

SLIDE INFORMATION GUIDE

Main Focus:

Tools and Machinery — Technology

The information accompanying this slide show is to be used as a guide only — teachers will tailor it to suit the needs of their students.

This slide collection represents Coastal and Interior regions of British Columbia. The DVD uses Vernon, BC (now and 100 years ago) at the beginning and end of the slide presentation... (#2, #24, #25). You may wish to show pictures of your community now and 100 years ago. If you provide us with the pictures and location information, we will add them to our website. Contact one of the Okanagan-Columbia forest educators via: www.learnforestry.com , click on 'Contact Us'.

As of Fall 2007 the slides and location information for the following communities are posted on our website. Watch for future additions:

Kelowna
Hedley
Revelstoke
Merritt
Oliver

Salmon Arm
Osoyoos
Golden
Armstrong
Williams Lake

Kamloops
Okanagan Falls
Penticton
Spallumcheen
Keremeos/Cawston

#1. Title slide: Community History: The Story of Logging

#2. Vernon - the city (early 1900's - Suicide Hill area)

- Why did people settle in our area?
- Early arrivals to our area were explorers, trappers, miners, gold seekers and then ranchers. This resulted in the early development of new towns.
- Towns near water were popular for early sawmills. (could use water to transport logs)
- What would they need lumber for? Why?
- What do you recognize?
- What is missing?
- What makes this a logging town? (trees, train)
- Where might the sawmill be? (out of the town but likely not far)

#3. Early logging

- Logging was done very close to their settlement areas and once the logs were gone, they would move further away to where more trees could be found.
- At this time, loggers had few regulations or restrictions - they simply cut what they needed.

SLIDE INFORMATION GUIDE

4. Large tree

- This is likely a tree from the coast - why do you think that? (size, weather, species)
- 100 years ago, trees this size were logged - today, we use much smaller trees and we use all of the tree. There is not as much waste as there used to be.
- It would take about two days to work through the tree. Do you see any safety gear yet?
- How did they get the trees out of the bush?
- Which way do you think the tree will fall?
- What tools are they using? (axe and springboard - they would cut a wedge in the tree and then put a plank in it so they could stand on the plank to get to the position of the tree they wanted. This was done because the flair at the bottom of the tree was undesirable, this part of the tree was bigger and took longer to cut and, if there was any rot in that area of the tree, they could avoid it.)

5. Oxen on skid trail

- What does the word "skid" mean? Give some examples of it.
- What do you notice about the trail?
- In order to get the logs to slide out of the woods, they had to build a skid trail.
- About every 4 metres there would be what was called a skid log - between these there would be smaller logs that would be covered. These were also called corduroy trails. (see corduroy sample in kit)

6. Skid trail

- Why do you think it would be easier to haul logs up a skid trail?
- Note the structure of the skid trail - this made it easier for the logs to be moved.
- This system was also used to get logs out of the water - they could be rolled up the ladders called "jack ladders".

7. Cedar Poles

- How do you think these would have been used by the Native people? (They used all parts of the tree - the wood for dugout canoes, house planks, bentwood boxes, clothing and many tools such as arrow shafts, masks and paddles. The inner bark for rope, clothing and baskets. The long arching branches were twisted into rope and baskets. It was also used for many medicines.)
- These poles were likely used for homes, haylofts, or the newly arrived telegraph lines that arrived at the time of the Canadian Pacific Railroad.
- What might be special about cedar wood? (contains natural preservatives so the wood lasts longer - also - the bark could be easily ripped off the trunk and could be used to weave a thatched roof.)
- Where do we find cedar trees? (wet areas - they like lots of water)
- How do you think they took the bark off these poles? (likely with an axe or a broad scraping knife.) Sample of bark in kit - optional.
- Today, one of the uses for cedar is for utility poles.

SLIDE INFORMATION GUIDE

8. Horses (still being used in some cases today)

- Horses followed the oxen as a means of transportation. Why do you think that happened?
- Although the oxen were stronger, horses were faster and could be more easily managed - they could take logs out with little direction - it was often said that they were as smart as the men who worked them!
- Skid trails were still a necessity - because horses could move faster, skid roads could be built farther away from the mills.
- What would we call a skid trail today? (a road - we now use trucks.)
- How do we transport logs to the mill today? (mainly by truck but also by train and sometimes by water.)

9. Slip tongue wheels

(This sketch was done by an art student from Vernon Sec. School - Kathy Stogneff)

- These high wheels were designed to lift the short logs up off the ground for hauling.
- It took a 4-horse team to pull the wheels - 2 were attached to the wheels and 2 to the sliding tongue which operated a hoisting device that raised the logs.
- On steeper slopes, the tongue was pushed back to lower the logs down so that they could act as brakes.

10 & # 11 - About 1910 - Roadside Logging

- Note the undercarriage on the wagon (between the wheels) - can you think of what purpose these might have had?
- The undercarriage provided additional support to the wagon.
- This enabled the workers to use less horsepower - they could pull more logs or heavier logs with fewer horses - the undercarriages provided good support for the logs.

12. Steam Donkey

- This machine is called a steam donkey - it's a steam powered winch that uses long cables to pull the logs.
- These machines could haul logs with the force of several horses or oxen - they became the choice for Interior loggers before being replaced by the combustion engines in the late 1930's.
- Why do you think they might have called it a donkey? (brainstorm) — they replaced donkeys (animals).
- The first steam donkey was used around 1897.
- About how many years ago was that?
- Workers were becoming more mobile - they worked with longer cables so they could haul from great distances.
- Skid roads were still necessary - this picture is like a skid boat that would run along the rail line.
- Sawmills used this type of energy to operate as well.
- Where do you think it would be used? (Any moving part in the mill - like the saws and conveyors.)
- The steam donkey burned bark and sawdust turning it into energy to run the equipment.

SLIDE INFORMATION GUIDE

13. Steam tractor

- Transportation continued to improve.
- The steam tractor worked well on flat surfaces.
- They were required to haul very heavy loads and often they collapsed after a few trips.

14. River drive

- Lumberjacks herded loose logs down rivers using pikes, poles, peaveys - a peavey was a long pole with a grabbing hook on it.
- Can you think of some dangers that might have faced the workers?
- On their feet they wore shin high boots with steel caulks (pronounced corks) - the spikes in these boots were like the claws of a cat.
- The lumberjacks rode the logs with great skill - they ran on them to spin and move them through the water.
- The first logs down would "grease" the stream - that means that they would fill the backwater bays and streams so that logs coming down behind would have a clear path.
- Some men rode the logs - even through rapids.
- "Jam busters" had to pry logs away from areas that became plugged.
- It wasn't uncommon for these workers to put in a 15 hour day - they took advantage of as much daylight as was available.

15. Flume

(About 1924-1940 - this one is the Lumberton Flume - named after a town in the Kootenays - it no longer exists)

- These structures were expensive and very difficult to build - they were like old irrigation ditches built off the ground through which water flowed assisting logs to travel.
- Once the trees were used up in the area they had started in, the workers would have to go further away from the camp for the wood.
- This also enabled them to get the wood from high locations - the logs would then float down the flume to the mill yard.
- Some of the flumes were miles long - but because they used water (self-renewing), there wasn't an ongoing transportation cost.

16. Steam engine (trains appeared in the coastal areas of B.C. first)

- Can you think of some advantages and disadvantages of trains? Advantages: could haul huge loads of logs and travel longer distances. Disadvantages: limited number of places they could go, expensive, had to travel where tracks were laid, could only travel up small slopes - any climbing would take a long time.
- Timber was so large and there was a lack of streams to drive logs so trains became more common.

SLIDE INFORMATION GUIDE

17. Four Wheel Drive Duplex

- These trucks ran on "fore and aft" roads made of logs laid end to end.
- The braking system wasn't great and it was difficult keeping the truck on the track - when it was frosty the track became very slippery and the driver had to fight to keep the wheels on the track.
- There was little protection from the bigger logs shifting and endangering the driver.
- Their wage was about \$2.80 per day. (somewhere around the 1920's)

18. Logging truck

- Trucks became more efficient as technology changed.
- How could this type of truck move logs better? (could go more places, could travel faster, could climb up steeper grades, could carry large loads)
- How do you think the ones of today differ from this one? (bigger, better, faster, can take steep grades more easily...)

19. Mill

- Most earlier mills started very small and never did get large.
- What kind of power do you think they would have used to operate the saw? (probably steam)
- Do you see any evidence of safety gear?

20. Mill

- Where mills were located on the lakeshore and fed by log booms, underwater steam lines kept the log booms from freezing in the winter.
- The first mills were steam-powered and wood fired.
- Steam power was an advantage, because once the lumber was cut from the logs, the bark and sawdust could be burned and used to create steam - there was less waste.

21. Brewery

- How many uses of wood can you see in this slide?
- This load of firewood would keep the hoppers going at the brewery - today in the world, more than 50% of all wood used is for cooking and heating.

22. Railway Ties

- In many parts of the Interior, railway ties became the first commercial forest product.
- There was a large demand for these and they were being used at a rate of 3,000 ties per mile.
- These ties would be made by hand.
- By 1917, B.C. had surpassed all provinces in lumber production.

SLIDE INFORMATION GUIDE

23. Then and now

- How has progress changed the logging industry?
- On the left of this picture is the old way of operating in the bush, on the right you see one example of how it is done today. This is a feller-buncher - this does the work of a man with an axe and is used in the Interior where tree sizes tend to be smaller.
- Technology has made a huge difference - in the mills and in the woods - more efficient, faster, better quality of products, less waste and pollution. Scanning of logs enables operators to see how each log can be utilized to its maximum.
- Careers are separated:
 - Woodlands - the forest science arm - all facets of working in the bush
 - Manufacturing - all facets of operations to produce products
 - Administration - clerical, management, computers, sales and marketing, accounting, etc.
- Many rules and regulations dominate all areas of today's operations.

24. Slide of Vernon, 2007

- What is different from the first slide of Vernon that you saw?
- What is the same? (Flip back and forth from this slide and #25 as students make their observations)

25. Repeat of slide # 2

