Transitions: An Introduction to the History of Forestry at Aleza Lake, British Columbia

Grades 4 - 5
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Teaching Kit Overview

Dear Educators,

This teaching kit offers educators the unique ability to explore the history and process of Canadian forestry through the study of Aleza Lake, a small community just east of Prince George. Included in this teaching kit is a collection of information about the geography, geology, biology, ecology, history, and practicality of Aleza Lake’s involvement in the burgeoning forest industry of the early twentieth century. The kit itself is meant to be read by the educator, but outlines the information given as lesson plans and activities that can be completed over a short or long term, making it flexible to the needs of your classroom. If you are interested in an extension of learning, please feel free to come to the Field Education Centre at the Aleza Lake Research Forest.

Goals

- Learn about the history of the Aleza Lake community during the twentieth century
- Understand the important role of forestry in the lives of people in and around the Aleza Lake (and Prince George) area from the past to the present day
- Familiarize yourself and students with the idea of progression and how the vision of what forestry might look like in the early 1900s has transformed in the past 100 years
- Interpret the many ways that a variety of sciences intersect in the world of forestry
Getting Started

To begin, familiarize yourself with the resources in the kit. There are summaries, maps, photos, timelines, and activities. Read the included books either to your class or with your class to get acquainted with the big picture and what forestry is about.

Organization

The Teacher’s Resource that you are reading is organized into chapters by themes. Each theme begins with a summary of information or history followed by a variety of information, resources, and activities to expand your students’ understanding of the topic. The themes are meant to be starting points – you know your classroom best and which direction to guide your students.

Chapter 1   Introduction: the Transition
Chapter 2   The Aleza Lake Forest Experiment Station
Chapter 3   How has Forestry Changed?
Acknowledgements
Bibliography
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Transitions: The Changing Face of Forestry at Aleza Lake, British Columbia

Curriculum Relevance:
Grade 4 – Local History and Change

Discover the importance of forestry to our local history through stories, poetry, and primary sources. Learn about how resources have been used and how their value and their use has changed over the last 100 years. Encourage students to use history to look to the future of their community and society.

<table>
<thead>
<tr>
<th>Social Studies</th>
<th>Related Big Ideas from BC Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pursuit of valuable natural resources has played a key role in changing the land, people, and the communities of Canada.</td>
<td>Demographic changes in North America created shifts in economic and political power.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language Arts</th>
<th>Related Big Ideas from BC Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploring stories and other texts helps us understand ourselves and make connections to others and to the world.</td>
<td>Texts can be understood from different perspectives.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science</th>
<th>Career Education</th>
<th>Applied Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>All living things sense and respond to their environment.</td>
<td>Good learning and work habits contribute to short- and long-term personal and career success.</td>
<td>The choice of technology and tools depends on the task.</td>
</tr>
</tbody>
</table>
Transitions: The Changing Face of Forestry at Aleza Lake, British Columbia

Grade 5 – Resources and Economic Development in British Columbia

Strengthen your students’ understandings of local development over time. Discuss how difficult situations in our history were addressed and overcome. Encounter the broad significance of one event to an entire community.

Social Studies

<table>
<thead>
<tr>
<th>Related Big Ideas from BC Curriculum</th>
</tr>
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<tbody>
<tr>
<td>Natural resources continue to shape the economy and identity of different regions of Canada.</td>
</tr>
<tr>
<td>Immigration and multiculturalism continue to shape Canadian society and identity.</td>
</tr>
<tr>
<td>Canadian institutions and government reflect the challenge of our regional diversity.</td>
</tr>
</tbody>
</table>

Language Arts

<table>
<thead>
<tr>
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<td>Exploring stories and other texts helps us understand ourselves and make connections to others and to the world.</td>
</tr>
<tr>
<td>Texts can be understood from different perspectives.</td>
</tr>
<tr>
<td>Questioning what we hear, read, and view contributes to our ability to be educated and engaged citizens.</td>
</tr>
</tbody>
</table>

Science  
| Career Education  
| Applied Technologies |
| Related Big Ideas from BC Curriculum |
| Earth materials change as they move through the rock cycle and can be used as natural resources. |
| Good learning and work habits contribute to short- and long-term personal and career success. |
| The choice of technology and tools depends on the task. |
Chapter 1 - Introduction

It is safe to say that the land, people, and industry of Central British Columbia has changed significantly over the course of the twentieth century. What is more difficult to explain is what these changes were, how they happened, and why they matter. This kit will focus on answering the following questions in within the geographical context of Aleza Lake, British Columbia, a small community about 60km east of Prince George:

How have places like Aleza Lake and Prince George changed over the last 100 years?

How has the forest industry provoked these changes?

How might forestry look in the future?
Forestry: Planning for the Future

Concerned for the future, the forest industry began looking for innovative ways to continue logging while still producing a sustainable yield.

Efforts were made by the Canadian government to invest in research that would help them discover how to achieve sustainable logging. In 1911, the B.C. Forest Service was created, soon followed by the Provincial Research Branch of the government. These government sectors would provide the staff, funding, and legwork for many of the steps made towards the research and implementation of sustainable yield for decades to come.

Comparing today’s P.G. to the P.G. of 1923

Let’s begin by looking at how our present community is different than it was nearly 100 years ago. While Canada’s recorded history is not very old, it is important to recognize that history has progressed very quickly for Canadian communities and peoples. Rapid evolutions of technology and science have propelled small towns into large urban centres built on the value of local resources. However, other communities have become smaller and retained their rural culture. Let’s focus on some of the changes between Prince George and Aleza Lake in 1923 and 2019.

<table>
<thead>
<tr>
<th>Population</th>
<th>Prince George - 1923</th>
<th>Prince George – 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Approximately 1,200</td>
<td>Approximately 79,000</td>
</tr>
</tbody>
</table>

While 1,200 still might seem like a lot of people, it makes a considerable difference between the Prince George of today and that of 1923. Many of the luxuries and technologies we have today did not exist at the time, making the lifestyle of a Prince George resident extremely different compared to someone living in Prince George today. In the forest industry, new technologies and advancements in the field encouraged people to move to British Columbia to work as researchers and foresters. This was part of a major boost in population in the
Prince George area, alongside increased millworkers, pioneers, trappers, businessmen, homesteaders, and many other livelihoods. The train track between Prince George and McBride, often called the “East Line,” made the central interior of B.C. accessible to entrepreneurs hoping to find success.

BRAINSTORM – what are some major differences in technology between today and 1923? Brainstorm with your class to see what you can come up with. Refer to the list below for ideas.

**CARS** – vehicles existed but were not as popular as they are today. Many people still used horses for work and transportation. How do we use vehicles today?

**ELECTRICITY** – the use of electricity also existed but the massive grid installed to keep our city running today was not yet built. Some places had electricity if they could afford it, but many still used fireplaces and lamps for heat and lighting. What do you use every day with electricity?

**PLUMBING** – the use of running water and toilets was in the same place as electricity. Some people had it, and many of the pipes and systems we have today were being planned, but few places had built these water lines and put them to use. What would you do without running water in your home?
Discussion Activity: What does this picture tell you?

Consider the photo above and answer the following questions:

1. Are there any things/places in these photos that you recognize?

2. Are there any elements that are new to you? What are they?
   a. Talk about clothing, colours, and transportation.

3. What is a speeder? What do you think it is for?

*Speeders were used to travel on rails between stations. Motorized (unlike handcars), they were great for a quick trip between Prince George and Aleza Lake for just a couple people.

Note: This exercise can be repeated with any photo from the booklet included with this kit. See how ideas change and can be recognized by looking at them all.
Chapter 2 – The Aleza Lake Forest Experiment Station

The early 1900s saw a time of rapid development for Canada’s forest industry. The Grand Trunk Pacific Railway made tracks through Prince George in 1913, creating easy access to BC’s interior. The East Line brought traffic through the Upper Fraser area, which was one of the reasons the Aleza Lake Experiment Station site was built where it was. The site was accessible and provided a space that could eventually be reached by the main highway via new roads.

Through the late 1910s, the British Columbia Forest Service (BCFS) implemented a focus on two principal forest regions: the Spruce-Balsam forests of the Central Interior and the Douglas Fir woodlands of the southern coast. In 1913, Bob St. Clair, a member of the BCFS, recommended the creation of two experiment stations at Aleza Lake and Cowichan Lake. Finished by the end of the 1920s, these two experiment stations, though built with the same idea in mind, would interact very little over the course of the next few decades.

The Aleza Lake Experiment Station (ALES) was built first and completed near the beginning of 1924, under the supervision of Percy Barr, a recent graduate of the forest engineer program at UBC. Barr recruited the help of several individuals to outline the site, build the necessary housings, and begin experimental trials in the forest surrounding the Aleza Lake Experiment Station. He used the Experiment Station as a home base for his own research, studying the plants and wildlife in hopes of

Ralph Schmidt, an historian who conducted an in-depth study of the Aleza Lake Research Station in the early 1990s, asserts that the ALES was established with two major priorities:

1. To demonstrate sustained yield forestry at a practical level; and
2. To conduct research, especially of factors influencing natural regeneration after logging.

finding ways to help the forest grow back healthily after it was logged. Using the information he gathered, Barr spearheaded the research done to maintain B.C. forests long-term.

By logging in such a way to ensure they did not run out of trees every year and learning the best methods to help trees grow back after harvest, Barr and his crew looked to develop a methodology called “sustainable yield forestry.” Barr welcomed sixteen other men into his crew in 1925 to assist in his research. These efforts would continue until the Great Depression in the early 1930s, which would hinder the economic abilities of many businesses, including the ALES.

In 1935, following the implementation of Canada-wide relief camps to combat the economical depression, the Canadian government developed the Young Men’s Forestry Training Program (YMFTP). This program would give young men, and eventually boys in the Youth Forest Training Program (YFTP), the skills needed to work in forestry and maintain jobs in a time when nearly half a million Canadians were seeking work. Funding was given to the B. C. Forest Service, who chose the Aleza Lake Experiment Station site to be turned into one of the YMFTP camps. This brought a surge of new families into the area, as well as funding for the ALES to continue research, though it was not the same as it had been previously. Older trials would be maintained, but new ones would rarely be started. These programs continued until the beginning of World War II, which ended both the Young Men’s and Youth Forestry Training Programs in favour of other ventures.
Trials that had already begun could still be monitored over time, but no new trials would be started for many years. Several of the employees at the ALES also moved on in the early 1930s, and by 1934, the Experiment station was boarded up.

The ALES site, however, was still used after World War II, as research foresters and surveyors used the station as a base for their operations throughout the 1940s. In 1949, resident forester Larry de Grace was hired to reactivate the ALES as a research site, bringing with him several researchers studying variety of topics, such as forest nursery and regeneration, harvesting methods, and scarification. As funding for research depleted, however, the B. C. Forest Service was forced to shut down the ALES on December 11th, 1963. On this day, any buildings that could not be relocated elsewhere were burned down to reduce the cost of maintaining them, and a legacy of research history was lost. Few artifacts and records survived and it is rumoured that many of them were only saved by

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employees who were hoping to keep the memory of the ALES alive. The main station was left abandoned and the only people who interacted with the site were dedicated forest researchers who periodically checked in on the trials that had been conducted in the research forest out of personal interest.

New hope was found in 1992, however, when the funding was found for the site to re-open as the Aleza Lake Research Forest. In conjunction with the University of British Columbia and the University of Northern British Columbia, the Aleza Lake Research Forest Society (ALRFS) was created to continue to maintain the forest itself and the research that had been conducted in the area for nearly a century. Today, the society is taking a vested effort in looking at the historical and scientific properties of the legacy created with the establishment of the ALES and what the future might hold for the ALRFS.
Discussion Activity: Linking Forestry to Lifestyle

Together as one large group, or split into smaller groups, talk with your class about how the history of the Aleza Lake Experiment Station is intertwined with many of the changes that occurred in the Prince George/Upper Fraser area in the twentieth century regarding the following topics:

What is forestry?

What do you already know about forestry, what it is, and why it is important?

Transportation

What kinds of transportation would be useful to foresters? Would that make roads important? How about railways, boats, and wagons?

Population

We know that population has risen in our local area substantially in the last 100 years. What did forestry have to do with this? What is our population doing right now?

Land Use

What else, other than forestry, would our forests have been used for 100 years ago? Who else would have used them? What do we use them for now?

Geography

Why has British Columbia found forestry so important? What are the physical characteristics of our province like?
Chapter 3 – How has Forestry Changed?

So, what has forestry actually looked like over the past 100 years in our area? Better yet, how has it changed? How has it stayed the same?

As represented by these photos, taken about 90 years apart, some elements of forestry have not changed too much. Both these men are using an increment borer to extract a long, thin piece of wood from a tree in order to tell how old it is. Increment borers, compasses, and many other handheld tools that were used in the past are still used today to assess the growth and yield of local forests. Though they look a little updated, they are essentially the same and can be used the same way. Both the men depicted in these photos are working in the Aleza Lake Research Forest.
Use all of the photos included in this kit to talk about how forestry has changed and how it has stayed the same.

Talk about:

- Tools
- Environment
- Clothing
- People
- Land

And anything else you notice
Classroom and Outdoor Activities:
Meet a Tree and Learn its Name

Goals:

1. To learn that every tree is unique and there are many different kinds of trees.
2. To understand that we share an environment with many other plants and animals.
3. To start observing the world around us scientifically.

Materials:

1. Access to the outdoors
2. Drawing paper and something to put your paper on so you can draw and write outside.
3. Pencils, crayons, or coloured markers.
4. Bag or box to carry materials in.
5. Envelopes for samples.
6. Be prepared for the weather. This project can be done during class time or as homework home but should be done outside.
8. Tree Bee Identify a Tree: [https://treebee.ca/identify-a-tree/](https://treebee.ca/identify-a-tree/)

Pre-Activity Intro:

1. Have you ever met a tree?
   
   a. Share what kinds of trees students have “met.” This includes trees they saw, they played on, watched animals play on, etc.
   
   b. How do you tell trees apart?
   
   c. What are they used for?
2. How are trees unique?
   a. Discuss the physical traits of trees (leaves, needles, shapes, size, colour, fruit, nuts, flowers, bark, etc).
   b. How do people use trees?
   c. How do animals use trees?

3. Today, you are a scientist that is going to meet a tree. You will observe and study a tree to see what makes it special, according to all of these physical traits we have discussed. Then, you can draw your tree and write down what you remember about it so that you can introduce your tree to others.

**PART ONE Activity:**

*Students can work alone, in pairs, or in groups, at supervisor's discretion.*

1. Make observations
   a. Use your eyes to study the whole tree, from top to bottom. Use your eyes like a camera to take snapshots of how tall or short your tree is, what its branches look like, whether it has needles or leaves, and if you can see any animals or their homes.

2. What are your tree’s physical traits?
   a. Is the trunk smooth or rough? Long or short branches? Do the branches point up or down? Leaves or needles? What shape are the leaves or needles and how are they grouped together? Are there any flowers, fruit, nuts (NEVER EAT ANY fruits, nuts, or berries off of a tree or bush or the ground)? Any animals?

3. Document your observations.
   a. How are you going to remember what you saw?
   b. Write (if you can)
   c. Draw pictures
   d. Take a rubbing of the bark / leaves / needles
e. Take small samples (nothing large enough to hurt the tree)

4. Repeat for a minimum of five trees

**Large Group Discussion:**

- Ask again, “Have you ever met a tree?”
- Ask again, “What are some of the characteristics of different trees?”
- Students can sit in a circle and take turns sharing what they found.

**PART TWO Activity:**

1. Take all of the information you gathered about your tree and go to [https://treebee.ca/identify-a-tree/](https://treebee.ca/identify-a-tree/). This website uses a simple interface to allow students to use their detective skills to find out what kinds of trees they are interacting with.

2. Using the information that students wrote down, drew pictures of, and remember, answer the multiple choice questions to find out what kind of trees they met and what their real names are.

3. Try to identify as many trees as possible, but do a minimum of five.

   a. How have humans used this tree?

5. To extend learning, you could do the following things:
   a. Create an exhibit of all the trees found
   b. Visit the Aleza Lake Field Education Centre to see what trees live out in the research forest

*If the internet is not available at the time of the activity, use the included “Tree Book” PDF to analyze the characteristics of trees and find out their names.

**Credit:**
Transitions: The Changing Face of Forestry at Aleza Lake, British Columbia

This activity was adapted from a website called “Reach Out Michigan” that supports environmental learning at a young age, found at the following web address:

http://www.reachoutmichigan.org/funexperiments/agesubject/lessons/arb/meetatree.html
Acknowledgements

This kit has been developed for educational use by the Aleza Lake Research Forest Society in conjunction with the Northern B.C. Archives.

Thank you to all the administrators and teachers from School District 97, The Council of Forest Industries, and the University of Northern British Columbia for their invaluable assistance in the development of this kit.
Bibliography


The Mark of Progress, 1959. 2016.5.3.16.1. Northern BC Archives, University of Northern British Columbia, Prince George, BC. https://www.youtube.com/watch?v=mzR2Fuso2z0.


“‘Work Resumed at Forest Station at Aleza Lake.’” *Prince George Citizen*, May 26, 1927.

The complete digital photograph collection in the Aleza Lake Research Forest Fonds of the Northern BC Archives.
Additional Resources

The following list of teaching kits and other resources are available online to further expand you and your class’s understanding of Canadian Forestry and our local history.

1. Aleza Field Education Centre: visit the forest where the history happened. The education centre offers a full, outdoor classroom surrounding by forestry at work. Click below for booking details. https://www.aleza.ca/


3. The HCTF Education Website offers teaching kits for outdoor forestry, geography, and biology education AS WELL AS Go Grants. The Go Grants enable classrooms across British Columbia to apply to have all or a portion of their classroom field trip to the outdoors paid for by grant. Visit the website for further information. https://www.hctfeducation.ca/go-grants/

4. The Association of BC Forest Professionals offers a site full of student resources on basic forest management information for all ages. https://abcfp.ca/web/ABCFP/Students/Educational_Resources/ABCFP/Students/Educational_Resources.aspx?hkey=53d9d62d-dbaf-4cbd-a1ee-02de7bb18168

5. Classroom with Outdoors offers a BC-curriculum based outdoor education resource that assists with the understanding of ecosystems. You can book outdoor field trips and request other information below: https://wildsight.ca/programs/classroom-outdoors/
Appendix