



LESSON 3

Help Wanted – Lumberjacks

BIG IDEAS

- As Europeans settled Wisconsin, forests provided jobs for a growing immigrant workforce, resources for building the nation, and dollars for a new state economy.

(Subconcept 20)

- Early logging, the resultant cutover, attempts to change land use, and the reforestation of pre-existing forest lands were activities that contributed to the need for forestry.

(Subconcept 21)

OBJECTIVES

Upon completion of this lesson, students will be able to:

- Describe methods that were used to log Wisconsin's forests in the 1800s.
- Recognize the role that Wisconsin's forests played in providing building materials for other areas in the nation.

SUBJECT AREAS

Arts, Social Studies

LESSON/ACTIVITY TIME

- Total Lesson Time: 115 minutes

- Time Breakdown:

Introduction.....5 minutes

Activity 130 minutes

Activity 275 minutes

Conclusion.....5 minutes

TEACHING SITE

Classroom

NUTSHELL

In this lesson, students learn about the steps involved in the logging process during the late 1800s. They discover how a northern Wisconsin tree ended up as lumber in a house in Des Moines, Iowa, and arrange, in order, all the people who were involved in turning the tree into lumber.

BACKGROUND INFORMATION

Wisconsin's forests played a key role in the building of this country. **Lumber** was the construction material of choice for many settlers. The demand for lumber for use in Wisconsin increased as the population of European settlers rose from 3,000 in 1830, to 30,000 in 1840, and to 300,000 in 1850.

In addition, Wisconsin wood was used in many places other than Wisconsin. As settlement in the United States expanded, material was needed to build houses, farm buildings, and towns. Many of the places being settled were not as fortunate as Wisconsin to have wood resources. Many areas in the country lacking forests got their wood from Wisconsin.

As early as 1840, Wisconsin's forests were helping meet the demands of westward migration and settlement. When the Civil War ended, the need for Wisconsin lumber increased dramatically. By 1869, the annual harvest of the state reached one billion board feet. (A **board foot** is a volume of lumber equal to 12" X 12" X 1", or 144 cubic inches.) This increased to a peak of 3.4 billion board feet in 1899. That year Wisconsin took over as the nation's chief lumber producer. Wisconsin lumber was used around the nation for homes, barns, sidewalks, furniture, boats, paper, gunstocks, barrels, etc.

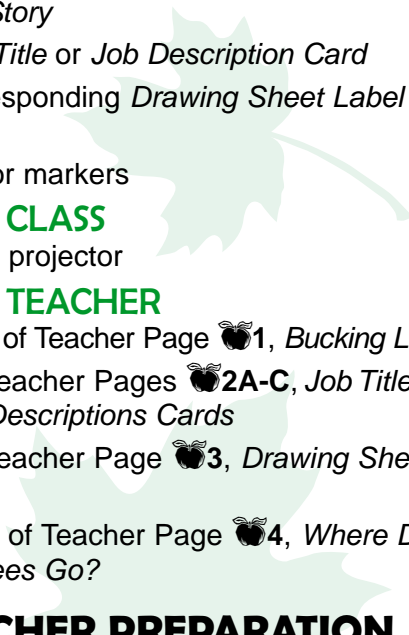
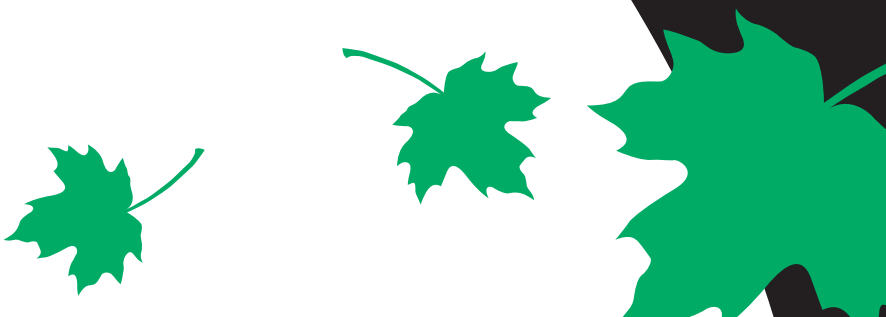
The process of getting usable lumber out of Wisconsin's forests in the late 1800s was not an easy task. Thousands of individuals were needed to help turn standing trees into marketable lumber. Northwoods lumber camps and whole communities sprouted up overnight. Coming to this area in search of "a living" were countless immigrants from Europe – all to work in the big timber or the mill for 50 cents to one dollar per day.

White pine was the tree of choice. It was tall and straight, and it floated easily on water. Logs were hauled by sleighs to the riverbanks during the winter. During the higher water levels of spring, logs were floated down river to the sawmills. Lumber companies often depended on the waterways to send their lumber to faraway markets. Lumber was bound together in rafts and floated to locations like Bettendorf (Iowa), St. Louis, and New Orleans.

What seemed like an infinite resource was gone in a little over half a century – first the white pine, then the red, then the hemlocks, and finally the hardwoods. Left behind was a landscape devoid of the great forests that once awed the first explorers. This same story was repeated in other states of the Great Lakes Region, including northern Minnesota and Michigan.

PROCEDURE INTRODUCTION

Put the overhead transparency of Teacher Page 🍁1, *Bucking Logs* which shows 19th century logging on the projector. Review with students why forests were important to settling Wisconsin by asking, "Why was the lumber business important to early citizens of Wisconsin?" (*It provided building materials, jobs, and contributed to the economy.*) Tell students that today they will be looking at what was involved in the logging process. They will be learning about jobs like those shown in the picture. Ask students what things needed to be done to a tree in the forest to turn it into boards for the lumberyard in



MATERIALS LIST

FOR EACH STUDENT

- Copy of Student Pages ✍️1A-B, *Logging Story*
- One *Job Title* or *Job Description Card*
- One corresponding *Drawing Sheet Label* for their job
- Crayons or markers

FOR THE CLASS

- Overhead projector

FOR THE TEACHER

- Overhead of Teacher Page 🍁1, *Bucking Logs*
- Copy of Teacher Pages 🍁2A-C, *Job Titles* and *Job Descriptions Cards*
- Copy of Teacher Page 🍁3, *Drawing Sheet Labels*
- Overhead of Teacher Page 🍁4, *Where Did All the Trees Go?*

TEACHER PREPARATION

- Copy and cut apart Teacher Pages 🍁2A-C, *Job Titles* and *Job Descriptions Cards*
- Copy and cut apart two sets of Teacher Page 🍁3, *Drawing Sheet Labels*. Each pair of students with a particular job title and job description get the same *Drawing Sheet Label*.
- Make overheads of Teacher Page 🍁1, *Bucking Logs* and Teacher Page 🍁4, *Where Did All the Trees Go?*

those days. (*Cutting the tree down, delimbing it, cutting it into lengths, hauling it to the river, floating it to the mill, sawing the log at the sawmill, transporting the boards to the lumberyard.*) If your students are having trouble coming up with ideas, ask them leading questions such as, "Does lumber in a lumberyard still have bark on it?" or "How does the tree get from the forest to the lumberyard?"



VOCABULARY

Board Foot: A volume of lumber equal to 144 cubic inches (i.e., 12" X 12" X 1").

Bucker: The person whose job is to cut the tree trunk into logs.

Crosscut Saw: A saw designed to cut across the grain of wood; what lumberjacks used in the 1800s and early 1900s to saw trees down.

Cruiser: The person who estimates the amount of wood in a forest before it is cut.

Cutover: Land that has been logged. This term is often used as "the cutover," which refers to northern Wisconsin after it was heavily logged during the period from the 1850s to the 1920s.

Feller: The person who used a crosscut saw to saw a tree down.

Fitter: The person who cuts a notch on one side of the tree in preparation for cutting it down.

Hay Man on the Hill: The person who spreads hay on icy slopes to make it safe for the sleighs to travel.

Logging: The removal of trees from the forest for lumber.

Lumber: Boards sawed from logs.

Lumberjack: A term used for individuals who work in the woods during a logging process.

Marker: The person who pounds the lumber company's stamp into the end of each log.

Notch: A V-shaped gap made in a tree that is going to be cut down.

River Pig: The person who floats the logs down the river to the lumber mill.

Scaler: The person who measures each log and estimates how much wood is there.

Skidder: The person who drags the logs out of the forest and loads them onto sleighs.


Sky Bird: The person who stands on top of the logs on the sleigh and arranges them into a pile.

Sleigh: A horse-drawn vehicle with runners instead of wheels that was used to haul a pile of logs or other cargo.

Swamper: The person who cuts the branches off the tree after it has been cut down.

Teamster: The person who brings the loaded sleighs down to the river with horses or oxen.

ACTIVITY 1

1. Tell students that today they are going to be learning about how trees in the late 1800s went from standing in Wisconsin's forests to being wood in a lumberyard. Tell students that they are going to read a story, and they should try to remember the jobs that are mentioned. Have your students take turns reading Student Pages  **1A-B**, *Logging Story*, to the class.
2. Discuss the story with your students. Ask them why there were so many people involved in the process. (*Many different jobs to do.*) Ask if they think this was easy or hard work. Ask why logging was done during the winter. (*Made it possible to transport logs on the slippery snow.*) Ask why the trees (lumber) ended up in Iowa. (*Iowa was a prairie state and lacked many trees.*) Ask them how the lumber got to Iowa. (*By raft.*) Ask them where else they think Wisconsin lumber could have gotten shipped to on a raft. (*Anywhere along the Mississippi, Missouri, or other rivers that connect to the Mississippi River.*)



ACTIVITY 2

1. Tell students that next they are going to see how well they remember the jobs from the story they read. Have them turn the story over on their desktop. Pass out one *Job Title* or *Job Description Card* made from Teacher Pages 🍁2A-C, to each student. Explain that there are two types of cards. One type contains the name of a job from the *Logging Story*, and the other type contains a description of that job. Tell your students that you want them to move around the room and find the student with the description that matches their job title or vice versa. Depending on how many students you have, some cards may need to be repeated, or some students may need to match more than one card. Once your students have paired up with who they think should be their partner, go around the room and check to see if groups are correct.
2. Now that all of the students are correctly matched up, have them sit back down at their desks. Hand out the drawing sheet labels made from Teacher Page 🍁3, to the respective students (each pair of students who matched up a particular job will draw their own picture and get their own drawing sheet label). Ask your students to draw and/or color a picture that represents someone doing their specific job. Use the information from the drawing sheet labels for ideas. Have students fasten their drawing sheet label to their drawing.
3. After all the students have completed their drawings, work as a class to organize the jobs in the correct order. During this process you will post the pictures on a bulletin board or wall in the order that they were done during the logging process. Do this by asking the students which job came first. (*Cruiser.*) Have the students with cruiser pictures bring them up and help them attach them to a wall or bulletin board. Continue working through the jobs until all have been posted. Have the students study the order and debate if any are in the wrong order. (*Correct Order: Cruiser, Fitter, Fellers, Swamper, Bucker, Skidder, Sky Bird, Hay Man on the Hill, Teamster, Scaler, Marker, River Pig.*)
4. Discuss with your students what they think it would have been like to be a lumberjack in the late 1800s. Be sure to include the role of women. Ask what women would have done. (*They weren't usually lumberjacks, but some women had the job of being the cook at the lumberjack camp.*) Tell students that many women were on their own while their husbands worked in the woods. Since many lumberjacks were farmers, the women stayed home and kept the farms going over the winter while their husbands were logging in the Northwoods.

CONCLUSION

Put the overhead transparency of Teacher Page 🍁4, *Where Did All the Trees Go?* on the overhead projector. Ask students to comment on the photo. Ask them where all of the trees went. (*They were cut down for lumber.*) Ask the students if they know what areas were logged off first. (*Near the rivers.*) If they don't remember, give them a hint that it had something to do with how they transported the logs. Tell the students that as time went on, railroads were built to take the logs out of the areas not near the rivers. Ask the students to guess what eventually happened. (*All of Wisconsin's forests had been cut down.*) Tell the students that in the next lesson they will learn what happened to this land following "the cutover" or cutting of all the trees.



CAREERS

The career profile in this lesson is about Dennis Schoeneck, Logger, Enterprise Forest Products, Inc. Career Profile 3C.L is found on page 47. A careers lesson that uses this information begins on page 140.

SUMMATIVE ASSESSMENT

1. After reminding the students of how Wisconsin lumber was shipped to places like Iowa in the story, ask them to write a paragraph that describes where they think Wisconsin forest products are used today. (They are used worldwide.)
2. Now that students have learned about the logging process of the 19th century, have them research and write a one-page report comparing today's process of turning trees into lumber to that of the 19th century.

REFERENCES

- This lesson adapted with permission from Golden, R. et al. (2002). The Changing of the Land Lesson 3, The Logging Process. Amherst Junction, WI: Central Wisconsin Environmental Station.

Fries, R. (1951). Empire In Pine: The Story of Lumbering In Wisconsin 1830-1900. Madison, WI: The State Historical Society of Wisconsin.

Ostergren, R. C. & Vale, T. R. (1997). Wisconsin Land and Life. Madison, WI: The University of Wisconsin Press.

Rosholt, M. (1982). Lumbermen on the Chippewa. Rosholt, WI: Rosholt House.

Rosholt, M. (1979). Pioneers of the Pineries. Amherst, WI: Palmer Publications, Inc.

RECOMMENDED RESOURCES

●●● BOOKS ●●●

Journey Back to Lumberjack Camp by Janie Lynn Panagopoulos (Spring Lake, MI: River Road Publications, 1993.) In this chapter book, twelve-year-old Gus McCarty awakens to find himself working at a lumberjack camp in Michigan during the booming lumberjack era. "Lumberjack lingo" is used throughout and defined in the glossary.

There's Daylight in the Swamps by Mert Cowley (Chetek, WI: Banksiana Publishing Co.) This book documents the history of logging in the Great Lakes Region. Photographs, drawings, letters, and job descriptions give you a feel for what lumber camp was really like.

Lumberjacks and Logging Coloring Book by Chet Kozlak (St. Paul, Minnesota: Minnesota Historical Society, 1982.) More than thirty historically accurate drawings depict the work of lumberjacks and loggers in Minnesota.

●●● WEBSITE ●●●

Geography of Michigan and the Great Lakes Region

www.geo.msu.edu/geo333/part-four-c.html

This website is part of a course at Michigan State University. Read the history of lumbering in the Great Lakes Region. Lots of interesting facts and good photographs.

MI Kids!

www.michigan.gov/mikids

Click on the link for "way back when" to find interactive stories with pictures about "Lumber From Forest to Mill" and "A Day in the Life of a Lumberjack."



Dennis uses this harvesting machine to cut trees in the forest.

DENNIS, LOGGER

Meet Dennis Schoeneck. Dennis is a logger. He works for Enterprise Forest Products, Inc. Paper companies and sawmills hire Dennis to come to their forests and use his tree harvester. He uses a big machine when a large number of trees need to be cut down and it would take too long to use a saw or an axe. Other things that Dennis does when he is working include building roads and maintaining the machines he uses.

Dennis has had a lot of experience in order to do his job. He worked with his dad when he was young, learning about being a logger. He's been working at this job for 24 years! He also has had training about sustainable forestry. That means he has learned how to cut down trees for us to use today, but makes sure there will still be trees in the future. He knows how to log an area and keep the environment healthy. Dennis is a member of different groups of loggers and people who grow trees who meet to keep up with the latest information.

Dennis says that his favorite part of his job is, "Believing that I am doing the best I can to make sure we use our forest resources the best we can."

If you would like to be a logger, Dennis has some suggestions for what you can do now to get ready. You should learn about sustainable forestry and biology. Dennis says that mechanical abilities are very handy. Dennis thinks that really liking the outdoors is the most important thing you need to be a logger.

BUCKING LOGS



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LOGGING STORY

Greetings. I am Professor Tim Burr. I am the inventor of the Way Back Story-telling Machine. How the Way Back works is, you place an item into the reflective chamber, shut the door, and turn the machine on. In a matter of moments, the machine prints out a story about the item. If you want more information, all you have to do is punch the red button and it will print out more information. Let me show you. I will insert this small piece of lumber into the chamber, turn the machine on, and presto!

You won't believe this story. It says here that this board came from a house in Des Moines, Iowa. The house was built in 1885. But the board didn't come from Iowa. Iowa was a prairie state and didn't have many trees. It says here the board came from a place called Wisconsin. It was floated down the Wisconsin and Mississippi Rivers in a raft of boards bundled together. The board was then hauled overland by a train to Des Moines.

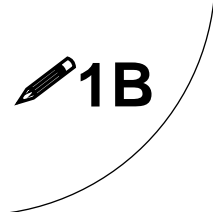
Let's press the red button and see what else we can learn. Wow! Wait until you see this. This story takes us back to the beginning, when the board was part of a tree growing near Wausau, Wisconsin. This white pine grew in a beautiful forest surrounded by many other white pine trees.

One day in 1883, a man came through a patch of woods looking for white pine trees. He looked them all over very carefully. He was a **CRUISER**, and his job was to figure out how much wood and money could be gotten out of the forest. It wouldn't be long before more men came and cut down all the trees.

The next year, men came into the forest with axes and saws and lots of other equipment. The tree this board came from was a big tree, so it wasn't long before they decided to cut it down. The first man to work on the tree was called a **FITTER**. He looked the tree over, decided which way it should fall, and used an axe to cut a notch on that side of tree. He swung the axe over and over again until he had a big notch chopped. That must have been hard work!

It looked as though he was going to cut down the tree, but he stopped when he had chopped the notch. Two men approached the tree with a crosscut saw. A crosscut saw is a long, flat saw. It has lots of big teeth and a handle at each end. The men were called **FELLERS**. They cut from the side opposite of where the big notch had been chopped out. They stood on either end of the saw. One of them would pull the saw towards himself and then his partner would pull the saw towards himself. As their saw reached the notch, the tree began to make a cracking sound. The **FELLERS** moved sideways away from the tree and yelled, "Timber!" at the top of their lungs. The tree cracked, swayed, and came crashing to the ground. AWESOME!

The tree was now lying in the snow on the forest floor. It barely hit the ground before a man called a **SWAMPER** came and chopped off all of the limbs with an axe. Then two men called **BUCKERS** came and cut the trunk into several logs with a crosscut saw. The logs were now ready to be moved. Those guys can really make a saw sing!



LOGGING STORY, CONTINUED

Later that day a man called a **SKIDDER** came and hooked a chain around each log and dragged it away with a team of horses. Without the snow and ice on the ground, it would have been hard to move the logs. The **SKIDDER** dragged the logs up to the loading yard.

At the loading yard, the logs were pulled up on a sleigh by chains and horses. On top of the pile of logs on the sleigh was a man called a **SKY BIRD**. He had quite a dangerous job. He guided each log to the top of the log pile on the sleigh. OH MY GOSH! One almost rolled on top of him! When that log was finally balanced, he loaded more logs on the sleigh.

After the logs were loaded, a man chained them together on the sleigh. The roads through the forest had water from the river sprayed on them so that there was a sheet of ice over them. This made it easier for the load of logs to be moved. There was also a man called the **HAY MAN ON THE HILL**, who spread hay on the ice so that the sleigh would not go too fast down the hill to the riverbank. That's a pretty important job. Without him, I bet the horses would get squashed.

It was the **TEAMSTER'S** job to drive the sleigh down to the riverbank. A team of strong horses pulled the sleigh. Once the load of logs got down to the riverbank, a **SCALER** measured each log to see how much wood it would provide.

Next, each log was stamped by the **MARKER** with a mark that looked like this: "I." The logs were stamped so that when they arrived at the sawmill, people could tell which logging company the logs belonged to. I guess that's kind of like signing your name.

The logs were stacked next to the frozen river and remained there until the spring thaw. When the ice on the river melted and it began to flow, the logs were pushed into the river.

Wow! This is unbelievable. It says here that men called **RIVER PIGS** worked the logs down the river. Sometimes they would travel along the riverbank; other times they would walk on the logs as they floated down the river. One of the **RIVER PIGS** drowned along the way when he slipped and fell between logs.

At one point, all of the logs got stuck in a logjam. They wouldn't move! Why, those logs backed up the river for two miles. The river pigs had to use explosives to get them unstuck. COOL!

Finally, after a long time floating down the river, the log arrived at a sawmill. There were logs with all kinds of stamps, like "I", "O", and "Θ." All of the logs with "I" were grouped together.

At the lumber mill, the log was cut into boards, just like you might see in a lumberyard. Then the boards were fastened together to create a huge river raft carrying lots of other boards. That's how boards ended up in Iowa. They were floated down the Wisconsin River and into the Mississippi River. There weren't a lot of trees in Iowa in the late 1800s like there were in Wisconsin, so the people who lived there had to get lumber from other places. Boards from that same Wisconsin mill went to Illinois, Missouri, or even Wyoming. This board was used to help build a house in Iowa. It's been there for a long time, and has been part of a home for many people.

Well, that's how the Way Back Story-telling Machine works. Hard to believe you can learn so much from one simple board.

JOB TITLES AND DESCRIPTIONS CARDS

JOB TITLE	JOB DESCRIPTION
Cruiser	<p>Your job is to go through the forest before any trees are cut.</p> <p>You estimate how much money your boss will get from cutting the trees. You'd better be right, or he will lose money and you could get fired!</p>
Fitter	<p>Your job is to cut a notch on one side of the tree using an axe.</p> <p>You are the first person to cut the trees. It is a very important job!</p>
Fellers	<p>You two work with the long crosscut saw. You cut on the side opposite of where a big notch has been cut. When the tree is about to fall, you yell, "Timber!" and get out of the way!</p>
Swamper	<p>Your job is to cut all the branches off the tree trunk. These branches and limbs are not needed for making lumber.</p>

JOB TITLES AND DESCRIPTIONS CARDS

JOB TITLE	JOB DESCRIPTION
Bucker	Your job is to cut the tree into logs. Some of those white pine trunks were really long, so there could be a lot of logs from one single tree!
Skidder	Your job is to drag the logs out of the forest and leave them in the loading yard.
Sky Bird	You have a very dangerous job. You must stand on top of the logs on a sleigh and arrange them so that a lot can fit on a single sleigh. You'll be lucky if you make it through the logging season without getting hurt.
Hay Man on the Hill	The logging roads are very icy which makes moving the logs easier, but it can also be dangerous when the sleighs are going down slopes. Your job is to spread hay on the icy slopes for safety.

JOB TITLES AND DESCRIPTIONS CARDS

JOB TITLE	JOB DESCRIPTION
Teamster	<p>Your job is to bring sleighs full of logs down to the river. You used to use oxen for the job, but now you use horses. You and your horses work as a team!</p>
Scaler	<p>Your job is to measure each log once it has made it down to the riverbank. You want to let your boss know how much wood is in each log. The amount of wood is measured in board feet.</p>
Marker	<p>Your job is to put the lumber company's stamp on the end of each log before it goes down the river. This way, your boss will be sure to get money for all of his logs.</p>
River Pig	<p>You have a dangerous job. You follow the logs down the river to the mill. Sometimes you walk along the banks of the river, but other times you stand on the floating logs. Don't slip!</p>

DRAWING SHEET LABELS

BUCKER	Hi, I am a buckeer. My partner and I go to work after the fellers have dropped a tree and the swampers have delimbed it. We use a crosscut saw and cut the tree into 16-foot logs.
CRUISER	Hi, I am a cruiser. My job is to go through the forest and determine how much timber (trees that can be cut for lumber) is on the land. I use a measuring stick to determine how much lumber is in a tree and write down what I find.
FELLER	Hi, I am a feller. My partner and I work together to cut down trees. Each of us works one end of a crosscut saw. We saw toward the notch that the fitters chopped in the tree. As the tree falls, we yell "Timber!" and move to the sides.
FITTER	Hi, I am a fitter. I determine which way a tree should fall. Once I know this, I chop a V-shaped notch into the tree on the side that I want the tree to fall. I use an axe for all the work I do.
HAY MAN ON THE HILL	Hi, I am a hay man on the hill. I work to keep the sleighs full of logs from sliding too fast down hills. I shake hay on the trail to help slow them down.
MARKER	Hi, I am the marker. I use a large hammer-like tool. This hammer has a star-shaped mark on the end of it. The star is the mark of our camp. When I hit the end of the log, I leave a star mark on the log.
RIVER PIG	Hi, I am a river pig. I help logs downriver to the sawmill using a long pole with a hook on the end to push and pull logs. I do this to keep them from making a logjam. I sometimes ride downriver on top of logs. It is a very dangerous job.
SCALER	Hi, I am a scaler. I work at the landing on the river. The teamsters deliver logs to the landing. I measure them and record how much timber the camp has cut. After I am done measuring, the logs are stacked in big piles along the river.
SKIDDER	Hi, I am a skidder. My job is to pull the logs up to the loading yard where the logs are loaded on sleighs. I use a chain to hook the log to a team of horses. I then drive the horses to the yard.
SKY BIRD	Hi, I am a sky bird. I direct the loading of logs on the sleigh. I stand on top of the load and help stop the logs from rolling off. It is a dangerous job. The logs are pulled up with chains by horses.
SWAMPER	Hi, I am a swamper. My job is to cut a trail for the skidders to drag the logs up to the road. I also cut the limbs off the trees once they are on the ground. I use an axe to do my work.
TEAMSTER	Hi, I am a teamster. My job is to move the logs from the logging yard to the landing on the river. The logs are loaded onto a sleigh. A team of four horses pulls the sleigh. I drive the horses.

WHERE DID ALL THE TREES GO?



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