be considerable and that not each group will be adequately equipped to do each activity.

Supplies, Part 2

- Blackline Master 5-17: Booking Time on the Calendar
- Overhead markers (One colour representing each group.)
- Blackline Master 18: In Season
- Blackline Master 16: Group Record Sheet

Part Two: When to Go

Who plays: Scheduler

The student elected Scheduler will book three 2-week time slots in which the hunting, fishing and gathering for their group will occur. The time slots may be consecutive. Use duplicates or an overhead of Blackline Master 5-17, Booking Time on the Calendar. Once students have booked time for their group, refer to or overlay an overhead of Blackline Master 18, In Season, to determine which activities are viable for each part of the year. Record on Blackline Master 5-16, Group Record Sheet which groups have both attained equipment and selected viable time of year (see Above).

- At the end of the activity, students may realize that knowledge of local seasonal timing is important.

Supplies, Part 3

- Regional Map
- Blackline Master 19, Potential Locations and 20, Great Locations
- Blackline Master 16,Group Record Sheet

Part Three: Where to Go (optional)

Who plays: Navigator

Have students select from a list of locally accessed sites for hunting and fishing. Most of these will be identifiable to students on the Large Regional Class Map or smaller maps. Some will be very familiar locations. (See Blackline Master 5-19, Locations). Some of these locations will not be viable: success will not result due to the impact of population or industry. Consult with Blackline Master 5-20, Great Locations to determine if the Navigator has applied either luck or understanding and chosen locations that are appropriate. The instructor can record which groups were “successful” location-selectors on the Group Record Sheet (see Above).

- At the end of the activity, students may realize that knowledge of local habitat is essential. At this point it will be important to realize that unless the group is both knowledgeable and lucky they will not be able to hunt, fish or gather

Supplies, Part 4

- Bean Bags or small classroom friendly throwable objects
- Blackline Master 5-17, Booking Time on the Calendar
- Target Cards (Large cards with a visual or word representing the various species of animals and plants to attach to the wall or board.) See Blackline Master 5-21.
- Blackline Master 5-6, Group Record Sheet

without trading or borrowing from the other competing teams. Each group needs
-suitable equipment
-suitable timing
-suitable locations.

Part Four: Target Practice

Who plays: Target Hitter, Negotiator

- Set up the cards in three distinct areas of "Hunt" (large and small game animals) "Fish" (fish, shellfish) and "Gather" (berries, mushrooms, seaweed). The cards vary in size in order to suggest the ease in attaining these foods, and the numbers of these species available. The Card also provides information on how many students will be fed.
- Go through the schedule by month and have groups who have booked time send their Target Hitter to a designated spot in the classroom from which to take aim at the cards. However there are two important caveats: the group should have appropriate equipment and have selected a viable location (see Blackline Master 5-16, Group Record Sheet). (For example, those equipped to fish, cannot hunt.) Gathering may be done by both groups. At this point groups may make use of their Negotiator to attain equipment from other groups. If these conditions have been satisfactorily met, Target Hitter is free to fire away.
- If targets are hit, the group gets to keep the catch. It will make sense to limit the number of chances each target hitter gets to one or two chances (or use discretion). This will force the player to select specific species and create some suspense.
- At the end of the activity, students may realize that these hunting, gathering and fishing activities require skill as well as knowledge and may not result in a yield. If students have borrowed equipment, they may realize that social networks are an important part of gaining access to the resources. Students may also witness what motivates people to seek specific species, Size? Value? Ease of access? Food value? Seaweed has been included on the Gather list because it is an edible food product (highly nutritious) that some local people harvest. However, seaweed is also harvested for its value as a garden fertilizer. Firewood is another example of a non-edible, yet valuable harvest item but has not been included as a target.

Supplies, Part 5

- Blackline Master 5-22, Cost per Trip
- Blackline Master 5-23, Deduction Instructions
- Two prizes (optional)

Part Five: Adding up the Cost

Who plays: Personal Accountant

- Provide the Personal Accountant with the Blackline Master 5-22, Cost per Trip sheet which outlines the cost of various items and expenses associated with hunting, fishing and gathering. Personal Accountants must quickly and accurately add up expenses. (Total cost will be $976.)
- Once the expenses are added this sheet is handed in (check quickly to see sum is correct). Instructions to an additional math problem (see Blackline Master 5-23, Deduction Instructions) are given to Personal Accountant. This student must subtract any costs from the general expense list that his or her team did not actually incur over the course of this activity. (For example, any teams that fished will not need to spend money on hunting license tags.)
- Award prizes to the first team to finish calculations and to the team who has incurred the lowest cost.
- Students may realize that there is an economic component to the personal use of natural resources. Some students may feel these are "unfair." Others may see they act as a limitation on hunting, fishing and gathering activities for local residents.

Supplies, Part 6

- Prizes, tokens or food.
- Blackline Master 16, Group Record Sheet

Part Six: Sharing

Who plays: Gift Giver

- Have Gift Giver exchange animal, fish and plant cards won by group for tokens (or prizes or food – some sort of tangible goodies). Large animals and valued animals will yield a larger cut of the goodies. Gift Givers must decide how to distribute this wealth among and between the groups.
- Some groups may have already promised a share of the food supply in exchange for use of equipment.
- Gift Givers are free to share with their friends in other groups, or keep the goodies equitably distributed within their own team. They may share with students who chose not to participate in this game. Only the Gift-Giver may share.
- Students may decline the gift if they wish, but they may not pass it along to others.
- Discuss the major understanding of this section: Sharing the yield is an important concluding activity. Food (even symbolically) should not be wasted, but seen as a valuable and social commodity. How the food is allocated may be determined by networks established by the activities and/or by existing friendships.

References:

Menzies C., Mattson L., and Butler, C. (2002). The place of the informal economy in the North Coast LRMP process. In Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. www: ecoknow.ca/

Motivation to Hunt, Fish, Gather

Interview Data	Motivation to hunt, fish and gather
"I go hunting to get up into the mountains. I enjoy it. I go often just for the hike. It's more for fun at my age."	
"I take my four grandsons moose hunting and my four granddaughters wanted to go. I started taking the girls to the Charlottes. I'll go for goat soon with my daughter."	
"May: Long weekend is a traditional family outing. We go camping in the Kitwancool area and target cutthroat fishing in the lake. We keep an ice cream bucket full and smoke them, fry them. We go motor biking and have a small boat."	
"It is 100% about the food. Sure it's fun, but that's not why we're out there."	
"It's a lot of work. We're in it for the meat. I think it's an old hunter's instinct we all have."	
"My daughter moved out and went to buy a big roast to have a party. Then she looked at the price and bought a tiny one. Now she wants meat from home. She never realized what it cost."	
"Before I hunted harder because I had a family to feed."	
"There is no such thing as subsistence in this day and age for Native and Non-Indigenous. Because everyone can afford a freezer and afford to buy meat. It's about priorities. At the same time, while it's a sport, it is critically important because it is ingrained in people, this hunter-gatherer instinct. Still bringing home for the table is part of your nature. It's a bit hard to describe."	

CTI Interview Data / Menzies, C., Mattson, L., and Butler C. (2002). The Place of the Informal Economy in the North Coast LRMP Process in Forests for the Future. In Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. www: ecoknow.ca/

Health Benefits of Game Meat

"The game meat is leaner and healthier than store bought beef, for example. Everyone is pushing free-range animals, yet they are still against hunting."

"I believe game meat is better for you – less additives, injections."

"It has no additives and hormones."

"Wild game has no cholesterol. And with red meats, there is a definite health concern for older people."

"We bought some commercial meat, but very little. Over 75% of our protein, I caught. It is way better for you, high protein, and low cholesterol."

Source: CTI interview data / Menzies C., Mattson L., and Butler, C. (2002). The place of the informal economy in the North Coast LRMP process. In Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. www: ecoknow.ca/

Backgrounder #6

Informal Economy – Wild Food Harvesting on the North Coast

Introduction

Increasingly, scholars, policy makers, and citizens are being influenced by the relationship between humans and geography as well as recognizing that regional residents can contribute substantially to resource management planning. Thus, in 2001 the BC government endorsed the initiation of the North Coast Land and Resource Management Plan (LRMP) process. The planning process attempts to consider all potential uses and functions of land and resources and invites stakeholders to participate in the decision-making process. In the process, north coast non-Aboriginal residents were interviewed to determine the extent to which the region's land and resources influence their livelihoods and lifestyles.

Informal Economy – Working Definition

In general terms, informal economy refers to the production, distribution, and consumption of goods and services that have economic value, but are neither protected by a formal code of law nor recorded for use by government-backed regulatory agencies (Ellison et. al. 1997:256-257; Reimer 2000:2). To simplify and compare, formal economy is essentially economic activity that is counted, whereas informal activity is not. Informal economic activities are usually performed for self-consumption or for relatives, friends, and/or acquaintances (Ellison 1997:257). Furthermore, because informal economic activities are not recorded, and therefore undetectable to conventional economic analysis, their value is also invisible.

Conditions Necessary to Support the Informal Economy

In order for informal economies to operate a number of specific conditions are required. The conditions that support informal economies are: resources; knowledge and skills; social networks; social norms that support informal exchange; and economic need (Ellison et al 1997:258-259; Reimer 2000).

Resources

The first important factor in the operation of an informal economy is the availability of resources such as land, work space, tools, transportation, cash, and time (Ellison et. al. 1997:257-259).

For one, land is needed for the operation of wild food harvesting. Excerpts from interviews with North Coast residents show that those individuals who harvest wild food are able to do so because of access to specific areas and the renewable resources within those locales. Here are two examples of resident responses:

Stephens and Porcher Islands - It's where I gather my food and take my family for recreation. It's close enough to Prince Rupert so that people can go there for the weekend and enjoy it.

Generally [I] fish in Chatham Sound.

The regions that harvesters access vary and are determined, in part, by the type of resources they are seeking to harvest.

Second, tools are needed and may be either simple or complex. Harvesting land animals involves binoculars, decoys, rifles, scopes, and

possibly bows or chest waders. Fishing requires rods, boots, jackets, and pants. Wild food harvesters emphasized that harvesting game and fish has the potential to be an expensive undertaking. Harvesting berries, mushrooms, and wood involves simpler and less expensive tools and at times is engaged while hunting for example, thereby diminishing fuel costs of traveling to a harvest site.

Third, hunting and fishing require access to transportation. Purchasing trucks and boats is an expensive undertaking.

Fourth, the inventories of tools and means of transportation indicates cash is required to participate in hunting and fishing. The cash that is required for the purchase of hunting and fishing equipment links both the informal and formal economy within the region.

Finally, time is an important resource for the operation of an informal economy. The individuals interviewed are generally long time residents of the region who often list more than one significant occupation. Furthermore, their occupations, current and former, allow a certain degree of flexibility in regard to time dedicated to work in the formal economy (carpenters, coastguards, commercial fishermen, construction workers, firemen, labourers on fish farms, and loggers).

Knowledge and Skills

A second condition that serves to enhance the operation of the informal economy is "access to the knowledge and skills relating to various product and service activities"(Ellison et. al 1997:259). In the last few decades there has been an increasing recognition that Traditional Ecological Knowledge (TEK) can contribute substantially to resource management planning (e.g., Berkes 1993, 1999; Freeman 1979; Inglis 1999; Nadasdy 1999). This section introduces the skills and knowledge that wild life harvesters in the North Coast apply in the harvesting process. For one, knowledge of where to go to access the resources is required:

> *I go crabbing, in the river. There is not so much halibut around Smith Island now, not like it used to be. I used to stop for halibut on the way to the trap line in December. I would average 2-3 a year while I was waiting for the tide at Gamble Point.*

In addition, knowledge of the wildlife (for example, habits, characteristics) itself is necessary in harvesting activities: The interviews undertaken with harvesters in the region reveal an intimate and developed knowledge of the region's land and resources. This knowledge is vital to participating in harvesting practices.

Social Network

A third important element in the operation of informal economies such as wild food harvesting is the "availability of a social network" that provides opportunities for informal exchange of goods and services (Ellison et al 1997:259). Factors that make possible the development of social networks include geographic proximity, kinship, and the sharing of interests (Ellison et al 1997:259). The interviews show that harvesting tends to be a very social activity. Most of fishing and hunting that interviewees spoke about happens in pairs or larger groups of family and/or friends. Many of the more distant hunting trips are organized well in advance and provide an opportunity for friends to spend time together—often friends who live in different communities. Some of these kinds of trips are repeated every year. The social groups that go hunting together are built in a variety of fashions, including kinship (for example, brothers), co-workers, or neighbours.

Furthermore, many community members jar sockeye. This fish appears to move primarily through the informal economy—sockeye is bought directly from a salmon gill-netter for jarring. People buy fish from the same fishermen every year, an acquaintance or family member.

Social Norms or Customs

A fourth element of an informal economy is social norms (for example, mutual aid, honouring commitments, and self-sufficiency) that support informal exchange. Based on the interviews it would appear that exchanges as they relate to game, fish, mushrooms, and berries take various forms (for example, food is traded for food, food is traded for services, exchanges of materials, sharing of resources, sharing of access-animals tags). However, all of these exchanges appear to lack a formal accounting system, such as one would find operating in a formal economy.

Economic Need

Scholars who study informal economies state that participation in an informal economy becomes "an appealing, perhaps necessary alternative" to involvement in a regular economy. Interviews with North Coast harvesters generally show that harvesting big game in particular was not cost-effective and that hunting is not related primarily to economic need. Other activities, like fishing, are less expensive. For commercial fishermen particularly, using some of their catch as "food fish" is a key source of winter food. This would reflect both a preference for eating fish, and the benefits of 'free' protein. One estimate that take-home sockeye has increased slightly due to the lower prices harvesters receive for their catch—the economic gap between selling a fish and taking it home as food has decreased. Harvesting of wild foods also includes gathering of mushrooms, berries and wood. Harvesting these wild foods tends to be more cost-effective because the process requires simpler tools. Furthermore, as state previously gathering berries and mushrooms is sometimes engaged in while hunting, thereby decreasing site access costs.

Value of the Informal Economy (Processes and Products of Wild Food Harvesting on the North Coast)

The values of wild food harvesting include: providing an alternative source of goods and services; the process of wild food harvesting expanding the capacity of communities and individuals; promoting social and cultural well being; and contributing to the formal economy.

For one, wild food harvesting provides an alternative source of food. Those that do harvest and consume game meat appear to use it as a replacement for beef and maintain that it is superior to store bought meat. Protein is also derived from a weekly consumption of fish. The fish is either procured by household members or given them by family, friends, or acquaintances. In addition, the area's residents also use the region's forest to pick berries (for example, blueberries, huckleberries, soapberries), fiddleheads, and mushrooms.

Second, interviews reveal that participation in an informal economy creates an opportunity for both greater self-reliance and co-reliance (Nicholls and Dyson 1983:157). The formation of alliances in the wild food harvesting processes provide opportunities for individuals who are seeking work to create an impression or to establish contacts. For those individuals who work together in the formal economy, harvesting provides an opportunity to strengthen social

bonds that will of consequence in the work environment. The formation of productive alliances and the building of capacity the individual level ultimately enhance the capacity of the community.

Third, wild food harvesting serves to promote social and cultural well-being in various ways. For one, harvesting enhances the quality of life by getting people out on the land in a social activity. Second, harvesting serves to strengthen family ties and provide and opportunity for the transfer of knowledge and skills about the land and resources. Many interviewees spend a great deal of time hunting and fishing with their children and harvesting activities are also incorporated into family vacations. Third, it can be argued that harvesting has the potential of improving an individual's quality of life by enhancing an individual's sense of self-worth. Being in a position to harvest one's food is empowering. Therefore, although it is difficult to measure and quantify harvesting does enhance the social and cultural well-being of the individuals who participate in the process and eventually the communities they inhabit.

Fourth, wild food harvesting was shown to contribute to the region's formal economy. Harvesting of game animals in particular is a costly undertaking. It has the potential to inject a great deal of money into a region's formal economy.

References

Berkes, Fikret
1993 TEK in Perspective. In TEK: Concepts and Cases, edited by J.T. Inglis. International Development Research Centre, Ottawa, Ontario.

Berkes, F., P.J. George, R.J. Preston, A. Hughes, J. Turner, and B.D. Cummins
1994 Wildlife Harvesting and Sustainable Regional Native Economy in the Hudson and James Bay Lowland, Ontario. Arctic 47(4): 350-360.

Ellison, Barry, Michel Arsenault, and Bill Reimer
1997 The Informal Economy: Metro and Non-Metro Comparisons. In The Sociology of Labour Markets: Efficiency, Equity, Security, edited by Axel Van Den Berg and Joseph Smucker, pp. 255-270. Prentice Hall Allyn and Bacon Canada. Scarborough, Ontario.

Freeman, M.M.R.
1979 Traditional Land Users as a Legitimate Source of Environmental Expertise. The Canadian National Parks: Today and Tomorrow, Conference II., University of Waterloo, Waterloo, Ontario, pp. 345-369.

Inglis, J.T.
1993 TEK: Concepts and Cases. International Development Research Centre, Ottawa, Ontario.

Johannes, R.E.
1993 Integrating Traditional Ecological Knowledge and Management with Environmental Impact Assessment. In TEK: Concepts and Cases, edited by J.T. Inglis. International Development Research Centre, Ottawa, Ontario.

Lui, Joynce
1995 The Use of Local Knowledge and Expert Opinion in Resource Planning. Ministry of Forests, Victoria, BC.

Nadasdy, Paul
1999 The Politics of TEK: Power and the "Integration" of Knowledge. Arctic Anthropology 36(1-2): 1-18.

Nicholls, W.M. and W.A. Dyson
1983 The Informal Economy: Where People are the Bottom Line. VIF Publication, Ottawa, Ontario.

Palsson, Gisli
1997 Learning by Fishing: Practical Engagement and Environmental Concerns. In Linking Social and Ecological Systems, edited by F. Berkes and C. Folk. Cambridge University Press, Cambridge.

Reimer, Bill
2000 The Informal Economy in Rural Canada. http://cerf.mcmaster.calconferences/r…

Ruddle, Kenneth
1994 Local Knowledge in the Folk Management of Fisheries and Coastal Marine Environments. In Folk Management of the World's Fisheries: Lessons for Modern Fisheries Management, edited by C. Dyer and J. McGoodwin, pp. 161-206. University of Colorado Press, Niwot.

Shende, Suresh N.
n.d. Informal Economy. The Special Tax Regime for Small and Micro Businesses: Design and Implementation. http://unpanl.un.org/intradoc/groups/…

Wolfe, Robert
n.d. Subsistence: Frequently Asked Questions, Myths: What Have You Heard? http://www.state.ak.us/adfg/subsist/geninfo/about/sub-faq.htm

Roles in the Game

Gift Giver (good-natured, friendly, can share)

Personal Shopper (sense of how much big ticket items like trucks and boats and smaller purchases actually cost)

Target Hitter (can throw bean bags accurately)

Personal Accountant (can quickly and accurately add and write)

Navigator (sense of where to go to locate game animals, fish or plants)

Scheduler (sense of seasons and best times of year to hunt, fish, and gather)

Negotiator (friendly, sensible, sense of fair trade)

Blackline Master #16: Group Record Sheet

This sheet will be useful for tracking the different histories of each group as they progress through the activities.

	Equipment (Indicates whether it is for Hunting Fishing or Gathering)	Schedule (Indicates time selected and whether viable with equipment)		Locations (Indicates whether viable or not)	Targets Hit (lists species)	Sharing (indicates nature of the sharing)
Group A (list team members) 1) 2) 3) 4) 5) 6)	H F G	Time 1	yes	Viable /not		In group
		Time 2	yes			Between group
		Time 3	yes			Generous?
Group B 1) 2) 3) 4) 5) 6)	H F G	Time 1	yes	Viable /not		In group
		Time 2	yes			Between group
		Time 3	yes			Generous?
Group C 1) 2) 3) 4) 5) 6)	H F G	Time 1	yes	Viable /not		In group
		Time 2	yes			Between group

		Time 3	yes			Generous?
Group D 1) 2) 3) 4) 5) 6)	H F G	Time 1	yes	Viable /not		In group
		Time 2	yes			Between group
		Time 3	yes			Generous?
Group E 1) 2) 3) 4) 5) 6)	H F G	Time 1	yes	Viable /not		In group
		Time 2	Yes			Between group
		Time 3	Yes			Generous?
Eaters of packaged and store-bought food 1) 2) 3) 4) 5) 6)						

Blackline Master 17: Booking Time on the Calendar

JANUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

MARCH

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

OCTOBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

DECEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Blackline Master 17: In Season

JANUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Crabbing Spring Salmon Deer						
Crabbing Spring Salmon Deer						
Crabbing Spring Salmon Deer						
Bird Hunting Crabbing Spring Salmon Deer						
Bird Hunting Spring Salmon Deer						

FEBRUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Deer Crabbing						
Deer Crabbing						
Deer Crabbing						
Deer Crabbing						
Deer Crabbing						

MARCH

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Crabbing						
Crabbing						
Crabbing						
Crabbing						
Crabbing						

APRIL

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Crabbing Lake Fish						
Crabbing Lake Fish						
Crabbing Lake Fish						
Crabbing Bear Lake Fish						
Crabbing Bear Lake Fish						

MAY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Spring Salmon Prawns Rock Fish Bear Lake Fish						
Spring Salmon Prawns Rock Fish Bear Lake Fish						
Spring Salmon Prawns Rock Fish Bear Lake Fish						
Spring Salmon Prawns Rock Fish Bear Lake Fish						
Spring Salmon Prawns Rock Fish Bear Lake Fish						

JUNE

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Spring Salmon Halibut Coho						
Spring Salmon Halibut Coho						
Spring Salmon Halibut Coho						
Spring Salmon Halibut Coho						
Spring Salmon Halibut Coho Rock Fish						

JULY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Rock Fish Halibut Coho Salmon						
Rock Fish Halibut Coho Salmon						
Rock Fish Halibut Coho Salmon						
Rock Fish Halibut Coho Salmon						
Rock Fish Halibut Coho Salmon						

AUGUST

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Goat Hunting Rock Fish Halibut Coho Salmon						
Goat Hunting Rock Fish Halibut Coho Salmon						
Goat Hunting Rock Fish Halibut Coho Salmon						
Goat Hunting Rock Fish Halibut Coho Salmon						
Goat Hunting Rock Fish Halibut Coho Salmon						

SEPTEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bird Hunting Moose Coho Salmon						
Bird Hunting Moose Coho Salmon						
Bird Hunting Moose Coho Salmon						
Bird Hunting Moose Coho Salmon						
Bird Hunting Moose Coho Salmon						

OCTOBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Lake Fish Deer Crabbing						
Lake Fish Deer Crabbing						
Lake Fish Deer Crabbing						
Lake Fish Deer Crabbing						
Lake Fish Deer Crabbing						

NOVEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Moose Crabbing Clams Bird Hunting						
Moose Crabbing Clams Bird Hunting						
Moose Crabbing Clams Bird Hunting						
Moose Crabbing Clams Bird Hunting						
Moose Crabbing Clams Bird Hunting						

DECEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Spring Salmon						
Spring Salmon						

Potential Locations

Select from the following list three locations where your group will be hunting, fishing or gathering:

1) Dundas Island
2) Ecstall River
3) Hevnor Inlet
4) Higgins Pass
5) Khtada Lake
6) Khutes Inlet
7) Loredo Sound
8) Lucy Islands
9) Ridley Island
10) Stephens Island
11) Swanson Bay
12) Wainright Basin

Great Locations

Gathering activities can take place in either the hunting or fishing spots. Evaluate the locations in the following way:

1) Dundas Island -- fishing good
2) Ecstall River -- fishing and hunting good
3) Hevnor Inlet -- logging damage
4) Higgins Pass – hunting good
5) Khtada Lake – hunting good
6) Khutes Inlet – logging damage
7) Loredo Sound – hunting good
8) Lucy Islands – fishing good
9) Ridley Island -- polluted
10) Stephens Island -- fishing good
11) Swanson Bay – pulp mill
12) Wainright Basin – dam and pollution

target cards

Cost per Trip

How much does a trip come to?

Transportation
Marine Gas and Oil - $4 gallon X 5 gallons
Truck gas to get there and back -$450
Ferry cost to Queen Charlottes- $294 return
Alliford Bay ferry-$100 return

Equipment
High-end rifle Shot - $3 X 5 Shots
Bird shot - $1.25 X 12
Hunting License $20
Hunting Tags $22
Fishing Lures $4 X 5
Fishing License $20

TOTAL COST : _____

Deduction Instructions

Subtract any costs from your sum total of Blackline Master #120: Cost per Trip that your group DID NOT incur in this game. Provide new sum at the bottom of this sheet.

Transportation

Marine Gas and Oil - $4 gallon X 5 gallons

Truck gas to get there and back -$450
Ferry cost to Queen Charlottes- $300 return
Alliford Bay ferry-$100 return

Equipment
High-end rifle Shot - $3 X 5 Shots
Bird shot - $1.25 X 12
Hunting License $20
Hunting Tags $22
Fishing Lures $4 X 5
Fishing License $20

TEAM TOTAL _____

Theme Four: USER GROUPS

Introduction

These activities concern how user groups interact with and effect the process of large scale government and industry relationships. The history of this interaction with industry, is alluded to by examining policy directions in the first activity. (However, the emergence of user groups, and therefore competing claims for resource access and use is by no means the sole influence on policy.) How a resource-dependent economy structure is enacted and experienced is simulated by a game. The concept of user groups, other than industry, is implicitly suggested by the presence of grouping of Local Residents (who may or may not act as an organized, unified pressure group). Finally, the voices of resource users—local citizens—are presented along with other official or expert sources. However, the language, observations, and conclusions to be drawn from these expressions are different.

Major Understandings:

- Most of the forest resources are concentrated in the hands of large corporations
- Amount of harvested timber has increased in the last 3 decades due to technology and economic pressure
- The employee rate to harvested timber has decreased in the last few decades
- Government changes in forest policy reflect changing economic pressures, concerns and competing user group
- Resource-based economies involve tradeoffs between governments, corporations, local citizens and employees
- These stakeholder groups organize the tradeoffs as resources diminish and pollution is created
- The success of stakeholder groups to achieve balanced and mutually beneficial tradeoffs can be effected by goals, information, strategies and behaviours
- LEK, (or Local Ecological Knowledge) is information provided by residents of an area who have direct knowledge, connections and histories to the land and water
- LEK is rich in understandings of complex ecosystems and sustainability issues as well as the impacts of industry
- LEK is a critical dimension to insuring resource management plans are fair and protective of lifestyles that depend on the integrity of ecosystems

Supplies, Activity 12

- Regional Map
- Backgrounder 7: Time Line of Forest Policy (Blackline Master 5-24)

Activity 12: Time Line

Students will analyze a policy timeline. Information applies to the forest industry and involves a dimension of time. Students will create a method of representing information graphically on the Large Regional Class Map or a smaller regional map.

- Consider the information in the Backgrounder 7: Timeline of Forest Policy. This information offers us a small glimmer of understanding the nature of forest industry in this province by looking at changes over time. It is important to note that these changes are measures of reform. This timeline does not offer information regarding the acreage involved, type of licensing agreement, consolidation of smaller holdings into larger companies, or global market conditions. This timeline does not reflect the success and failure of governments and companies to regulate destructive practices, over-harvesting, and reforestation. The key questions students should be asking themselves is why? What influences a government to enact commissions, legislation and initiatives? In other words, what pressures create a need for change? What forces were these measures responses to? How effective might these changes be in their ability to redirect or refine forest industry structures and practices?
- Communicating Graphically Challenge:
  How can information that describes provincial policy changes be communicated visually? Think about what sort of icons, or symbols might be used to represent the concrete issues (for example, revenue size, employees, user groups, animals, environment). What sort of structures convey a sense of what happens over time? (For example, pie charts, bar graphs, maps, or more interesting diagrams.) What creative approaches could be taken to represent these sort of changes in graphic formats?
- If students can generate solutions to this challenge, use the Large Regional Class Map to display this graphic policy-over-time information.
- Discuss with students how difficult it is to represent a complex history of industry, public concern, Government, and market forces over time. Graphic information makes this task easier, but is a very sophisticated thinking process to arrive at good matches of structures and content of such visual information. The reality of the impact of the industry and the impact of policy changes is an even more complex and difficult picture to draw.

Supplies, Activity 13

- Clock
- ape
- Classroom space
- 3 red balloons (representing pollution)
- 10 white balloons (representing resources)
- 5 green balloons (representing profit, cash)
- A sharp object
- Blackline Master 5-25,Team Objectives
- Blackline Master 5-26, Balloons Questions for Discussion

Activity 13: Balloons

Students participate in a model of resource-based economy. Students will simulate the use, control, and benefits and pitfalls of resource-based industries. (In a fun way!) A mini-economy will be established through the trading of various coloured balloons. Students discuss issues of power, psychology and value of assets.

1. Game Set Up:

Clear large central space in classroom. Divide the open classroom space with masking tape. Mark off four areas, "Local Citizens" "Employees" "Large Corporations" and "Government." Assign students to groups:

"Balloon Popper" 1 student or the Instructor
"Observers" at least 4 students (one to observe the behaviour of students in each area)
"Government" 2 students
"Large Corporations" 5 or 6 students
"Employees" 10 or 12 students
"Local Citizens" remaining students

- The identity of the groups can be made explicit to students (use signs, labels) or be revealed after the conclusion of the activity. Have students sit in their designated areas. Observers are outside the "game area." The nature of the balloons (what the colours represent) should be revealed except in the case of the red balloons. (This can be achieved by labelling them once they have been blown up, or with the colour code up on the board).
- Ask observers to observe and keep track of the behaviour and sequence of events within one of the areas. Observers can provide this information during discussion at the conclusion of the activity.
- Distribute the ballons.
  Provide the Government with 8 white (resource) balloons
  Provide the Large Corporations with 4 green (profit) balloons
  Provide the Local Citizens with 2 white (resource) balloon and 1 (green balloon)
  Reserve the red (pollution) balloons.

2. General playing conditions:

Groups may trade balloons or team members.

A green or white balloon will be popped at suitable intervals, for example every 3 minutes.
A red balloon (unexplained) will be awarded to the Large Corporations at a random point in the game.

- Allow trading to occur for a set time. For example, 15 minutes.

3. Group Assets After Trading

- After 15 minutes of the game, stop action and have observers record the balloon and people assets of a group.
- At this point, any group with three or more white balloons will be awarded a red (pollution) balloon.
- Any group holding a red balloon must submit a white balloon to be popped. (For extra drama, if the group with the red balloon is either Local Citizens or Employees have the player lay down in illness or death.)
- Determine whether any groups have met winning conditions.
- Next, determine WHO has survived in each group.
  In Government, and Large Corporations anyone not holding a balloon has not survived. (Each player represents a large group of people).
  In Local Citizen groups, 1 green balloon + 1 white balloon = 5 people.
  Employees need only 1 white balloon to = 5 people.
- Insights generated by this activity will vary with classes. Students will get a general sense that exchanges involve some foresight, organization, drawbacks, and payoffs. Students should also note that the resource that trade is focused on is currently non-renewable.

Supplies, Activity 14

- Blackline Master 5-27, LEK (Local Ecological Knowledge)
- Blackline Master 5-28, Analysis of LEK (Local Ecological Knowledge) Data

Activity #14: LEK (Local Ecological Knowledge)

Background: LEK, or Local Ecological Knowledge is information provided by residents of an area who have direct knowledge, connections and histories to the land and water. In this case, the information has been offered by local citizens of the Prince Rupert area. These observations are rich in understandings of complex ecosystems and sustainability issues as well as the impacts of industry. These individuals express their values, sense of pride and sense of ownership, as well as concerns and protests very directly. This approach to collecting information respects the expertise generated by residents. LEK is essential to planning resource use in a manner that is fair and protective of lifestyles that depend on using the land and water surrounding Prince Rupert.
This is a comparison activity where students will evaluate the data

gathered from local citizens with other reports about these same resources. Students should contrast the type of knowledge generated by individuals who have intimate, life-long local connections to the region as opposed to expertise from other sources.

- Have students using the quotes provided in Blackline Master 5-27, LEK Data to complete Blackline Master 5-28, Analysis of LEK Data. This can be done as a whole class, small group or individual activity.

Backgrounder #7

Time Line of Forest Policy

Some Background

Who controls the Forest resources?

"British Columbia's forest sector is dominated by a few large, integrated firms. Ten companies each control over two million cubic metre of AAC. Their share represents nearly 68 per cent of the total commitments to commercial licensees. The top six companies alone control nearly 50 per cent of the volume committed to licensees." (p.81) Source: Marchak, P., Aybock, S., and Herbert D. (1999). *Falldown: Forest policy in British Columbia*. Vancouver, BC: Columbia. David Suzuki Foundation / Ecotrust Canada.

How much revenue is generated from nearly 50%? Total: $123,256,686,000

(AAC or "Annual Allowable Cut" is a term indicating the quota of cut timber, not a sustainable amount of timber to cut.)

How much wood is cut and how many jobs are generated?

Year	Approximate Roundwood harvested (1,000m^3)	Total Employees per 1,000m^3 harvested
1965	43,000	1.35
1972	56,500	1.20
1973	70,000	1.08
1978	75,000	1.04
1981	61,000	1.17
1987	90,500	.75
1991	75,000	.77
1995	74,500	.85

(Total number of logging, sawmills, and planing mills, and pulp and paper employees)

Top 6 Companies and Revenue Generated:
MacMillan Bloedel Ltd. – $4, 521,000, 000
West Fraser Timber Co. Ltd. $1,869, 761, 000
Canfor Corp. $1,840,567,000
Weyerhaeuser Canada Ltd. $1,800,000,000
Fletcher Challenge Canada Ltd. $1,350,000,000
Slocan Forest Products Ltd. $944, 358, 000

Source: Financial Post. 1998. The Financial Post 500, "Top 500" table, pp 130-51 Marchak, P., Aybock, S., and Herbert D. (1999). Falldown: Forest policy in British Columbia. Vancouver, BC: Columbia. David Suzuki Foundation / Ecotrust Canada.

Questions For Discussion:

(1) What is the trend over time for the amount of harvested timber (it increases and stabilizes somewhat in 70,000 (1,000m3) range)

(2) What accounts for these trends? (technology, access, BC Forest policy changes).

(3) What is the trend for the employee to timber harvest ratio over time? (definite drop of jobs)

(4) What accounts for this decrease in jobs over time? (technology, corporate structure)

Policy Responses of Government

1975
Fourth Royal Commission on Forestry
On the Table:
-Ecological concerns(BC Forests are disappearing) are voiced
-Newly emerging user groups, especially recreational uses
-Watershed degradation, therefore damage to fish habitat
-Political concerns (NDP) of unevenness of public vs. corporate concentration of harvesting rights

1978
The Forest Act
Legislation:
-introduces a new form of harvesting license
-introduces greater forest management responsibilities

1981
SBFEP Small Business Forest Enterprise Plan
Initiative designed to:
-make timber available to independent entrepreneurs
-introduces an Environmental Management System for sustainable forest management (although targets not met)

1994
Forest Land Reserve
Goals:
-protecting forest
-conversion of forest land to urban non-forest uses
-renew and stabilize forest
-long-term sustainability
-regulation of forest practices on private land

1994 Forests Practices Code
Legislation
-legally enforceable / penalties for non-compliance
-planning guidelines for each phase of timber harvesting around streams, lakes, and wetlands
-no allowance for LEK (Local Ecological Knowledge) or TEK (Traditional Ecological Knowledge)

Emerging Directions and Pilot Agreements

The Community Forest

- brings control over forest land to local communities
- sustainable employment opportunities by and for local communities
- use local talents, resources, needs and higher profit distribution to the community
- consider all values and functions of forest during management planning
- First Nations groups have applied Innovative Forestry Practices Agreement

Team Objectives

This is optional whether it is revealed to the class. This foreknowledge will dramatically affect play. But without knowledge trades will still occur . . .

The government needs to have green balloons from both Large Corporations and the Local Citizens to survive. The Government must request or force another group to give up a green balloon to the Employees.

The Large Corporations need a white balloon for each team member.

Employees need a green balloon for every 5 team members.

The Local Citizens need 1 green and 1 white balloon for every 5 team members.

Balloons Simulation Game: Questions for Discussion

1) What is the most valuable asset in this game people, resources, or cash? Is the ability to trade an asset? Which group can achieve the most stability and "positive" trading conditions?
2) Which groups (if any) have achieved conditions for winning the game?
3) How were those conditions met: skill, strategy, foresight, luck, aggression?
4) Which groups need to co-operate, befriend, and trade with which groups?
5) Are the winning or survival conditions reasonable and fair for each group?
6) Which groups are most likely to survive?
7) What are the downsides of trading on white balloons (resources) for each group? (Resources diminish, pollution created, not everyone can be supported, resource not fairly distributed to begin with).
8) What are the effects of trading resources (pollution created, resources diminish over time, yet people can be supported).
9) If you could choose the team you were assigned to, which team would you chose?
10) What sort of information would be helpful to each group in order to play the game?

Observers can provide examples and anecdotes about the psychology of trading, survival, greed, innocence, and the exchange of people for each group. Did leaders emerge? Power struggles? Was there confusion about what to do and how to do it? Did groups feel they had a fair deal? Did they look after the interests of one another?

Vocabulary

The following terms may be helpful for class discussion:

In economics, company or firm (the preferred term) is the generic name used to designate an organization that produces goods and / or services to be supplied to the market for a price.

Corporations

A corporation includes any organization with legal personality for the purpose of carrying on a certain activity. Most corporations are business for profits, but corporations, being a special type of firm, can also be charitable, municipal or even religious, all with distinctive features.

The main cost of becoming a corporation is that they are subject to special taxes. The profits of a large corporation may be taxed at the 34% corporate rate and then again at the personal 36% rate when they are paid out as dividends. Small corporations, on the other hand, enjoy many of the benefits of corporations (like selling of shares, limited liability), but their profits are just taxed at the personal rate.

Resources and Commodities

Resources are goods needed in production by an individual or society (like oil, for example). Commodities are goods ready for final consumption (for example, gas at the pump). In some cases commodities become resources for additional production processes, or they are consumed in their original state. There are several types of resources:

Natural resources are those supplied by the environment. Traditionally, these may have been only raw materials-- now we also include such things as landfill space, natural purification processes.

Human resources are abilities or attributes of people such as intelligence, skills, and experience that provide our needs.

Non-renewable or exhaustible resources: resources that are used up as they are used; typically fossil fuels and minerals. No additional amounts of these resources will be added to the earth system during the practical time-scale of human civilization.

Renewable resources: resources that are renewed by growth or reproduction. Sunlight, animal herds and agricultural crops, water… The use of these resources should be managed on a sustained yield basis so that the resource is removed only at the rate is can be replaced.

Intangible resources: these are things like natural beauty, open space, humanistic values such as knowledge, freedom, and spirituality.

Local Ecological Knowledge Data

All LEK data has been quoted from material gathered by the Coast Information Team (CIT) to assist in the North Coast LRMP (Land Resources Management Plan) in bringing environmental expertise and community experience to support the development of ecosystem-based management plans. This interview data was gathered in and around the Prince Rupert region during the Fall and Winter of 2002*.

Source of Data Quotation

QUOTE 1

A retired commercial fisherman, who has also worked as a boat builder, logger, sawmill manager
He has lived in the area for 73 years.

Q: Where are the important places on this map?

A: Hotsprings, because I have a wonderful bath when I go there. I hand logged a lot of this area. You can't even see where we were. Best place to ever hand log in 1943. You'd go to work and get real grubby and then get to go home and have the best bath ever. What else could you ask for really?

Q: What are the threats to this place?

A: Anything (development/tourism) that would exclude the average person from going there.

Q: For how long has this place been of value to people living in the community?

A: All the old timers that would go by Bishop Bay would stop for a bath. Since Settlement.

Q: What proportion of the people in your community, value, use, or engage in practices at each of these places?

A: Only about 5% in my community, but tons of people from Kitimat. There are lots of visitors, there are sidewalks all over, a campground and a bath house. There are thousands of names of people and boats that are written all over the walls. Need to keep this area so that our grandchildren are able to go there.

Quote 2

A woman in her 60's who has lived in Prince Rupert for 50 years.

Our harbour is the only one at the north end of Porcher. It is used a lot by sports and commercial boats. It is a traditional herring spotting area. First Nations come here to harvest roe on kelp. There are eight ponds in the mouth of the Inlet. I have concerns about that. There was noticeably less spawn this year.

In the past there was an application to put a fish farm in there. It got turned down and one of the main reasons was the herring spawn. We have concerns about fish farming effluent because it is a long and narrow inlet.

When we went there 25 years ago, they were logging up behind. They collected the logs in one area of the inlet. There was damage from bark at the bottom of the Inlet., but now it has come back fully. But I'd be concerned about log storage there.

Quote 3

A commercial fisherman who has been aresident for 32 years

Q: Where are the important places on this map?

A: Commercial fishing and salmon migration routes.

Q: What are the threats to this place?

A: Potential fish farms and sports camps.

Q: For how long has this place been of value to people living in the community?

A: 100 years.
Q: What proportion of the people in your community, value, use, or engage in practices at each of these places?
A: 50%
Q: What is the condition of each place?
A: Pristine. Beach seines and pocket seines had a negative impact on small streams historically. Haven't yet recovered but the potential to recover is there. Hand logging/small operations have had a minimal impact whereas large corporations with clear cutting can destroy an area: washes debris into spawning areas and also causes landslides.

Quote 4

A 55 years old business man, resident here all his life. He hunts, traps and takes photographs

There is huge confusion in the anti-fur movement. They portrayed it that we were trapping endangered species. These animals are definitely not endangered. In fact, it has been proven that we have healthier populations where there is trapping.

We have a unique marten population on the Skeena. They are the only ones that kill porcupines. There is some University of Victoria research on their genetics.

Trapping is open for 4 months. I'll spend 40 days in the bush. My trapline is on the lower Skeena. Sometimes I need to take a helicopter there when the river is frozen. I am required to check my traps every 48 hours.

I have concerns about logging in the area. Male marten will only stay in areas with trees of certain age and size. Females will live in younger forests but we don't target them. If I catch a female, I stop trapping there. (Males and females tend to live in different areas.)

We knew the rules when we started. But there are issues. Mining companies have to compensate trappers if they put cut lines in the area. But we get no compensation for logging roads. However, the government does make the forestry companies give the trappers their plans before they go into an area. I have suggested small changes to those plans.

Quote 5

A commercial charter patrolman. fisherman, boat builder, resident for 39 years. He worked in the last water-powered saw mill in the region

Q: Where are the important places on this map?
A: It's our home. We used to get our firewood here when we used to heat with wood. We still use it for food-gathering, picnicking, camping, beach-combing, skating on lakes when frozen, rock collecting, and seaweed collection for our gardens. Also visit old army sites which are part of Prince Repute's history.
Q: What are the threats to this place?
A: Pollution: from pulp mill, the city and potential salmon farmers; also logging and exclusion by Native land claims.
Q: For how long has this place been of value to people living in the community?
A: Since Prince Rupert was established.
Q: What proportion of the people in your community, value, use, or engage in practices at each of these places?
A: 90%.
Q: What is the condition of each place?

A: They have all been impacted because of pollution due to the city and pulp mill. You can notice a difference in the beach since the mill has been shut down for over a year. Prince Rupert doesn't have the revenue to have a sewage treatment plant.

Quote 6

Province of British Columbia Procedures for the Export of Timber 1999, Vancouver and Prince Rupert Forest Regions. Appendix 9 Instructions for Completing Coast and Interior Standing Timber Applications (p. 26)

1. State the number of the Crown harvesting tenure and the currently issued cutting permits, or describe the legal identity of Crown-granted lands. Applications covering cutting permits or timber sales not yet issued will not be processed unless accepted by the district or region.
2. Supply a map locating that area under application at a scale of approximately 1:250,000 and an operations map of the logging area,
3. Using the cruise as a basis, estimate the standing timber metric volumes, including felled and bucked timber, remaining application letter, by species and grade, for each cut block. Where cutting is subject to the prior approval of a five-year development plan, the cutting sequence by block must be shown in accordance to the plan.

Quote 7

Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. Policy Stream Report (p. 9)

The merchantable timber species found in the timber sale area located in the north coast region includes Western hemlock, Western red cedar, amabilis fir, Sitka spruce, yellow cedar, and cottonwood. These forests are very old with a large majority of the stands being over 280 years old (North Coast LRMP Current Conditions Report 2001). All harvesting to date has been of old growth forest, with there being no experience in the district of harvesting second growth stands (North Coast LRMP Current Conditions Report 2001). As noted in the LRMP report, most of the harvesting occurs in low elevation forests in the Coastal Western Hemlock zone. In the isolated valleys, harvesting operations are most often accessed from the water , with licensees preferring to harvest small drainages in a single pass. . .

References:

Menzies C., Mattson L., and Butler, C. (2002). The place of the informal economy in the North Coast LRMP process. In Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. www: ecoknow.ca/

Province of British Columbia (1999). Procedures for the Export of Timber: Vancouver and Prince Rupert Forest Regions: Appendix 9: Instructions for Completing Coast and Interior Standing Timber Applications (p. 26)

Brown, K. and Smith, M. (2002). Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. Policy Stream Report (p.9)

Analysis of LEK Data

	What are the concerns about?	What decisions would be made about managing resource if this information was considered?
Quote 1 (LEK)		
Quote 2 (LEK)		
Quote 3 (LEK)		
Quote 4 (LEK)		
Quote 5 (LEK)		
Quote 6 BC Procedures		
Quote 7 Forests for the Future		

Questions for Discussion:
1) What information source is more likely to consider long term changes and impacts?
2) What is difference in the tone and presentation style of the sources of information?
3) What sort of decisions might arise if this information was used in any planning process?
4) How easy is the information to understand?
5) Are the concerns motivated by similar or different values?

Theme Five
CONFLICTS OF INTEREST

Introduction

This is the final theme of the unit. The activities are designed to demonstrate complex interconnections of natural resources, politics, economics, and competing user groups. In addition to creating a sense of the challenge making personal or political decisions regarding resource use entails, potential sources for solutions are also provided. These are: analysis, personal contribution, science, mapping technology, and ecological knowledge. Students should be able to "see" the overall shape of the problem, and "see" where solutions may be. The use of maps in this theme (and throughout the unit) is intended to provide students experience with and exposure to what maps can do. Maps are a versatile and powerful way of communicating information. Maps that incorporate LEK, or Local Ecological Knowledge have enormous potential in the generation of sound community-based resource management strategies.

Major Understandings

- The competition between user groups of natural resources is complex and interconnected
- The competition between user groups over natural resources does not necessarily result in a fair or balanced result
- Personal knowledge and action may influence the results of these competitions.
- GIS mapping holds enormous potential for communicating knowledge and generating management solutions
- LEK (Local Ecological Knowledge) holds enormous potential for communicating knowledge and generating management solutions
- Many user groups compete for access to local resources
- User groups vary in terms of political strength, will, economic clout, and care over sustainability of resources
- User groups are composed of different economic and political power bases
- Creating change involves an understanding of the direct and indirect effects of resource use by other groups
- Individuals have a role in resource management planning
- Resource base and species are interconnected by economic and ecological ties

Supplies, Activity 15

- Rope
- Blackline Master 5-29. The Big Balancing Act
- Blackline Master 5-30, Team Size

Activity 15: The Big Balancing Act

This activity provides a structure for students to weigh and determine the importance of competing user groups. Students make observations about opposing forces in resource management. Students will be participating in a tug of rope contest in this and the next activity.

Students will realize that many user groups compete for access to local resources. The result of those competitions reveals political strength, will, economic clout as well as degree of care over sustainability of these resources. Students will gain a sense of the complexity of have balancing user groups against larger forces and have a voice in eventual outcomes.

- Demonstrate this basic conflict by having volunteers (in this example, 7 vs. 4) play Tug of War with a rope. The rope represents local resources. Students may wish to point out other user groups (for example, First Nations) or other balancing preservation forces not indicated here and adjust teams accordingly.

Student Observations and Discussion Points:

- The teams are “not fair” at this stage. Students may sense this and try to address this with balancing the teams. The consequences of unfair teams may be undesirable outcomes on the resource in question.
- There are two directions to go with adjusting the team fairness and strength. First, are the teams realistic? Do they represent the power each “side” currently holds? Is each type of user group adequately represented by a single player? Second, are the teams ideal? Given the thoughts and feelings of the class, do they represent the vision of students?
- Given that the rope represents local resources, the struggle and competition is evident. Students may also question what are the stakes? How does a side achieve victory? Where is the point of no return? Is it adequate to just gain ground? Can win-wins be achieved or imposed? At what point is one side's victory too destructive to permit?
- In order to address these issues before performing the more specific contests in the next activity, have students evaluate the relative strength and power of each of the above user groups. What proportion of the participating class should be assigned to each of the user groups? Fill in the Blackline Master 5-30. Team Size to indicate the number of students representing each user group. However, the sum total from all the user groups should not exceed the number of students in the class!

Supplies, Activity 16

- Information generated in previous activity.
- Backgrounder 8, Resource Use Conflict (Blackline Master 5-31)
- Blackline Master 5-32, Ideal Teams
- Rope for tug of war.

Activity 16: Tug of War

Students assess environmental information and participate in Tug of War teams. At this point, students have the opportunity to make personal decisions, declare loyalties and address balances. Students observe consequences of economic and political forces. Students construct a personal ideal balance of power.

Ask students to consider the information provided in the following backgrounders. This can be a class, small group or individual activity.

Part One: The Wars

Tug of War 1

The conflict: Wild vs. Farmed Salmon

- Assign Commercial Fisheries, Local Recreational Users, Local Subsistence Users and Tourists, Guides and Lodges against Fish Farm Operators.
- Pause or re-match.
- Given the backgrounder knowledge, additional volunteers may step into the contest.

Tug of War 2

The conflict: Fish vs. Timber

- Assign Commercial Fisheries, Local Recreational Users, Local Subsistence Users, Tourists, Guides, and Lodges against Corporate Logging.
- Pause or rematch.
- Small–scale logging may sit out or participate. Given the backgrounder knowledge, additional volunteers may step into the contest.

Tug of War 3

The conflict: Logging vs. Tourism

- Assign Logging Corporations, Small-scale Logging against Tourists, Guides, and Lodges.
- Pause and rematch.
- Given the backgrounder knowledge, additional volunteers may step into the contest. (This is especially complicated because the resource use of both groups has a negative impact on the other groups. Natural allies may or may not emerge. On what grounds is the support founded?)

Tug of War 4

The conflict: Logging vs. Ecosystem

- Assign Logging against a volunteer coalition representing Government Regulations, Ecological Knowledge, Science and

Environmental Movement.

Part Two: Ideal Teams

Students can now individually fill out the final column "Ideal Strength" on Blackline Master 5-32, Ideal Teams.

- Statements can be made regardless of the outcome of the "wars" in this particular class setting. The results will reveal where the power lies, how it is achieved, and how difficult it can be to halt or overcome. Balance may or may not be due to the knowledge and will of individuals to step into the contest. Class results should also clarify that struggle occurs over access and use the resources. Non-participants as well as those providing volunteer efforts, have an effect on these contests.

Supplies, Activity 17

- GIS (Geographic Information System) if available.
- Red, green and white yarn
- Visual Icons from Theme One, Activity 6

Activity 17: Icons on the Map

Both of the following activities will help students synthesize insights generated throughout the unit regarding the complex interconnection of user groups, natural resources and the role of LEK or, Local Ecological Knowledge. In the GIS mapping activity, students will need to provide their own knowledge to make inferences about the geographic display of information. In the yarn activity, much of the knowledge may be already displayed on the Large Regional Class Map. The yarn serves to symbolically tie all the pieces together.

GIS Mapping Technology

- If GIS mapping technology is available, allow students to manipulate maps of areas in the Prince Rupert region.
- Colour code areas of significance to different user groups. Discuss overlaps and how they relate to issues of fairness, balance, sustainability, and economic and political priorities.
- Students can compare the GIS maps to the Large Class Regional Map and determine accuracy, relevance, and the effectiveness of each map at conveying information.

Interconnection

- Have students use yarn to graphically indicate ecological and economic interconnection of resources and activities of user groups displayed on the Large Regional Class Map.
- Red Yarn = Economic ties (radiating out from Prince Rupert? Or are ties originating externally?)
- Green Yarn = Connection to health or viability of other resources (for example, salmon and streambeds and logging)

- White Yarn = Recreational and personal use by local residents (radiating out from Prince Rupert)
- Students may realize the potential for GIS mapping technology to provide a very sophisticated and objective picture of complex interconnections of recreational, personal and industrial uses of resources. Students may compare the map created throughout the course of this unit and assess the degree and nature of their own Local Ecological Knowledge.

The Big Balancing Act

Access

The following user groups want to access the land and water resources:

1) Corporate Logging
2) Small-Scale Logging
3) Commercial fisheries
4) Fish Farm operators
5) Local Recreational users
6) Local Subsistence Users
7) Tourists, Guides, Lodges

Preservation

The following agents attempt to protect the land and water resources from over-exploitation, damage and complete destruction:

1) Government (regulations)
2) Ecological Knowledge
3) Science
4) Environmental awareness

How many user groups are you opening the door to, and what forces attempt to restrict user groups?

Team size

Determine the number and strengths of the following teams:

User Group	Power of how many students
Corporate Logging	
Small-scale Logging	
Commercial Fisheries	
Fish Farm Operators	
Local Recreational Users	
Local Subsistence Users	
Tourists, Guides, Lodges	

Backgrounder 8

Resource Use Conflicts

Introduction

In an article entitled "Place" as an Integrating Concept in Natural Resource Politics: Propositions for a Social Science Research Agenda, Anthony Cheng and his colleagues (2003:93)* examine the significance of self-identity in natural resource politics or conflicts, stating that:

Outside the power plays over traditional economic and environmental policy positions conducted by interest groups in legislature, formal agency planning processes, or courtrooms, natural resource politics involves citizens whose expressions of value for natural resources are rooted in connections that define in part who we are.

Cheng and his colleagues (2003:98) point out "places can inspire people to take collective action." They continue, explaining that:

…an increasing number of natural resource controversies revolve around competing place meanings that are deeply held, vigorously defended, and applied in ways that border on religious conviction. Indeed, in battles over logging in the Pacific Coast in the 1980s, environmental organizations effectively drew a parallel between the majestic cathedrals in Europe to old-growth forests of the Northwest. The term "cathedral forest," coupled with stunning photos of those forests, became an effective media strategy and struck a chord with the …public. …The manipulation of place meanings to create a "flashy" situation can quickly raise the visibility of the controversy, thereby demanding immediate political action.

Furthermore, natural resource policy debates range from a global to local scales. At each geographic scale, there are different groups with which an individual may identify. At the regional, national, or international level "well-established interest groups tend to dominate natural resource debate"(Cheng 2003:98). Generally, individuals choose sides "according to whether they consider themselves pro-environmentalist or pro-business" (Cheng 2003:98). However, at the local level allegiance to one or the other group (i.e., pro-environment or pro-business) becomes less clear for the following reason:

…at local scales, one may also be a neighbor, a parent of a child who goes to the same school or who plays on the same soccer team as the child of the so-called "opponent"…

As a result, "while there may be differences, these individuals may also have common sentiments of, and concerns for, what happens to a shared place" (Cheng et al. 2003:98).

Currently in British Columbia there are a number of lively debates around the most appropriate use of natural resources in this resource rich province. There are concerns about the dwindling fish stocks, the threat of fish farming to Pacific salmon stocks, logging practices that impact upon animals' habitats and water resources, hydroelectricity, and the impact of tourism on the environment.

Resource Use Conflicts: Salmon

The discussion begins with fish, more specifically with salmon. Pacific Salmon are considered to be among the most commercially and socially valuable fish in British Columbia. There is concern about the fact that "countless salmon stocks have declined …over the last century as a result

of overfishing and widespread habitat destruction" (Meffe 1992:350).

Increasingly, Atlantic farm salmon are generating substantial revenue for the British Columbia economy. Atlantic Salmon are not native to British Columbia but the species is raised commercially in netpens by the salmon fishing industry, primarily in the waters off western and northern Vancouver Island. Surveys conducted in the 1990s discovered small numbers of Atlantic salmon fry in several Vancouver Island Rivers.

Fish farming remains a controversial issue in British Columbia. In an article entitled Pink Salmon Collapse Blamed on Fish Farming, reporter Mark Hume (September 25, 2002)* of the National Post writes:

VANCOUVER - A near collapse of pink salmon runs in the Broughton Archipelago, where more than three million fish failed to return to spawning rivers this fall, is being blamed on fish farms in the area.

Close to 30 farms, which raise Atlantic salmon in open sea pens, have clustered in bays and inlets on the approaches to spawning streams in the region, on the mainland coast off northern Vancouver Island.

Alexandra Morton, a biologist who has long been a critic of fish farms, said yesterday the farms have created a perfect winter breeding ground for sea lice, which flourish in the farms because of the concentration of fish and artificial lighting. …

Salmon farmers deny the allegation, however, saying the research [i.e., Ms. Morton's] is skewed.

In a Time Magazine article entitled Is Fish Farming Safe?, Terry McCarthy (November 25, 2002)* addressed the controversies surrounding fish farming:

This is Venture Point, 15 minutes northeast of Campbell River by air, one of 91 salmon farms licensed to operate in British Columbia Waters. …In these 12 pens, there are about 1 million salmon, each a delicious, silver-sided beauty, and when harvested in 18 months, they will fetch more than $10 million in retail sales.

What could be wrong with this picture? The farm-grown harvest is cheap, predictable and year-round. …Moreover, each farm-grown salmon means, in theory, one less fish taken from wild stocks that have been declining for decades…

But the story isn't that simple. Salmon farming can be a dirty business. According to Otto Langer, 56, a biologist who worked 30 years for Canada's Department of Fisheries, a large salmon farm may pour as much liquid waste into the sea as a small city. Add to that the plagues of destructive sea lice that thrive in densely packed salmon pens and the schools of farm-grown fish the inevitably escape to the opens sea, where they spread diseases and compete for food and breeding grounds with wild stocks.

The federal and provincial governments promise to manage the fish farming industry in a responsible manner. Many wonder whether that is possible.

Resource Use Conflicts: Forestry

The forest industry, which includes logging, saw milling, pulp and paper, panel board, silviculture, and secondary-manufacturing sectors are British Columbia's largest industrial sector, employing approximately 275,000 people in the 1990s. The industry, the province's first, has been come under intense criticism for its impact on the environment (Francis, *Encyclopedia of BC* 2000:259). There are a number of concerns regarding current forest practices. For one, much of the land is harvested by clear cutting

method, which has the potential to cause substantial soil erosion. Second, 37,000 kilometers of logging roads in the province, which involve road construction, use, and maintenance contribute to water further water pollution by contributing to 90% of the sedimentation from forestry activities (gov.bc.ca/wat/wq/bmps/nps-acton.html#forest).

Fishing and forestry are among British Columbia's five most important natural resource-based industries. However, sometimes the co-existence of the two comes into conflict. The impact of logging upon salmon stocks was raised in an article entitled British Columbia's Ancient Rainforests – A Global Treasure! The article conveys the following message:

Scientists attribute 30% of the decline in salmon stocks over the past two decades to the destruction of salmon habitats.

The Sierra Legal Defense Fund* in a release criticizing Canada for ignoring its own laws for protection of fish, explain the impact of logging upon fish and fish habitats. The organization claims that logging companies participate in the following damaging practices:

Fall and yard timber across fish streams, altering and destroying fish habitat and depositing "deleterious sediment and woody debris in these waters;

Log and build roads on terrains where landslides are "highly likely" (landslides often destroy fish habitat, block the passage of spawning fish, deposit sediment and woody debris in streams and rivers);

Clearcut up to the banks of streams and rivers, altering or destroying fish habitat.

The organization states that "studies show that 142 distinct salmon populations in B.C. and they Yukon have been driven to extinction."

On a more positive note, Aran O'Carroll*, executive director of Forest Watch of British Columbia, proposes the following solution to the problem:

One of the easiest and quickest changes that logging companies could make to demonstrate a commitment to improved forestry practices would be to leave the trees standing to create buffer zones on small streams critical to fish…

Experts in the tourism field acknowledge that British Columbia's tourism industry is for the most part natural resource-based. Consequently, the forest industry, which is also resource-based, comes in conflict with tourism. Critics of industrial logging state that current forestry practices have the potential to damage tourism operations in British Columbia, limiting scenic corridors and viewscapes for the tourism industry. The BC Wilderness Tourism Association* cautions that if:

…BC's wilderness tourism industry is to continue to grow at its current annual rate of 11% or more, it must have a secure land and water resource base.

The majority of BC's tourism industry is natural resource-based. Visitors come to our province to experience wilderness, wildlife, fishing, dramatic scenery, intact forests, rivers, and wild coastlines. As a result, a range of natural resource-based tourism products, such as sea kayaking, helisking, wildlife viewing, and saltwater fishing, have evolved.

The Association remains optimist that "both of BC's forest industries, tourism and logging, can co-exist and thrive.' They propose that where tourism and forestry overlap in an area, "retaining the tourism values may involve either outright preservation… which precludes logging and roading, - or sensitive viewscape management through careful logging".

Resource Use Conflicts: Tourism

Experts in the tourism field acknowledge that British Columbia's tourism industry is for the most part natural resource-based. Consequently, the forest industry, which is also resource-based, comes in conflict with tourism. Critics of industrial logging state that current forestry practices have the potential to damage tourism operations in British Columbia, limiting scenic corridors and viewscapes for the tourism industry. The BC Wilderness Tourism Association cautions that if:

> *…BC's wilderness tourism industry is to continue to grow at its current annual rate of 11% or more, it must have a secure land and water resource base.*
>
> *The majority of BC's tourism industry is natural resource-based. Visitors come to our province to experience wilderness, wildlife, fishing, dramatic scenery, intact forests, rivers, and wild coastlines. As a result, a range of natural resource-based tourism products, such as sea kayaking, helisking, wildlife viewing, and saltwater fishing, have evolved. [www.wilderness-tourism.bc.ca/W]*

The Association remains optimist that "both of BC's forest industries, tourism and logging, can co-exist and thrive.' They propose that where tourism and forestry overlap in an area, "retaining the tourism values may involve either outright preservation… which precludes logging and roading, - or sensitive viewscape management through careful logging" (www.wilderness-tourism.bc.ca/W).

Resource Use Conflicts: Ecology

Additional concerns about forest practices are raised in the following article entitled Forest Industry hoodwinks British Columbia environmentalists again? (2000):

> *The world's largest temperate rainforest is located along the Northwest coast of North America between Oregon and Alaska. Much of the old-growth timber, including many of the world's largest trees, has already been cut. Of what remains, about half is in British Columbia, and of that, most is slated to be logged within the next dozen years.*
>
> *The decision to log British Columbia's coastal rainforest has been made without reference to its important ecological functions, which include preservation of biodiversity and the regulation of atmospheric carbon dioxide concentration.*
>
> *…Among species to which the old-growth coastal rainforest provides either a permanent or seasonal home are the grizzly bear, black bear, woodland caribou, cougar, bald eagle and Pacific Salmon.*
>
> *In addition, the coastal rainforest represents a vast accumulation of organic carbon, both in trees and soil. Liquidation of the forest will release most of this carbon to the atmosphere in the form of the greenhouse gas, carbon dioxide. [natural science.com/ns/news/news26.html]*

Anthropologist David S. Trigger (1996; 1999) has examined natural resource conflicts in both British Columbia and Australia. He demonstrates how both "how pro-development and pro-wilderness views seek to establish moral authority" regarding appropriate use of forests. Trigger's (1999:174) interviews with Green activists and industry defenders in Australia revealed that:

> *Major differences emerge over conceptions of nature and appropriate human relations with it. Green [messages] stress the importance of 'wilderness', the rights of nature and an ecological crisis brought about by human wastage and inappropriate develop-*

ment of resources. Industry comments [stress]…the rights and needs of people who benefit from logging and mining, both those who work in industries and everybody else who uses a wide range of resulting products.…

Whereas Green activists condemn what they regard as crimes against nature, industry defenders feel such criticisms are personal attacks on their senses of local identity and moral standing in Australian society. They reject characterizations of their aspirations as solely related to economic interests and stress the sociocultural aspects of their work and broader community lifestyles. The industry persons quoted feel that they are "not understood", that their work represents an enterprise of symbolic importance in Australian history and that what the environmentalists want to negate is their 'way of life' and their 'communities'.

References:

Cheng, Antony S., Linda E. Kruger, and Steven E. Daniels (2003)
"Place" as an Integrating Concept in Natural Resource Politics: Propositions for a Social Science Research Agenda. *Society and Natural Resources* 16(87): 87-104.

Francis, Daniel (Editor) (2000)
Encyclopedia of British Columbia. Madeira Park, BC: Harbour Publishing Ltd.

Hume, Stephen (2002)
Pink Salmon Collapse Blamed on Fish Farming. *National Post*.
(persweb.direct.ca/kbryski/pinkcollapse.htm)

McCarthy, Terry (2002)
Is Fish Farming Safe? *Time Magazine*.
Website Address: www.time.com.time/globalbusiness/article/0,9171,1101021125-391523,00.html

Meffe, Gary K. (1992)
Techno-Arrogance and Halfway Technologies: Salmon Hatcheries on the Pacific Coast of North America. *Conservation Biology* 6(3):350-354).

Sierra Legal Defense Fund
Open season on British Columbia's threatened wild salmon stocks.
[www.sierralegal.org/m_archive/2000/bk00_03_15.htm]

Trigger, David (1996)
Contesting Ideologies of Natural Resource Development in British Columbia, Canada. *Culture* XVI(1):55-69

Trigger, David (1999)
Nature, Work and 'the Environment': Contesting Sentiments and Identities in the Southwest of Western Australia. *The Australian Journal of Anthropology* 10(2):163-176.

BC Wilderness Tourism Association (n.d.)
Mapping BC' Wilderness Tourism Resource.
[www.wilderness-tourism.bc.ca/W]

Author unknown (March 22, 2000)
Forest Industry hoodwinks British Columbia environmentalists again? Natural Science. [natural science.com/ns/news/news26.html]

Author unknown (1999)
Tackling non-point source water pollution in British Columbia: An Action Plan.
(wlapwww.gov.bc.ca/wat/wq/bmps/npsacton.html#forest).

Author unknown
Clearcut logging continues in Canada's rainforests.
[www.raincoast.org/news/Canadian_rainforests.htm]

Author unknown
British Columbia's Ancient Rainforests – A Global Treasure!
[www.oldgrowthfree.com/bc_snapshot.html

Ideal Teams

Determine number and strengths of the following teams:

User Group	Strength (Number of Students Assigned)	Ideal Strength (Number of students that should be assigned)
Corporate Logging		
Small-scale Logging		
Commercial Fisheries		
Fish Farm Operators		
Local Recreational Users		
Local Subsistence Users		
Tourists, Guides, Lodges		

Closing Activities

The following are suggested activities to provide closure at the end of this unit. They emphasize both the Regional Identity of the students and the Local Ecological Knowledge constructed by the class over the course of the unit.

Activity 18: Fill in the Blank Map

Provide students with a small version of a blank map of the region. Have students create their own legend to indicate important features. Students can then use the map to indicate their new understandings of the area.

Activity 19: Scavenger Hunt

Create a scavenger hunt that includes specific items related to the local people, businesses, and natural resources of the area.

Activity 20: Celebrate Regional Identity

Celebrate the region by creating a display of images and objects of local significance, including the large class map, providing a feast of locally available foods, and invite guests whose work or art contributes to the unique flavour of Prince Rupert. Students and guests can “show and tell” or present short pieces.

Appendix A: Major Understandings by Activity and Activity Thumbnails

Theme One: CREATING A REGIONAL SENSE OF PLACE

	Major Understandings
Activity #1: You Know You're in Prince Rupert . . .	-Prince Rupert is a specific and unique place
Activity #2: Brainstorm Local Products and People	-The region is rich in cultural and industrial resources
Activity #3: Placelessness	-Communities in North America are becoming homogenized -This trend has a psychological and economic dimension -This trend is related to how regional resources are managed
Activity #4: The Local Menu	-Foods that are locally available help characterize a region -Local food that is gathered, harvested and processed may not be widely available locally for economic reasons
Activity #5: Visit the Local Museum	-Museums represent the region with visual and tactile displays of local culture, history, and geography - Use of museum space reflects the value system of cultures and communities
Activity #6: Large Class Regional Map	-Creating a visual display of the region allows for ongoing discussion of resource-management issues, shared knowledge, and a graphic demonstration of interconnections of geography, politics, economics, and environmental science
Activity #7: Historical Maps	-Maps reveal social, cultural and economic value systems as well as geographic features

ACTIVITY THUMBNAILS

Activity #1: You Know You're in Prince Rupert . . .
Students identify cultural and community features of region that make it unique.

Activity #2: Brainstorm Local Products and People
Students identify local people and local products that are related to the region's identity.

Activity #3: Placelessness
Students identify local businesses and contrast them with chain businesses. Students consider themes of regional identity and economic implications.

Activity #4: The Local Menu
Students examine local food from the perspective of what is locally gathered and available through local sources. Recipes and meals that use these regional foods are also discussed.

Activity #5: Visit the Local Museum
Arrange for a class visit to the local museum. Students will create and analyze visual representations of the nature and size of the museum displays. Students will infer community values regarding the region.

Activity #6: Large Regional Class Map
Students will create a large-scale map for classroom discussion and display. The map will convey a sense of animals, habitats, seasons, changes, locally familiar territory, and industrial resource use.

Activity #7: Historical Maps
Students compare maps of the same region over time and observe how salient map features reflect social and economic values.

Theme Two: IMAGERY, TOURISM, AND REGIONAL IDENTITY

	Major Understandings
Activity 8: Prince Rupert on the Web	-There is an economic benefit to attracting tourists to the region -Communities in the region will market the same features (salmon fishing, natural scenery, First Nations culture)
Activity 9: Local Images	-How a region is known and marketed to outsiders reflects what is valued in the region -The mythology of the region potentially influences how regional resources are managed

Activity 10: Tourism under Investigation	-Tourist industries conflict and compete with both industrial and local use of the wilderness -LEK has a role in creating resource management solutions -Interview data as a research tool

ACTIVITY THUMBNAILS

Activity #8: Prince Rupert on the Web

Students compare visual material on local and regional tourism web sites.

Activity #9: Local Images

Students analyze the visual content of tourist pamphlets or other materials. Students provide a contrast between the ideal marketed features of the region and the reality for local residents.

Activity #10: Tourism Under Investigation

Students evaluate local interview data regarding threats and changes to resources where there are competing interests between tourists and locals.

Theme Three: TRADITIONAL AND LOCAL ECOLOGICAL KNOWLEDGE

	Major Understandings
Activity 11: Hunt, Fish, Gather	-Physical, social, and psychological dimensions to the desire to provide one's own food from the land and sea -Individual talents of students are valuable in team settings and contribute to the team skills and knowledge -Knowledge of local seasons is important -Knowledge of local habitat and resource use conditions is essential -Social networks are an important part of gaining access to the resources -There is an economic component to the personal use of the land and water resource -Local economies benefit from these activities -Food is a valuable and social commodity

ACTIVITY THUMBNAILS

Activity #11: Hunt, Fish, Gather
Students will play a game in student teams. They will participate in a number of challenges designed to simulate the knowledge, skills, resources, and networks involved in personal resource use. The simulation game is broken down into seven parts.

Introduction #1: Social and Psychological Dimensions to Hunting, Fishing, and Gathering
Students make a decision on whether or not to participate in the game in light of information regarding recreational and health benefits of harvesting one's own food from the land and sea.

Introduction #2: Role Preparation
Student teams will also determine roles suited to individual students in their assigned teams.

Part One: Start Up Costs
Teams calculate the start up costs of major equipment of hunting and fishing and gathering activities.

Part Two: When to Go
Teams determine appropriate times of the year for hunting, fishing and gathering activities.

Part Three: Where to Go (optional)
Teams determine appropriate locations in the region for hunting, fishing and gathering activities.

Part Four: Target Practice
Teams who have attained appropriate equipment and selected appropriate times of the year and locations attempt to hit targets representing local plant and animal species.

Part Five: Adding up the Cost
Teams determine the costs associated with each hunting, fishing, or gathering trip.

Part Six: Sharing
Teams share the food they have gathered within or between the groups.

Theme Four: USER GROUPS

	Major Understandings
Activity #12: Time Line	-Most of the forest resources are concentrated in the hands of large corporations -Amount of harvested timber has increased in the last 3 decades due to technology and economic pressure -The employee rate to harvested timber has decreased in the last few decades -Government changes in forest policy reflect changing economic pressures, concerns and competing user group
Activity#13: Balloons	-Resource-based economies involve tradeoffs between governments, corporations, local citizens and employees -These stakeholder groups organize the tradeoffs as resources diminish and pollution is created -The success of stakeholder groups to achieve balanced and mutually beneficial tradeoffs can be effected by goals, information, strategies and behaviours
Activity#14: LEK (Local Ecological Knowledge**)**	-LEK, (or Local Ecological Knowledge) is information provided by residents of an area who have direct knowledge, connections and histories to the land and water -LEK is rich in understandings of complex ecosystems and sustainability issues as well as the impacts of industry **-**LEK is a critical dimension to insuring resource management plans are fair and protective of lifestyles that depend on the integrity of ecosystems

ACTIVITY THUMBNAILS

Activity #12: Time Line
Students will analyze a policy timeline. Students will create a method of representing information graphically.

Activity #13: Balloons
Students participate in a model of resource-based economy. Students will simulate the use, control, and benefits and pitfalls of resource-based industries. A mini-economy will be established through the trading of various coloured balloons. Students discuss issues of power, psychology and value of assets.

Activity #14: LEK (Local Ecological Knowledge)
This is a comparison activity where students will evaluate the data gathered from local citizens with other reports about these same resources. Students should contrast the type of knowledge generated by individuals who have intimate, life-long local connections to the region as opposed to expertise from other sources.

Theme Five: CONFLICTS OF INTEREST

	Major Understandings
Activity 15: The Big Balancing Act	-Many user groups compete for access to local resources -User groups vary in terms of political strength, will, economic clout, and care over sustainability of resources
Activity 16: Tug of War	-User groups are composed of different economic and political power bases -Creating change involves an understanding of the direct and indirect effects of resource use by other groups -Individuals have a role in resource management planning
Activity 17: Icons on the Map	-Resource base and species are interconnected by economic and ecological ties

ACTIVITY THUMBNAILS

Activity #15: The Big Balancing Act
Students observe a demonstration of the opposing forces in resource management. Students discuss terms of victory and defeat . Students translate economic input and intangible value into team strength (number of students).

Activity #16: Tug of War
Students evaluate environmental information. Students participate in Tug of War teams. Students make personal decisions to address loyalties and balances. Students observe consequences of economic and political forces. Students construct a personal ideal balance of power.

Activity #17: Icons on the Map

Students graphically represent the ecological and economic ties of species and resources of the region. Students gain experience with mapping technology and the can uncover and represent complex interconnections of species and resources.

Appendix B: Activities and Links to Curriculum Prescribed Learning Outcomes

Theme One: CREATING A REGIONAL SENSE OF PLACE

	Course	Link to PLO
Activity 1: You Know You're in Prince Rupert . . .	**FN 12** **Social Studies 11**	Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions **Environmental Issues** It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -regions, (basic units of study that define an area with certain human and physical characteristics)
Activity 2: Brainstorm Local Products and People	**FN 12** **Social Studies 11**	Land and Relationships II It is expected that students will analyse the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: -governance -economics -environment -language **<u>Leadership and Self-Determination I</u>** It is expected that students will: -describe the roles, responsibilities and achievements of current Aboriginal groups and leaders, locally, provincially and nationally **Environmental Issues** It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique

	Resource Science 11 and 12 Forests	-movement (the varied patterns in the movement of life forms, ideas, and materials) -regions, (basic units of study that define an area with certain human and physical characteristics) Forests and Society It is expected that students will assess the importance of forests to British Columbians It is expected that students will demonstrate awareness of the social and economic value of forest animals Forest Resources It is expected that students will awareness of the roles of forests in the local and provincial economies
Activity #3: Placelessness	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -assess the role of values, ethics, and beliefs -recognize cause and effect relationships and the implications of events It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will analyse the exchange of ideas, practices, and materials

	Socials 11	between First Nations and other cultures, in historical and contemporary contexts, with reference to: -economics -environment **<u>Leadership and Self-Determination II</u>** It is expected that students will: -explain contemporary economic development issues facing First Nations Skills and Process I It is expected that students will identify and use approaches from the social sciences and humanities to examine Canada and the world It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -develop hypotheses and supporting arguments It is expected that students will develop and express appropriate responses to issues or problems **<u>Skills and Processes II</u>** It is expected that students will assess the role of values, ethics, and beliefs in decision-making It is expected that students will demonstrate appropriate research skills, including the ability to: -develop pertinent questions about a topic, an issue, or a situation -collect original data It is expected that students will recognize connections between events and their causes, consequences, and implications. It is expected that students will demonstrate awareness of the value of social studies education in their daily lives and careers

	Resource Science 11 and 12 Forests	Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures **Environmental Issues** It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials) -regions, (basic units of study that define an area with certain human and physical characteristics) Forests and Society It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use Forest Ecology It is expected that students will assess the effects of natural and human forces on the forest Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions
Activity #4: The Local Menu	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -gather relevant information from appropriate sources -recognize cause and effect relationships and the implications of events It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral

	Social Studies 11	traditions -design, construct, compose, and perform Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management **<u>Leadership and Self-Determination II</u>** It is expected that students will: -explain contemporary economic development issues facing First Nations Skills and Process I It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem It is expected that students will gather relevant information from appropriate sources **<u>Skills and Processes II</u>** It is expected that students will demonstrate appropriate research skills, including the ability to: -develop pertinent questions about a topic, an issue, or a situation -collect original data -use a range of research tools or resources -understanding the nature of and appropriate uses for primary and secondary sources Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures
	Resource Science 11 and 12 Forests	Animals It is expected that students will identify a variety of local animal species and their habitat requirements It is expected that students will demonstrate awareness of the social and economic value of forest animals

Activity #5 Visit the Local Museum	**FN 12** Socials 11	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -gather relevant information from appropriate sources -assess the role of values, ethics, and beliefs It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions -create and interpret maps -present and interpret data in graphic form Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will analyse the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: -governance -economics -environment -language Skills and Process I It is expected that students will gather relevant information from appropriate sources It is expected that students will reassess their responses to issues on the basis of new information **Skills and Processes II** It is expected that students will assess the role of values, ethics, and beliefs in decision-

	Resource Science 11 and 12 Forests	making It is expected that students will demonstrate appropriate research skills, including the ability to: -collect original data -use a range of research tools or resources -present and interpret data for accuracy, reliability, bias, and point of view -understanding the nature of and appropriate uses for primary and secondary sources It is expected that students will demonstrate mapping skills, including the ability to organize and synthesize various types of mapping data **Environmental Issues** It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials -regions, (basic units of study that define an area with certain human and physical characteristics) Forests and Society It is expected that students will compare historical and current forest practices It is expected that students will assess the importance of forests to British Columbians Forest Resources It is expected that students will awareness of the roles of forests in the local and provincial economies

Activity #6 Large Regional Class Maps	**FN 12** Social Studies 11	Skills and Practices It is expected that students will demonstrate skills associated with active leadership, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions -present in oral and written form -create and interpret maps -present and interpret data in graphic form Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management **<u>Contact, Colonialism, and Resistance II</u>** It is expected that students will -analyse land issues with reference to key events in First Nations resistance to land encroachment, locally, provincially, and nationally Skills and Process I It is expected that students will gather relevant information from appropriate sources It is expected that students will develop and express appropriate responses to issues or problems

		It is expected that students will reassess their responses to issues on the basis of new information **<u>Skills and Processes II</u>** It is expected that students will demonstrate skills associated with active citizenship, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently It is expected that students will demonstrate appropriate research skills, including the ability to: -collect original data -use a range of research tools or resources -compile and document task-specific from a wide variety of print and electronic sources It is expected that students will demonstrate mapping skills, including the ability to organize and synthesize various types of mapping data It is expected that students will demonstrate awareness of the value of social studies education in their daily lives and careers Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures **Environmental Issues** It is expected that students will explain the environmental impact of economic activity, population growth, urbanization, and standard of living It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics

		that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials -regions, (basic units of study that define an area with certain human and physical characteristics)
	Resource Science 11 and 12 Forests	Forests and Society It is expected that students will describe factors affecting forest-use decisions It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use It is expected that students will assess the importance of forests to British Columbians Forest Ecology It is expected that students will assess the effects of natural and human forces on the forest Animals It is expected that students will identify a variety of local animal species and their habitat requirements It is expected that students will describe factors affecting local animal populations and behaviours It is expected that students will demonstrate awareness of the social and economic value of forest animals Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions

Activity #7 Historical Maps	**FN 12** **Social Studies 11**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -gather relevant information from appropriate sources -assess the reliability, currency and objectivity of evidence -assess the role of values, ethics, and beliefs It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions -create and interpret maps -present and interpret data in graphic form Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management Skills and Process I It is expected that students will gather relevant information from appropriate sources It is expected that students will assess the reliability, currency, and objectivity of evidence **<u>Skills and Processes II</u>** It is expected that students will demonstrate appropriate research skills, including the ability to: -use a range of research tools or resources -present and interpret data for accuracy, reliability, bias, and point of view -understanding the nature of and appropriate

		uses for primary and secondary sources It is expected that students will demonstrate mapping skills, including the ability to organize and synthesize various types of mapping data Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures **Environmental Issues** It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials -regions, (basic units of study that define an area with certain human and physical characteristics)
	Resource Science 11 and 12 Forests	Measurement It is expected that students will demonstrate an ability to interpret air photos and satellite images Forest Resources It is expected that students will awareness of the roles of forests in the local and provincial economies

Theme Two: IMAGERY, TOURISM, AND REGIONAL IDENTITY

	Course	Link to PLO
Activity #8: Prince Rupert on the Web . . .	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -gather relevant information from appropriate sources -assess the reliability, currency and objectivity of evidence -assess the role of values, ethics, and beliefs It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions -present and interpret data in graphic form Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management It is expected that students will analyse the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: -governance -economics -environment -language

		<u>Contact, Colonialism, and Resistance II</u> It is expected that students will -analyse land issues with reference to key events in First Nations resistance to land encroachment, locally, provincially, and nationally **<u>Leadership and Self-Determination II</u>** It is expected that students will: -explain contemporary economic development issues facing First Nations
	Social Studies 11	Skills and Process I It is expected that students will gather relevant information from appropriate sources It is expected that students will assess the reliability, currency, and objectivity of evidence **<u>Skills and Processes II</u>** It is expected that students will demonstrate appropriate research skills, including the ability to: -collect original data -use a range of research tools or resources -compile and document task-specific from a wide variety of print and electronic sources -present and interpret data for accuracy, reliability, bias, and point of view -understanding the nature of and appropriate uses for primary and secondary sources Economic Issues It is expected that students will identify and assess economic issues facing Canadians **Environmental Issues** It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials

	Resource Science 11 and 12 Forests	-regions, (basic units of study that define an area with certain human and physical characteristics) It is expected that students will identify and assess environmental issues facing Canadians Forests and Society It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use It is expected that students will assess the importance of forests to British Columbians Animals It is expected that students will demonstrate awareness of the social and economic value of forest animals Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions
Activity 9: Local Images	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -assess the reliability, currency and objectivity of evidence It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions -present and interpret data in graphic form Land and Relationships I

	Socials Studies 11	It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management It is expected that students will analyse the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: -governance -economics -environment -language Skills and Process I It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem It is expected that students will gather relevant information from appropriate sources It is expected that students will assess the reliability, currency, and objectivity of evidence **<u>Skills and Processes II</u>** It is expected that students will demonstrate appropriate research skills, including the ability to: -develop pertinent questions about a topic, an issue, or a situation -collect original data -use a range of research tools or resources -compile and document task-specific from a wide variety of print and electronic sources -present and interpret data for accuracy, reliability, bias, and point of view -understanding the nature of and appropriate

	Resource Science 11 and 12 Forests	uses for primary and secondary sources **Environmental Issues** It is expected that students will explain the environmental impact of economic activity, population growth, urbanization, and standard of living Forests and Society It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use It is expected that students will assess the importance of forests to British Columbians Forest Ecology It is expected that students will assess the effects of natural and human forces on the forest Animals It is expected that students will demonstrate awareness of the social and economic value of forest animals Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions
Activity 10: Tourism under Investigation	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -gather relevant information from appropriate sources -assess the reliability, currency and objectivity of evidence -assess the role of values, ethics, and beliefs -recognize cause and effect relationships and the implications of events

	Social Studies 11	It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management **<u>Leadership and Self-Determination II</u>** It is expected that students will: -identify and analyse contemporary legislation, policies, and events affecting the self-determination of Aboriginal peoples -explain contemporary economic development issues facing First Nations Skills and Process I It is expected that students will identify and use approaches from the social sciences and humanities to examine Canada and the world It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -develop hypotheses and supporting arguments It is expected that students will gather relevant information from appropriate sources It is expected that students will assess the reliability, currency, and objectivity of evidence

		It is expected that students will develop and express appropriate responses to issues or problems It is expected that students will reassess their responses to issues on the basis of new information **<u>Skills and Processes II</u>** It is expected that students will assess the role of values, ethics, and beliefs in decision-making It is expected that students will demonstrate appropriate research skills, including the ability to: -develop pertinent questions about a topic, an issue, or a situation -use a range of research tools or resources -present and interpret data for accuracy, reliability, bias, and point of view -understanding the nature of and appropriate uses for primary and secondary sources It is expected that students will recognize connections between events and their causes, consequences, and implications. **Environmental Issues** It is expected that students will explain the environmental impact of economic activity, population growth, urbanization, and standard of living It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials -regions, (basic units of study that define an area with certain human and physical characteristics)

	Resource Science 11 and 12 Forests	It is expected that students will identify and assess environmental issues facing Canadians Forests and Society It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use It is expected that students will compare historical and current forest practices It is expected that students will assess the importance of forests to British Columbians Forest Ecology It is expected that students will assess the effects of natural and human forces on the forest It is expected that students will describe a variety of food changes and food webs Animals It is expected that students will identify a variety of local animal species and their habitat requirements It is expected that students will describe factors affecting local animal populations and behaviours It is expected that students will demonstrate awareness of the social and economic value of forest animals Forest Resources It is expected that students will identify economic factors affecting forest resource industries It is expected that students will awareness of the roles of forests in the local and provincial economies Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions

Theme Three: TRADITIONAL AND LOCAL ECOLOGICAL KNOWLEDGE

	Course	Link to PLO
Activity 11: Hunt, Fish, Gather	**FN 12**	Skills and Practices It is expected that students will demonstrate skills associated with active leadership, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions
	Socials 11	**<u>Skills and Processes II</u>** It is expected that students will demonstrate skills associated with active citizenship, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently **Environmental Issues** It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials -regions, (basic units of study that define an area with certain human and physical characteristics)
	Resource Science 11 and 12 Forests	Forests and Society It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use

		It is expected that students will assess the importance of forests to British Columbians Animals It is expected that students will identify a variety of local animal species and their habitat requirements It is expected that students will describe factors affecting local animal populations and behaviours It is expected that students will demonstrate awareness of the social and economic value of forest animals Forest Resources It is expected that students will awareness of the roles of forests in the local and provincial economies

Theme Four: USER GROUPS

	Course	Link to PLO
Activity #12: Time Line	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -gather relevant information from appropriate sources It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions -create and interpret maps -present and interpret data in graphic form Land and Relationships I It is expected that students will relate First

	Socials Studies 11	Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management **<u>Leadership and Self-Determination II</u>** It is expected that students will: -identify and analyse contemporary legislation, policies, and events affecting the self-determination of Aboriginal peoples Skills and Process I It is expected that students will gather relevant information from appropriate sources It is expected that students will assess the reliability, currency, and objectivity of evidence **<u>Skills and Processes II</u>** It is expected that students will demonstrate appropriate research skills, including the ability to: -compile and document task-specific information from a wide variety of print and electronic sources It is expected that students will recognize connections between events and their causes, consequences, and implications. It is expected that students will demonstrate mapping skills, including the ability to organize and synthesize various types of mapping data Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures

	Forests 11	**Environmental Issues** It is expected that students will explain the environmental impact of economic activity, population growth, urbanization, and standard of living It is expected that students will apply the following themes of geography to relevant issues: -movement (the varied patterns in the movement of life forms, ideas, and materials -regions, (basic units of study that define an area with certain human and physical characteristics) Forests and Society It is expected that students will describe factors affecting forest-use decisions It is expected that students will compare historical and current forest practices Forest Resources It is expected that students will identify economic factors affecting forest resource industries It is expected that students will awareness of the roles of forests in the local and provincial economies Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions
Activity #13: Balloons	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem develop hypotheses and supporting arguments -recognize cause and effect relationships and the implications of events

	Socials 11	It is expected that students will demonstrate skills associated with active leadership, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management It is expected that students will analyse the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: -governance -economics **Contact, Colonialism, and Resistance II** It is expected that students will -assess the impact of changing post-contact economies on First Nations societies **Leadership and Self-Determination II** It is expected that students will: -explain contemporary economic development issues facing First Nations Skills and Process I It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -develop hypotheses and supporting arguments It is expected that students will develop and express appropriate responses to issues or problems It is expected that students will reassess their responses to issues on the basis of new information

	Resource Science 11 and 12 Forests	**<u>Skills and Processes II</u>** It is expected that students will demonstrate skills associated with active citizenship, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently It is expected that students will demonstrate appropriate research skills, including the ability to: -develop pertinent questions about a topic, an issue, or a situation It is expected that students will recognize connections between events and their causes, consequences, and implications. It is expected that students will demonstrate awareness of the value of social studies education in their daily lives and careers Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures It is expected that students will identify and assess economic issues facing Canadians **Environmental Issues** It is expected that students will explain the environmental impact of economic activity, population growth, urbanization, and standard of living Forests and Society It is expected that students will describe factors affecting forest-use decisions It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use

		Forest Resources It is expected that students will identify economic factors affecting forest resource industries It is expected that students will awareness of the roles of forests in the local and provincial economies Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions
Activity #14: LEK (Local Ecological Knowledge)	**FN 12** **Socials 11**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -gather relevant information from appropriate sources -assess the reliability, currency and objectivity of evidence -assess the role of values, ethics, and beliefs -recognize cause and effect relationships and the implications of events It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Skills and Process I It is expected that students will identify and use approaches from the social sciences and humanities to examine Canada and the world It is expected that students will gather relevant information from appropriate sources

		It is expected that students will assess the reliability, currency, and objectivity of evidence **<u>Skills and Processes II</u>** It is expected that students will assess the role of values, ethics, and beliefs in decision-making It is expected that students will demonstrate appropriate research skills, including the ability to: -compile and document task-specific from a wide variety of print and electronic sources -present and interpret data for accuracy, reliability, bias, and point of view -understanding the nature of and appropriate uses for primary and secondary sources It is expected that students will recognize connections between events and their causes, consequences, and implications. Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures **Environmental Issues** It is expected that students will explain the environmental impact of economic activity, population growth, urbanization, and standard of living It is expected that students will apply the following themes of geography to relevant issues: -place (the physical and human characteristics that make a location unique -regions, (basic units of study that define an area with certain human and physical characteristics) It is expected that students will identify and assess environmental issues facing Canadians

	Resource Science 11 and 12 Forests	Forest Ecology It is expected that students will assess the effects of natural and human forces on the forest It is expected that students will describe a variety of food changes and food webs Animals It is expected that students will describe factors affecting local animal populations and behaviours It is expected that students will demonstrate awareness of the social and economic value of forest animals Land-Use Planning It is expected that students will -describe sustainable development and its relationship to land use -relate public involvement to land-use planning decisions

Theme Five: CONFLICTS OF INTEREST

	Course	Link to PLO
Activity #15: The Big Balancing Act	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -recognize cause and effect relationships and the implications of events Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions. Land and Relationships II

	Socials 11	It is expected that students will compare current and traditional First Nations resource use and management. Social Studies 11 **<u>Leadership and Self-Determination II</u>** It is expected that students will: -identify and analyse contemporary legislation, policies, and events affecting the self-determination of Aboriginal peoples **<u>Skills and Processes 1</u>** It is expected that students will develop and express appropriate responses to issues or problems It is expected that students will reassess their responses to issues on the basis of new information **<u>Skills and Processes II</u>** It is expected that students will demonstrate skills associated with active citizenship, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently It is expected that students will recognize connections between events and their causes, consequences, and implications. Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures
	Resource Science 11 and 12 Forests	Forests and Society It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use It is expected that students will assess the importance of forests to British Columbians

		Animals It is expected that students will demonstrate awareness of the social and economic value of forest animals Forest Resources It is expected that students will awareness of the roles of forests in the local and provincial economies Land-Use Planning It is expected that students will -describe forest land-use planning processes at the site-specific, regional, and province-wide levels -relate public involvement to land-use planning decisions
Activity #16: Tug of War	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem -recognize cause and effect relationships and the implications of events It is expected that students will demonstrate skills associated with active leadership, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management **<u>Leadership and Self-Determination II</u>** It is expected that students will: -explain contemporary economic development issues facing First Nations

	Socials 11	Skills and Process I It is expected that students will demonstrate the ability to think critically, including the ability to: -define an issue or problem It is expected that students will develop and express appropriate responses to issues or problems It is expected that students will reassess their responses to issues on the basis of new information **<u>Skills and Processes II</u>** It is expected that students will demonstrate skills associated with active citizenship, including the ability to: -collaborate and consult with others -respect and promote respect for the contributions of other team members -interact confidently It is expected that students will assess the role of values, ethics, and beliefs in decision-making It is expected that students will recognize connections between events and their causes, consequences, and implications. It is expected that students will demonstrate awareness of the value of social studies education in their daily lives and careers Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures **Environmental Issues** It is expected that students will apply the following themes of geography to relevant

	Resource Science 11 and 12 Forests	issues: -place (the physical and human characteristics that make a location unique -regions, (basic units of study that define an area with certain human and physical characteristics) It is expected that students will identify and assess environmental issues facing Canadians Forests and Society It is expected that students will describe factors affecting forest-use decisions It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use It is expected that students will assess the importance of forests to British Columbians Forest Ecology It is expected that students will assess the effects of natural and human forces on the forest Animals It is expected that students will describe factors affecting local animal populations and behaviours It is expected that students will demonstrate awareness of the social and economic value of forest animals Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions (p.28) Management Perspectives It is expected that students will analyse forest-related issues from a variety of perspectives (p.32)

Activity #17: Icons on the Map	**FN 12**	Skills and Practices It is expected that students will demonstrate the ability to think critically, including the ability to: -gather relevant information from appropriate sources -recognize cause and effect relationships and the implications of events It is expected that students will demonstrate appropriate research and oral and written presentation skills, including the ability to: -access and interpret material from a wide variety of primary and secondary sources, electronic sources, and First Nation oral traditions -create and interpret maps present and interpret data in graphic form Land and Relationships I It is expected that students will relate First Nations concepts of land and resource ownership to spiritual and other cultural dimensions Land and Relationships II It is expected that students will compare current and traditional First Nations resource use and management It is expected that students will analyse the exchange of ideas, practices, and materials between First Nations and other cultures, in historical and contemporary contexts, with reference to: -governance -economics -environment -language
	Social Studies 11	**<u>Contact, Colonialism, and Resistance II</u>** It is expected that students will -analyse land issues with reference to key events in First Nations resistance to land encroachment, locally, provincially, and nationally

		Skills and Process I It is expected that students will gather relevant information from appropriate sources It is expected that students will reassess their responses to issues on the basis of new information **<u>Skills and Processes II</u>** It is expected that students will demonstrate appropriate research skills, including the ability to: -use a range of research tools or resources -compile and document task-specific from a wide variety of print and electronic sources -understanding the nature of and appropriate uses for primary and secondary sources It is expected that students will recognize connections between events and their causes, consequences, and implications. It is expected that students will demonstrate mapping skills, including the ability to organize and synthesize various types of mapping data It is expected that students will demonstrate awareness of current geographical technology Economic Issues It is expected that students will assess implications of industrial and technological development for societies and cultures **Environmental Issues** It is expected that students will explain the environmental impact of economic activity, population growth, urbanization, and standard of living It is expected that students will apply the following themes of geography to relevant

	Resource Science 11 and 12 Forests	issues: -location (a position on the Earth's surface) -place (the physical and human characteristics that make a location unique -movement (the varied patterns in the movement of life forms, ideas, and materials -regions, (basic units of study that define an area with certain human and physical characteristics) It is expected that students will identify and assess environmental issues facing Canadians Forests and Society It is expected that students will describe factors affecting forest-use decisions It is expected that students will demonstrate awareness of a variety of perspectives and values related to forests and forest use Forest Ecology It is expected that students will assess the effects of natural and human forces on the forests It is expected that students will describe a variety of food changes and food webs Animals It is expected that students will identify a variety of local animal species and their habitat requirements It is expected that students will describe factors affecting local animal populations and behaviours It is expected that students will demonstrate awareness of the social and economic value of forest animals Measurement It is expected that students will apply collected data to describe forest areas It is expected that students will demonstrate

		an ability to interpret air photos and satellite images Forest Resources It is expected that students will identify economic factors affecting forest resource industries It is expected that students will awareness of the roles of forests in the local and provincial economies Land-Use Planning It is expected that students will relate public involvement to land-use planning decisions

References

BC First Nations Studies 12 (2000). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Social Studies 11 (1997). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Resource Sciences 11 and 12 Forests (1997). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

References

Anderson, Benedict (1991)
Imagined Communities: Reflections on the Origin and Spread of Nationalism. London and New York: Verso.

Ateljevic, Irena and Stephen Doorne (2002)
Representing New Zealand: Tourism Imagery and Ideology. Annals of Tourism Research 29(3): 648-667.

BC Wilderness Tourism Association (n.d.)
Mapping BC' Wilderness Tourism Resource. [www.wilderness-tourism.bc.ca/W]

Berkes, Fikret
1993 TEK in Perspective. In TEK: Concepts and Cases, edited by J.T. Inglis. Ottawa, Ontario: International Development Research Centre.

Berkes, F., P.J. George, R.J. Preston, A. Hughes, J. Turner, and B.D. Cummins
1994 Wildlife Harvesting and Sustainable Regional Native Economy in the Hudson and James Bay Lowland, Ontario. Arctic 47(4): 350-360.

Bowden, M.J. (1992)
The invention of American tradition. Journal of Historical Geography 18(1):3-26.

Brown, K. and Smith, M. (2002). Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. Policy Stream Report (p.9)

Ellison, Barry, Michel Arsenault, and Bill Reimer
1997 The Informal Economy: Metro and Non-Metro Comparisons. In The Sociology of Labour Markets: Efficiency, Equity, Security, edited by Axel Van Den Berg and Joseph Smucker, pp. 255-270. Scarborough, Ontario: Prentice Hall Allyn and Bacon Canada.

Cheng, Antony S., Linda E. Kruger, and Steven E. Daniels (2003)
"Place" as an Integrating Concept in Natural Resource Politics: Propositions for a Social Science Research Agenda. Society and Natural Resources 16(87): 87-104.

Ching, Barbara and Gerald W. Creed (editors) (1997)
Knowing Your Place: Rural Identity and Cultural Hierarchy. New York and London: Routledge.

Fossett, Renee (1996)
Mapping Inuktut: Inuit Views of the Real World. In Reading Beyond Words, edited by Jennifer S.H. Brown and Elizabeth Vibert. Peterborough: Broadview Press, pp.74-94.

Francis, Daniel (Editor) (2000)
Encyclopedia of British Columbia. Madeira Park, BC: Harbour Publishing Ltd.

Freeman, M.M.R.
1979 Traditional Land Users as a Legitimate Source of Environmental Expertise. The Canadian National Parks: Today and Tomorrow, Conference II., University of Waterloo, Waterloo, Ontario, pp. 345-369.

Goble Dale. D. and Paul W. Hirt (editors) (1999)
Northwest Lands, Northwest Peoples: Readings in Environmental History. Seattle and London: University of Washington Press.

Hume, Stephen (2002)
Pink Salmon Collapse Blamed on Fish Farming. National Post. (persweb.direct.ca/kbryski/pink-collapse.html)

Inglis, J.T.
1993 TEK: Concepts and Cases. Ottawa, Ontario: International Development Research Centre,

Johannes, R.E.
1993 Integrating Traditional Ecological Knowledge and Management with Environmental Impact Assessment. In TEK: Concepts and Cases, edited by J.T. Inglis. Ottawa, Ontario: International Development Research Centre,

Kemmis, D. (1990)
Community and the politics of place. Norman: University of Oklahoma Press.

Lui, Joynce
1995 The Use of Local Knowledge and Expert Opinion in Resource Planning. Victoria, BC. : Ministry of Forests.

Manning, Richard (2001)
Inside Passage: A Journey Beyond Borders. Washington and Covelo: Island Press.

Marchak, P., Aybock, S., and Herbert D. (1999). Falldown: Forest policy in British Columbia. Vancouver, BC: Columbia. David Suzuki Foundation / Ecotrust Canada.

McCarthy, Terry (2002)
Is Fish Farming Safe? Time Magazine. Website Address: www.time.com.time/globalbusiness/article/0,9171,1101021125-391523,00.html

Meffe, Gary K. (1992)
Techno-Arrogance and Halfway Technologies: Salmon Hatcheries on the Pacific Coast of North America. Conservation Biology 6(3): 350-354).

Menzies C., Mattson L., and Butler, C. (2002). The place of the informal economy in the North Coast LRMP process. In Menzies C., Mattson L., and Butler, C. (2002). The place of the informal economy in the North Coast LRMP process. In Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management. www: ecoknow.ca/

Nadasdy, Paul
1999 The Politics of TEK: Power and the "Integration" of Knowledge. Arctic Anthropology 36(1-2): 1-18.

Nicholls, W.M. and W.A. Dyson
1983 The Informal Economy: Where People are the Bottom Line. Ottawa, Ontario: VIF Publication.

Palsson, Gisli
1997 Learning by Fishing: Practical Engagement and Environmental Concerns. In Linking Social and Ecological Systems, edited by F. Berkes and C. Folk. Cambridge: Cambridge University Press.

Province of British Columbia (1999). Procedures for the Export of Timber: Vancouver and Prince Rupert Forest Regions: Appendix 9: Instructions for Completing Coast and Interior Standing Timber Applications
(p. 26)

Reimer, Bill
2000 The Informal Economy in Rural Canada. http://cerf.mcmaster.calconferences/r…

Rodman, Margaret C. (1992)
Empowering Place: Multilocality and Multivocality. American Anthropologist 94(3): 640-656.

Rogers, Susan C. (2002)
Which Heritage? Nature, Culture, and Identity in French Rural Tourism. French Historical Studies 25(3):475-503.

Ruddle, Kenneth
1994 Local Knowledge in the Folk Management of Fisheries and Coastal Marine Environments. In Folk Management of the World's Fisheries: Lessons for Modern Fisheries Management, edited by C. Dyer and J. McGoodwin, pp. 161-206. Niwot: University of Colorado Press.

Rundstrom, Robert A (1990)
A Cultural Interpretation of Inuit Map Accuracy. Geographical Review 80(2): 155-168).

Schollmann, Andrea, Harvey C. Perkins, and Kevin Moore (2001)
Rhetoric, claims making and conflict in touristic place promotion: the case of central Christchurch, New Zealand. Tourism Geographies (3)3: 300-325.

Shende, Suresh N.
n.d. Informal Economy. The Special Tax Regime for Small and Micro Businesses: Design and Implementation. http://unpanl.un.org/intradoc/groups/…

Sierra Legal Defense Fund\

Open season on British Columbia's threatened wild salmon stocks. [www.sierralegal.org/m_archive/2000/bk00_03_15.htm]

Trigger, David (1996)
Contesting Ideologies of Natural Resource Development in British Columbia, Canada. Culture XVI (1):55-69

Trigger, David (1999)
Nature, Work and 'the Environment': Contesting Sentiments and Identities in the Southwest of Western Australia. The Australian Journal of Anthropology 10(2): 163-176.

Van der Duim, Rene and Janine Caalders (2002)
Biodiversity and Tourism: Impacts and Interventions. Annals of Tourism Research 29(3): 743-761.

Williams, W.G. (2001)
Nature's Northwest: In Search of a Pacific Region. In The Great Northwest: The Search for Regional Identity, edited by William G. Robbins. Corvallis: Oregon State University Press, pp: 158-182.

Wolfe, Robert
n.d. Subsistence: Frequently Asked Questions, Myths: What Have You Heard? http://www.state.ak.us/adfg/subsist/geninfo/about/subfaq.htm

Websites:

http://wlapwww.gov.bc.ca/wld/documents/huntinglicensefees_2003non.pdf / Ministry of Water, Land, and Air Protection

http://www.-comm.pac.dfo-mpo.gc.ca/pages/sfg/licences_e.htm/ Fisheries and Oceans Canada

natural science.com/ns/news/news26.html
Author unknown (March 22, 2000) Forest Industry hoodwinks British Columbia environmentalists again? Natural Science.

wlapwww.gov.bc.ca/wat/wq/bmps/npsacton.html#forest
Author unknown (1999). Tackling non-point source water pollution in British Columbia: An Action Plan.

www:ecoknow.ca/
Forests for the Future: Integrating Local Ecological Knowledge with Natural Resource Management

www.oldgrowthfree.com/bc_snapshot.html
Author unknown British Columbia's Ancient Rainforests – A Global Treasure!

www.raincoast.org/news/Canadian_rainforests.htm
Author unknown. Clearcut logging continues in Canada's rainforests.

www.tourismprincerupert.com/know.htm
Author unknown. Get to Know Us.

www.tourismprincerupert.com/early_days.htm
Author unknown (1914)

BC Curriculum Packages

BC First Nations Studies 12 (2000). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Social Studies 11 (1997). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Resource Sciences 11 and 12 Forests (1997). Integrated resource package. British Columbia Ministry of Education Curriculum Branch.

Forests for the Future, Unit 5
Two Ways of Knowing: Traditional Ecological Knowledge and Scientific Knowledge
by Veronica Ignas

One of a series of curriculum materials developed as part of the Forests for the Future project
funded by Forest Renewal BC Research Award

www.ecoknow.ca