

Balancing Act

Lesson Summary

Students will take on the role of a stakeholder in forest management and learn about the various goals of developing a management plan.



INTERMEDIATE/SENIOR FOF 57

A Forest Ecosystem Education Guide

Activities and Lesson Plans For Teachers and Resource Educators



Ontario Forestry Association



Ontario

**FORESTRY
CONNECTS**

Activity Information

- Estimated Duration:** Minimum two 1hr class periods – one class will be used for dividing the class into groups and beginning the project, with time for discussion and work (homework will also be required for this project); and one class for presentations.
- Materials:** A copy of the planning exercise, a large map of the study area, non permanent coloured markers, stakeholder description cards, pens, pencils, paper
- Setting:** Indoors
- Key Vocabulary:** stakeholder, ecosystem, industry, local economy, environmentalist, tourism, recreation, indigenous people
- Additional Resources:** Videos that accompany this lesson plan can be found at www.youtube.com/ontforest
Videos are available:
- Forestry Connects
- Fact Sheets (found in Homework Helpers on www.focusonforests.ca)
- Glossary of Forest Management Terms



Teacher Background

Forestry is one of Canada's main industries and has played a pivotal role in the development of the country. The management of Canadian forests follows sustainable principles, aiming to meet environmental, economic and social objectives. When developing a management plan, various stakeholders take part in the planning process with each group having their own needs and objectives. Understanding the complexity of this process becomes more apparent when directly involved.

The focus of this lesson plan is to engage students in taking on a common stakeholder role in forest management. The lesson plan accompanies a set of videos available at www.youtube.com/ontforest that can be played during the class period. These videos were developed by footage shot by students who traveled to northern Ontario to learn about forest management. Watch the Forestry Careers video with the class. Talk about career opportunities with the students- consider using the Paths to the Forest lesson plan! The goal is to get the students engaged in learning about the challenges and efforts made to create a sustainable forest management plan.

Consider choosing an area in your province to use as an example. Provide the students with the location information, and have them research about the ecology of the area. They can use this information in better plan their mapping area. Also, have students challenge other groups on their mapping decisions. Have them represent the local community who has been presented with this plan, and ask them to defend their choices.

Teacher Instructions

1. Watch the Forestry Connects Main video with the class.
2. Ask the following questions to your class:
 - What is the importance of forests to you?
 - What forest products are you aware of?
 - What is the importance of forests to local communities in the North? To provinces? To Canada?
 - What values do different industries place on forests?
 - Do any of these values conflict with each other?
 - How are these conflicts overcome?
3. Divide the class into five groups, with an equal number of students in each group. The objective of this exercise is for each group to prepare a land use management plan that allows for the sustainable use of resources that are currently located on the land base described in the planning scenario. Each group will be responsible for gathering information about the resources in the planning area, and will be provided with some details about the individuals or organizations that wish to use these resources. Within each group, students will represent one of five specific resource interest groups. Each person is expected to

promote their own interests and objectives during the planning process. Emphasize to students that some objectives may overlap between different stakeholders. Teachers should assist the groups in making their cases, especially as they relate to the background information and objectives of each pair. At the end of the exercise, select a random pair of spokespersons from each of the five groups to present their group's Land Use Management Plan. As part of the presentation the pair of spokespersons will also comment on how well they met their role playing objectives.

Each group should receive:

- planning scenario
- what is a resource
- Instructions
- Land Base Information
- Stakeholder cards
- maps
- non permanent markers, pens, pencils

Extensions

Have the class think of other stakeholders/scenarios and how that would change their plan. To include an outdoor component, consider choosing a local wooded area and sending in students to do various sampling. This could include:

- measuring the diameter and height of trees as well as the quality
- identifying the tree species composition
- analyzing the soil types
- looking for signs of wildlife and ideal habitat features
- assessing regeneration by looking at the species of trees that are growing underneath the canopy
- water quality samples and aquatic invertebrate species composition



Student Instructions

Planning Scenario

A parcel of land, about 80 ha in size, has recently been donated to your province. This area is north/east of outside of a community and is located near a lake. It is an area that is currently valued by a number of stakeholders for both timber production and its recreation/tourism potential.

The government is seeking information from citizens and organizations in order to determine the best land use strategy for this popular area. You are a group of planners who have been hired to gather resource based information, and then to prepare and present a land use plan to a local town council. The objective of this exercise is for your group to prepare a land use management plan that allows for the **sustainable use of resources** that are currently located on this land base.

Your plan will be prepared directly on the maps provided. You will also determine which land use activities will be considered, and where Areas of Concern (*area of concern: describes environmentally sensitive or damaged areas*) (and their associated prescriptions) will be prescribed. A map scale template has been provided to assist you in measuring area and distance on the map.

Your group will be responsible for gathering information about the resources in the planning area, and will be provided with some details about the individuals or organizations that wish to use these resources. In each group, people will be asked to represent one of five specific stakeholder groups. A *stakeholder* is a person or group that has an investment, share, or interest in something, in this case, the land. Each pair is expected to promote their own interests and objectives during the planning process. At the end of the exercise, a pair of spokespersons will be selected randomly from your group to present your Land Use Management Plan. As part of your presentation the pair of spokespersons will also comment on how well they met their role playing objectives.

While creating your plan consider, What is a Resource?

A resource may mean different things to different people. A definition of resource is; a means of supplying what is needed, a value or asset. If resources were limitless there would be little need to consider their management. However, because all resources occur in limited quantities we must manage, or conserve, their uses. Usually more than one resource occurs at the same place at the same time. Also, many resources have more than one value. Thus, there is competition (and sometimes conflict) for a resource or the area in which the resource occurs.

Resource managers and planners must consider the sustainability of the resource and the needs of all resource users in order to gain the greatest benefits from our resources while reducing conflicts between users. To best accomplish these objectives resource managers attempt to resolve potential conflicts through negotiations during a planning process. Normally negotiations are a give-and-take exercise of compromise; if you want to gain some things, you likely have to give up some other things.

Land Base Information

- A current area map, with accompanying legend, is provided – roads, trails, and structures are indicated
- Analyze/discuss the resources that are present in the area
- Collaboratively decide what your land use strategies will be. This may require you to do some research on the ecology of the area. – base them on the data that you have collected

- Indicate your ideas on the map – be prepared to explain/defend them

Questions to consider with your plan

- Has the voice of all 5 stakeholders been heard?
- Is your plan sustainable?
- Does your plan balance the needs of the 5 stakeholders?



Stakeholder #1: FORESTER

Role Playing

You are a forester. A forester is someone who practices forestry and the profession of managing forest resources. They adhere to a code of ethics ensuring that our forest resources are being managed in a sustainable manner. You are employed by the Evergreen Forest Company and your primary focus in the preparation of this plan is to ensure that sufficient, appropriate timber is accessed and available for harvest in order to supply the local mill now and into the future.

Background Information

- Sampling in the area has indicated that the forest is dominated by black spruce (Sb) and jack pine (Pj), and aspen in regenerating areas.
- The age of species in the planning area is approximately 80 years old, with some blocks of forest that were harvested 30 years ago regenerating very well.
- The main species the company is interested in cutting are Jack Pine (Pj) and Black Spruce (Sb).
- Any stands with over 40 % conifer composition are considered to be essential for harvest consideration.
- Any major limitations or restrictions on harvesting the area will directly affect mill production and the jobs of the mill employees.
- Existing Primary road already accesses the planning area.

The Forester's Objectives

- To abide by provincial forest management regulations.
- Sustainable harvest and regeneration of suitable areas.
- Maximize the harvesting areas but ensure that future harvest is possible.
- Secondary road access into the planning area is required and must be planned efficiently to access the proposed harvest areas.
- To ensure that jobs are maintained for the local community.
- To balance the needs of all stakeholders while maintaining harvest.



Stakeholder #2: LOCAL ANGLER AND HUNTER

Role Playing

You are a local angler and hunter. You feel it is your 'right' to be able to use logging roads to access Crown Land areas to fish, hunt and camp. Your primary focus in the preparation of this plan is to ensure that your 'rights' are expressed, understood and addressed. You also enjoy the access to these areas for use of their mountain biking trails.

Background Information

- Changes or improvements in recreational values are normally promoted by residents or local interests.
- Often residents are in favor of building more roads that provide access to new areas.
- In other areas, resource plans may promote road construction to access underutilized lakes. This would serve to provide new recreational opportunities and help reduce harvest pressure on areas currently accessed.
- There are currently a network of mountain bike trails in the area that are used by the local community.
- Signs of deer, moose, fishers, wild turkey, and weasels are abundant in the area (research about the needs of these animals).
- Aquatic sampling has indicated a diversity of fish species in the nearby lakes and streams as well as suitable beaver habitat.

The Recreationalist's Objectives

- Try to maximize access to new areas for fishing, hunting and camping.
- Try to minimize any restrictions on the public's use of forest access roads.
- To maintain the high quality biking trails.
- To ensure that there is a diversity of quality habitat for different wildlife species.
- To minimize or eliminate damage to aquatic ecosystems.



Stakeholder #3: ENVIRONMENTALIST

Role Playing

You are an environmentalist. You volunteer for the Green Society, and you support an information-based perspective on appropriate use of technology to prevent adverse effects on the natural environment. You have strong views on issues that concern the environment, and advocate for the preservation, restoration, or enhancement of the natural environment. You are sometimes informally referred to as “tree-huggers”

Background Information

- The boreal forest is an important carbon reservoir. It traps carbon and stores it, thus helping to protect against global climate change.
- The boreal forest supports large functioning ecosystems, including large predators and thousands of plant, mammal, bird and insect species.
- The boreal forest is also home to hundreds of First Nations communities whose members are integrally tied to this ecosystem, shaping it and shaped by it.
- Wetlands in the boreal forest filter millions of litres of water every day and play an important role in the regulating the hydrological system or 'plumbing' of the boreal forest.

The Environmentalist's Objectives

- To lobby for Protected Areas which are permanently established, publicly owned spaces where no industrial development - such as logging, mining or hydro development - is permitted.
- Some areas are identified primarily for recreational uses to enhance our quality of life, others to provide important habitat for fish and wildlife that are sensitive to human-caused disturbance. Together they provide an important part of sustainable use of natural resources, to ensure that our economic demands do not use up all of our natural capital.



Stakeholder #4: TOURIST OPERATOR

Role Playing

You are a potential tourist camp operator. You would like to open and operate Scuttle Butt Fishing Lodge in the planning area close to the main lake. You accept the fact that timber harvesting may occur in the area but you have some concerns. Your primary focus in the preparation of this plan is to ensure that your concerns are heard, understood and addressed.

Background Information

- The main stay of the Lodge's business will be a high quality fishing experience in a convenient, accessible, wilderness setting.
- Secondary roads to the lake would likely result in increased camping, hunting, and fishing pressure, which (in the tourist camp operator's opinion) would create an over-harvest situation and reduce angling opportunities for your guests.
- Aesthetics (or the natural shoreline landscape) around the lake are also important to the Lodge's business. The tourist camp operator is concerned that cutting along the shoreline will destroy the scenery and has a potential environmental damage.
- The critical requirements for fish habitat are spawning areas, nursery areas (provide food and cover for young fish) and migration routes, as well as general water quality.
- These critical habitat areas may be damaged if exposed to siltation. Siltation may occur as a result of runoff and erosion on shoreline slopes adjacent to timber harvest areas or where roads cross streams. The steeper the slope, the greater the chance of runoff and erosion.
- These critical habitat areas are important to protect for all fish species. Some fish species however, have greater requirements. Lake Trout, for example are much more sensitive to the effects of forest management than pike or pickerel. As a result Lake Trout waters may require greater protection from harmful effects such as siltation, nutrient loading or the loss of shade.

The Tourist Operator's Objectives

- Minimal road access is to be planned to or near the lake. The Lodge is dependent on a client group that is looking for a wilderness fishing experience and if many roads were to open up the lake, it would put you out of business.
- Where timber harvesting is proposed adjacent to a lake or stream, ensure there is a minimum 50 metre no-cut reserve along the shoreline to protect against possible siltation.
- Identify and/or confirm the location of areas of critical fish habitat (spawning, nursery and migration routes) and ensure they receive adequate protection from planned forest operations.
- Try to minimize the number of proposed road/water crossings.

Role #5: First Nations

Role Playing

You are a member of a First Nation community in the boreal forest region. You have lived on this land for many generations and want to be included in all consultation and decisions made about this area. You value your traditional lands and resources and want to make sure that these are not used unsustainably or taken advantage of. As a resource user, you accept that timber harvesting will take place in the area; but you want to be included in as much as possible; especially in terms of employment and economic improvement for your community.

Background Information

- The boreal forest is home to hundreds of First Nations communities whose members are integrally tied to this ecosystem, shaping it and being shaped by it.
- The concerns you have for this land encompass many aspects of the others, including sufficient timber harvest, protection of important fish habitat areas and waterways, and the protection of your peoples land and rights.
- The piece of land in question was previously used for fishing for subsistence purposes and you want to ensure this right is protected.
- In other areas, resource plans may promote road construction to access underutilized lakes. This would serve to provide new fishing and hunting opportunities to other stakeholders and help reduce harvest pressure on areas currently accessed.
- You have been historically excluded from the management and decision making processes; that has changed in recent years (due to legal rulings and changes to government policies) and you want to ensure your voices are heard and concerns taken into account.

First Nations' Objectives:

- Forestry revenue sharing with government and industry
- Capacity building in forestry
- Acquiring the skills and capacity to participate more effectively in the forest economy
- Demonstrated commitment by government to promote and support aboriginal forestry partnerships and economic development through funding and program support
- Co-management of forestry resources
- Participation in forest management planning
- Protection and mapping of traditional knowledge and uses of forests
- Jurisdiction and treaty rights to forest resources and First Nations territories
- Respect for the background, consider the traditional uses and knowledge of the forests and overall ecosystem; including community Elders' input/ participation in forest management, etc.



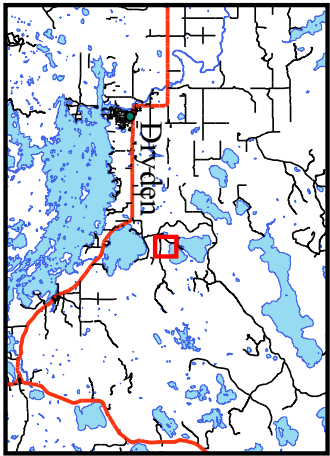
Dryden Conservation Camp Forest Stand Map

Legend

Project Area	Patent Land
MNR Road Segment	Waterbodies
Trail	BSH
Branch	FOR
Operational	OMS
Primary	RCK
Hydro Line	TMS
Natural Gas Pipeline	UCL
Streams	
Intermittent	
Permanent	



Disclaimer:
This map is illustrative only. Do not rely on it as being a precise indicator of routes, locations of features, nor as a guide to navigation.



Ontario Ministry of Natural Resources
Dryden District, Planning and Information Management
Producer: May 9, 2011
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