Harvesting Timber: Old Ways, New Ways

Activity Info
Level: primary/junior
Subject: language arts, science and technology, social studies
Skills: research, cooperation, communication [oral], hypothesizing, noting patterns and relationships
Duration: 1 or 2 class periods
Group size: any size; independent study and small groups
Setting: indoors
Pre-Activity Preparation:
• Obtain the animated short film The Log Driver’s Waltz from your library or NFB
• Chutes & Log Jams board game, 4 markers and die — enough copies for your class to work in groups of 4 [e.g. 6 for a class of 24]. If you wish, have students colour and mount the game on bristol board.
• Set up two demonstrations:
  1. A square container [e.g. shoebox or smaller] and a selection of groups of similar shaped, and similar-sized objects to fill the box [e.g. 20 small 2.5cm styrofoam balls, 20 lengths of 2.5cm dowelling, 20 lengths of 2.5cm x 2.5cm scrap wood]
  2. A large, water-filled basin such as a dishpan. Float a number of craft sticks on top.

Summary
Students will explore the square timber trade, an important part of Canada’s early history, and modern forestry practices through discussion, demonstrations, a game, group and independent research and oral presentations.

Learning Outcomes
By looking at past and present logging practices, students will:
• compare and contrast labour-based and technology-based approaches to the same task [i.e. cutting timber and transferring it to the mill]
• explore the reasons for, and the impacts of, change
• make observations about the way language evolves to reflect new ideas and new ways of doing things and the way words can become obsolete as old ways are lost

Background
The Square Timber Trade
Lumbering and the forest industry have always been a vital part of Canada’s economy and its development. Although Canada was first known for its fur trade, two events outside of Canada — the United States War of Independence in 1776 and the actions of Napoleon Bonaparte in 1809 — led to a sudden shift in Canada’s economy. The United States, having just gained independence from Britain, was hesitant to renew trade with England and Britain’s access to many of its European trading partners had been cut off by Napoleon’s war efforts. Britain needed a new source of wood for its Navy. In 1809 Britain sent the first of her ships to Canada to be loaded with timber and, in a few short years, timber became Canada’s primary export.

The wood for Europe was sent as squared timber. Hewers trimmed the rounded sides off huge logs 12m to 20m [40’ to 60’] long resulting in a square-sided log. Logs had to measure at least 30cm x 30cm [12” x 12”] on each side but many were much bigger. The square timber had several advantages over logs: it could be more easily stacked in the hull of the ships, took up less space and it would not roll in the high waves of the Atlantic. The prized timber was white pine, eastern Canada’s largest conifer, capable of reaching heights of 50m/150’ or more. Some of these tree-length logs were left round and sent to England for the masts of the Navy’s ships.

After the logs were harvested, they were floated downstream on log drives to main collecting points on the large rivers like the Ottawa and St. Lawrence where they were joined to form huge rafts of square timber cribs which were floated to Quebec City. There, the individual logs were loaded and stacked in ships bound for England.

Modern Forestry
Times have changed and so has the way we harvest and ship timber. Axes are a thing of the past, replaced by cutters using gas-powered chainsaws or by workers using mechanical harvesting equipment that resemble giant tractors or earthmovers. The timber is moved out of the bush using machines, such as skidders and forwarders, or even cables and helicopters in some of the hard-to-reach places in the mountains and coastal areas of British Columbia.

The last spring log drive in Canada took place on the Coulonge River in Quebec in 1982. Although river drives were an inexpensive way to move timber, better trucking and hauling systems became more appealing. As well, concerns about human and water safety issues, the effects of log drives on the river’s health, and on the growth of the communities along the rivers’ shores have all made the river drive less appealing. Instead, logs or chipped trees are usually shipped to the mills on large trucks.

Resources:
Websites: Forest company or provincial forestry association site, www.modelforest.net or www.cppa.org/english/
Part One

1. Begin by playing *The Log Driver’s Waltz* video or by reading an extract from one of the children’s reference books about square timber logging. Afterwards, discuss as a class what students know about logging in the 1800s and about log drives.

2. What do they know about logging today? You may wish to bring in their own experiences — perhaps they have gone to cut firewood with a parent, have visited a logging museum or lumber mill, or have some other related experience.

3. For younger students: Working with small groups, use the two demonstrations to help explain the reason for shipping squared timber and to show the challenge of moving logs on a river.

   **Demo #1:** Have the children experiment with placing different shaped objects in the box. Which shape fits the best? Which might change position if the container moves? Which shape allows the most to be loaded?

   **Demo #2:** Ask the children to work in pairs and, using craft sticks, to try to move the sticks together from one end of the dish pan to the other. How hard is it to do this? What are the challenges? Why do they think the river drivers tied the logs into rafts or used booms to surround them? Was this a good idea?

4. For older students: Divide the class into work groups of 3 to 5 students and assign them a number of words from either of these two lists using the activity sheet to guide them. Give them 15 minutes to find out the definitions of as many of their words as possible. Ask the groups to explain the meanings of their words to the class.

   Which words are no longer used? New? Have changed their meaning? Are there examples that they can think of from other areas [for example, computer, typewriter, record player?]

5. Break into groups of 4 and close the lesson by playing *Chutes and Log Jams*.

### OLD WORDS | NEW WORDS
---|---
skidder operator | teamster
swamper | swamper
axeman | chainsaw
roser | yarding
liner | cutter
scorer | harvester
hewer | log truck with pup
rollaway | allowable cut
loggers | silviculture
log drivers | block cutting
sky loader | selective cutting
lumberjack | clear cutting
road monkeys | rigging-slinger
foreman | stockpiling
timber mark | forwarder
shanty | feller-buncher
river pig | grapple-loader
alligator | high grading
river drive | marking [trees]
lop and top | forest management unit
white water boys | 

Part Two

1. **Student Assignment:** Times have changed. You are a 101-year-old logger! Choose something important to logging today, such as a chain saw, mechanical peeler, skidder or logging truck. Find out what tool was used in the past to accomplish the same task. How has it changed and evolved over the years? Record your information and be prepared to be interviewed by your class.
Is Horse-Logging a Thing of the Past?

No, it’s alive and well and, in some cases, it is even on the increase! Both oxen and horses have been used for logging but, nowadays, horse-logging is used mostly in small private woodlots or in areas that are managed for firewood or for extracting very high quality woods, for example removing black walnut or cherry for producing veneer.

Horse logging is as close to nature as you can get. I’ve been doing it for years.

- Jack Nolan, Shamrock, Ontario, off the historic Opeongo Settlement Road