



# FOREST HISTORY CURRICULUM

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# WOMEN IN FORESTRY

## LESSON SUMMARY

### Inquiry Description

In this focused inquiry, students investigate the compelling questions: *What roles have women played in industrial forestry? How have women's roles and representations in Washington state's forest products industry changed over time?*

Students will learn about the history of forestry and will engage in critical thinking of women participating in forestry through various jobs throughout the twentieth century, with a focus on the vital role women played as fire lookouts in Washington's rugged and remote wilderness during World War II. Drawing on photographs, first-person accounts, and historical articles, students will investigate how women contributed to forest conservation and what their stories reveal about gender, labor, and environmental stewardship in Washington state.

The supporting question is: *What challenges and contributions did women experience as fire lookouts in Washington during the twentieth century?*

The historical thinking skill of continuity and change over time is addressed as a core practice. Students will also become aware that there aren't that many sources written about women in forestry. They will reflect on what could be done to correct the incomplete historical record.

Students study images and a variety of texts to gain background knowledge about forestry and some of the positions women have had in forestry. This is not an inclusive list of jobs held by women, but it is meant to be a survey of a few.

This inquiry could be used in a Washington State History class as teachers teach the effect of logging on the development of Washington (usually in a Territory to Statehood unit of study), as a supplement to labor issues in Washington during the Progressive Era, or in a World War II history class focused on domestic war jobs or gender equality. Teachers could also have students complete these lessons at the end of the year to recap "the long twentieth century" as a retrospective study.

For the "take informed action" part of the inquiry, students will develop and create an interactive community board to inform others about what they have learned. The boards should provide answers to the compelling questions and meaningfully inform the public about how women are represented in forestry in Washington state.

Note: The HistoryLink essays have excellent photo resources on the sidebar of the pages. Be sure to use these as you see fit throughout the lesson, as there are incredible learning opportunities to add to students' overall understanding of the topic.

## Standards

SSS4.6-8.1 Analyze multiple factors, make generalizations, and interpret sources to formulate a thesis in a paper or presentation, while observing rules related to plagiarism and copyright.

H2.6-8.2: Explain and analyze how individuals and movements have shaped Washington state history since statehood.

H3.6-8.3: Explain, analyze, and develop an argument about how Washington state has been impacted by individuals and movements, cultures and cultural groups, and technology and ideas.

CCSS.ELA-LITERACY.RH.6-8.1: Cite specific textual evidence to support analysis of primary and secondary sources.

CCSS.ELA-LITERACY.RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

D2.His.10.6-8. Detect possible limitations in the historical record based on evidence collected from different kinds of historical sources.

## Learning Goals / Objectives

1. Students will use document analysis skills to understand the history of forestry in Washington state.
2. Students will analyze primary sources to understand historical perspectives.
3. Students will use analysis skills to understand how World War II changed opportunities for women in forestry.
4. Students will identify key responsibilities and experiences of women fire lookouts in Washington State history.
5. Students will use historical thinking skills to understand how women's roles in forestry have evolved over time.
6. Students will use the information they learned to consider what sources and topics are missing from the historical record.
7. Students will create an interactive community board that teaches others about women in forestry.
8. Students will collaborate to synthesize information from images and texts.
9. Students will develop a written or multimedia response to the compelling questions and propose an informed action related to conservation or historical recognition.

## Focused Inquiry

**Compelling Questions: What roles have women played in industrial forestry? How have women's roles and representations in Washington state's industrial forest products industry changed over time?**

**Supporting Question: What challenges and contributions did women experience as fire lookouts in Washington during the twentieth century?**

### Formative Performance Tasks:

#### Part 1: Building Background & Context

- Activity 1: Students begin with the context of the history of forestry in Washington state (see Student Handout #1). Students will read and annotate the edited HistoryLink text "Logging, Lumbering, and Forestry in the North Cascades." (see Student Handout #2) Students can answer the questions at the end of the text: What jobs did men have? What jobs did women have?
- Activity 2: Students watch [Mossback's Northwest: Lumberjacks, meet the Lumberjills](#) by Knute Berger (see Student Handout #3). Ask students to answer the question using evidence from the reading.
- Activity 3: Students read an excerpt from "[New Faces, Same Old Values': Revisiting a History of Attitudes Towards Women in the Forest Service](#)". (See Student Handout #4) After students finish this text, students meet with their community board team and they are given the directions to create an interactive community board that engages people and educates them about the ways women have contributed to forestry.
- Activity 4: Students read an excerpt from "[We Feminine Foresters': Women, Conservation, and the USDA Forest Service, 1850-1970](#)" to build background knowledge about specific roles women have taken in forestry. (See Student Handout #5)

**Part 2:** Students will review individual experiences that women had working in forestry in the twentieth century. Student Handout #6 is a graphic organizer that students will use through the remaining texts.

Optional: Teachers can have students complete these texts as a jigsaw activity. Directions for the jigsaw protocol can be found here: <https://www.cultofpedagogy.com/wp-content/uploads/2015/04/Jigsaw-Instructions.pdf>

Each student works to become an "expert" about one person and then share their information with the rest of their group. In essence, each student becomes the teacher, communicating what they learned while other students take notes. When students are done, they will have their entire graphic organizer completed.

#### Featured Source(s):

- [Everett teacher and mountaineer Mabel McBain solo staffs the Skykomish Lookout Station in summer 1918.](#) (File 23117)
- [Pauline Dyer, Conservationist](#) (File 9673)
- [Fay Fuller becomes the first woman known to reach the summit of Mount Rainier on August 10, 1890.](#) (File 7786)
- [Washington Forest History Interviews: Sally Jewell, former U.S. Secretary of the Interior](#) (File 23161)

**Part 3:** Begin by staging the question with images. Project or print historic photos of women fire lookouts from Washington Rural Heritage or Flickr Commons. Ask students to make observations and inferences. What do you notice/wonder? What do these images tell you about the lives of these women? Why might women have taken these jobs? What surprises you about these images? Conclude with the supporting question displayed prominently.

## Photos to Use:

- [Washington State Archives](#) - Photographs Record Series and search for "Fire Lookout Stations"
- [Lookouts](#) – Washington Rural Heritage
- [Flickr Commons](#) – Lookout Towers - Pacific Northwest
- [Fire Lookouts in Washington](#), HistoryLink.org File 2325

Have students read the HistoryLink essay "[Fire Lookouts in Washington](#)." Decide how you would like students to read and how you want to differentiate for different learners. Students will read with the compelling question and supporting question in mind and fill out the graphic organizer (Student Handout #7). After students have finished reading and writing, have a discussion. Use the discussion prompts on the graphic organizer as an opportunity for students to prepare for the whole-class discussion

**Final task:** Students coalesce their research and create an interactive community board in a public space in their school to promote dialogue and inquiry about the representation of women in forestry in Washington.

## Featured Source(s):

### Background Knowledge:

- **Source A:** "[Logging, Lumbering, and Forestry in the North Cascades](#)," HistoryLink file 23147
- **Source B:** [Mossback's Northwest: Lumberjacks, meet the Lumberjills](#), Cascade PBS
- **Source C:** '[New Faces, Same Old Values](#)': Revisiting a History of Attitudes Towards Women in the Forest Service [excerpt], Forest History Society
- **Source D:** "[We Feminine Foresters': Women, Conservation, and the USDA Forest Service, 1850-1970](#)" Rachel D. Kline, University of New Hampshire, Durham

## Jigsaw Texts

### Fire Lookouts:

- **Jigsaw Text A: Mabel McBain** "[Everett teacher and mountaineer Mabel McBain solo staffs the Skykomish Lookout Station in summer 1918](#)." HistoryLink file 23117

### Conservationists/Adventurers:

- **Jigsaw Text B: Pauline Dyer** "[Dyer, Pauline \(Polly\) \(1920-2016\)](#)", HistoryLink file 9673
- **Jigsaw Text C: Fay Fuller** "[Fay Fuller](#) becomes the first woman known to reach the summit of Mount Rainier on August 10, 1890." HistoryLink file 7786

### Administrators:

- **Jigsaw Text D:** "[Washington Forest History Interviews: Sally Jewell, former U.S. Secretary of the Interior](#)," HistoryLink file 23161

## Photo Sparks

- [Washington State Archives](#) - Photographs Record Series and search for "Fire Lookout Stations"
- [Lookouts](#) – Washington Rural Heritage
- [Flickr Commons](#) – Lookout Towers - Pacific Northwest
- [Fire Lookouts in Washington](#), HistoryLink.org Essay 2325

**Argument and Taking Informed Action:**

Have students use the information they got from the images and articles to answer the supporting question. Student responses should include a clear claim, specific evidence, and a well thought-out reason. After students conclude their research they will produce an argument that answers the following prompt:

You are a staff member of a local history museum. Your job is to make a recommendation to a team of researchers to further study this topic and to create more sources to broaden the historical record regarding women in forestry. With your group, create an interactive community board that explains the roles women play in the history of forestry in Washington state. You should also make a presentation or write a letter that shares what is known about women in forestry and give suggestions about what more can be done to encourage others to research and write about women who contributed to forestry in the twentieth century.

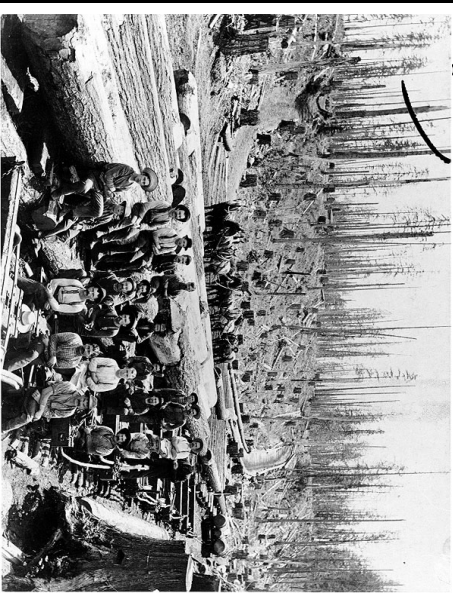


This can be an individual or group project.

**Argument and Taking Informed Action**

In the Taking Informed Action portion of the lesson, students apply their historical learning to real-world contexts by creating a product that raises awareness or promotes preservation. They might design a social media post, podcast, or historical marker proposal to honor the legacy of women fire lookouts in Washington. Alternatively, students can research a local lookout site or forest area and write a letter to a public official or parks department advocating for its preservation or for improved public education. This step encourages students to see themselves as active participants in civic life, capable of using their voices to influence how history is remembered and how natural resources are protected.

Student Handout # 1

Image Analysis

<p>Image #1</p> 	<p>Image #2</p> 	<p>Image #3</p> 
<p>See</p> <p>Think</p> <p>Wonder</p>	<p>See</p> <p>Think</p> <p>Wonder</p>	<p>See</p> <p>Think</p> <p>Wonder</p>



<div data-bbox="1401 155 1430 283" data-label="Caption"><p>Image #4</p></div> <div data-bbox="956 155 1401 728" data-label="Image"></div>	<div data-bbox="1401 751 1430 879" data-label="Caption"><p>Image #5</p></div> <div data-bbox="703 762 1401 1331" data-label="Image"></div>	<div data-bbox="1401 1348 1430 1476" data-label="Caption"><p>Image #6</p></div> <div data-bbox="691 1358 1401 1858" data-label="Image"></div>
<div data-bbox="615 155 644 212" data-label="Text"><p>See</p></div> <div data-bbox="521 155 550 243" data-label="Text"><p>Think</p></div> <div data-bbox="427 155 456 268" data-label="Text"><p>Wonder</p></div>	<div data-bbox="615 751 644 808" data-label="Text"><p>See</p></div> <div data-bbox="521 751 550 840" data-label="Text"><p>Think</p></div> <div data-bbox="427 751 456 865" data-label="Text"><p>Wonder</p></div>	<div data-bbox="615 1348 644 1404" data-label="Text"><p>See</p></div> <div data-bbox="521 1348 550 1436" data-label="Text"><p>Think</p></div> <div data-bbox="427 1348 456 1461" data-label="Text"><p>Wonder</p></div>






<div data-bbox="1401 155 1430 283" data-label="Caption"><p>Image #7</p></div> <div data-bbox="657 155 1401 655" data-label="Image"></div>	<div data-bbox="1401 751 1430 879" data-label="Caption"><p>Image #8</p></div> <div data-bbox="873 764 1401 1327" data-label="Image"></div>	<div data-bbox="1401 1348 1430 1476" data-label="Caption"><p>Image #9</p></div> <div data-bbox="803 1360 1401 1822" data-label="Image"></div>
<div data-bbox="602 155 631 212" data-label="Text"><p>See</p></div> <div data-bbox="508 155 537 243" data-label="Text"><p>Think</p></div> <div data-bbox="414 155 443 268" data-label="Text"><p>Wonder</p></div>	<div data-bbox="602 751 631 808" data-label="Text"><p>See</p></div> <div data-bbox="508 751 537 840" data-label="Text"><p>Think</p></div> <div data-bbox="414 751 443 865" data-label="Text"><p>Wonder</p></div>	<div data-bbox="602 1348 631 1404" data-label="Text"><p>See</p></div> <div data-bbox="508 1348 537 1436" data-label="Text"><p>Think</p></div> <div data-bbox="414 1348 443 1461" data-label="Text"><p>Wonder</p></div>

Image Analysis Reflection Questions

1. What image struck you as the most interesting?	2. How are these images different?
3. What do these images have in common?	4. How are images 1-3 different from 4-9?
5. How are men represented? What jobs did they have in images 1-3?	6. How are women represented? What jobs did they have in images 4-9?

**Source A:** "Logging, Lumbering, and Forestry in the North Cascades" [excerpts]

While you read, consider: How many jobs can you list that are forestry related?

### **Long Ago: Native American Stewardship**

"Indigenous peoples lived in, used seasonally, and traveled through North Cascades forests. Trails and community sites were used for thousands of years and continue to be. The areas where the forest canopy opened were especially valuable for groups such as the Upper Skagit, who might burn these areas to maintain their productivity and make them suitable for cultivating native species...These forests and mountains provided all sorts of food – berries, roots, fish, deer, bear – and materials for baskets and other material culture, especially from cedar species...Known as the "tree of life," cedars provided wood for building and art, as well as bark that could be woven into mats, baskets, and clothing."

### **New Settlers and a New Purpose**

"Non-Native settlers who arrived in the mid-nineteenth century saw the forests mostly in economic terms, and the subsequent rise of the timber economy, facilitated by railroads and skyrocketing demand for wood products, transformed North Cascades forests...In constructing towns, forests were critical. Sawmills closely followed the earliest non-Native settlers. Small mills were easy to establish and fulfilled a key need for local construction. They also offered a way to wealth... Although these small mills might serve local needs, the North Cascades soon provided timber for larger markets and mills...in time, timber from the foothills flowed to the mills and connected to an international economy."

### **Men's Roles in Logging and Mills**

Logging was mostly done by men, who lived in forest camps and worked with axes, saws, and eventually steam-powered machines to cut down trees. It was hard and dangerous work, and many men got hurt or sick.

"Loggers and millworkers faced difficult and dangerous working conditions throughout the North Cascades, as they did elsewhere. Many organized in unions, including the Industrial Workers of the World. Reports of poor camp conditions concerning safety, working hours, and food quality circulated in union newspapers."

### **Women's Involvement**

Many women likely supported these communities by running homes, boarding houses, or stores in nearby towns. Women were also involved in conservation later on. For example, women like Polly Dyer and Laura Zalesky helped fight to protect the forests from being overlogged.

"In the era between the world wars, conservationists in and out of the government called to protect the area and keep it as wilderness, free from commercial development and permanent settlements..."

### **Changing the Forest**

At first, the forests were cut with little concern for the future. But as time went on, people started to worry about forest fires, overlogged, and worker mistreatment.

"The Forest Service managed its holdings for what came to be called multiple use – primarily timber, watershed, wildlife, grazing, and recreation. The forests of the North Cascades served all these roles, although grazing was the minor partner, while timber was most important economically."

### **Fighting for Fairness and Nature**

Workers formed unions to get better pay and safer work. Groups like the Industrial Workers of the World fought for change, and sometimes there were strikes and even violent protests.

"When World War I broke out, the Wobblies (members of the IWW) and other unions organized strikes throughout the state. Conflict reached its violent height in 1916 in the so-called "**Everett Massacre**" when



Wobblies coming from Seattle tried to dock in Everett. Shots were fired, and the Wobblies retreated.”

At the same time, conservationists fought to save parts of the forest for future generations. “Conservationists, growing in national power, warned of a timber famine. In 1891, they convinced Congress to pass legislation that authorized presidents to create forest reserves.”

### National Parks and Protection

People started to see the forests not just for wood but as beautiful places to enjoy and protect.

“Federal land management sought to protect forests, develop them for recreation, and help the timber industry. By the 1950s, these competing demands clashed. This struggle culminated in efforts to preserve much of the North Cascades as a national park in 1968.”

The national park protected huge areas of wilderness so they wouldn’t be logged or developed. It was a compromise—logging was stopped in some areas but continued in others.

### Modern Changes

Logging used to be a big industry, but over time, technology and new laws changed everything. Mills closed, and many towns had to find new ways to make money. Some forest lands were used to help schools and hospitals through public funding. New values like climate change awareness and wildlife protection are guiding how forests are managed today.

Vi Hilbert, the Upper Skagit leader, said, "Parks are needed because we must protect ancient trees that are a bosom, the nursemaid which nurtures all other plants and creatures that depend on trees that have existed for centuries. The National Park Service, if it takes the long view of things instead of shortsighted profit, can protect that. I hope it will always be true" (Hilbert, 61). Three decades later, in 2024, the federal government announced a plan to reintroduce the endangered grizzly bear to the North Cascades.

Answer these questions with evidence you learned in the text:	
What jobs did men have?	What jobs did women have?

Student Handout #3

**Source B:** [Mossback's Northwest: Lumberjacks, meet the Lumberjills](#) by Knute Berger

Date May 24, 2024, Cascade PBS

While You Watch the Video	
Free note-taking space while you watch:	What questions do you have?
Analysis Questions	
What factors led to the employment of women in logging during World War II?	How did societal perceptions of women's roles change during this period?

#### Student Handout #4

**Source C:** “New Faces, Same Old Values’: Revisiting a History of Attitudes Towards Women in the Forest Service” [excerpt]

Forest History Society

By James Lewis

#### **Background:**

The U.S. Forest Service (USFS) is a federal agency within the U.S. Department of Agriculture that manages national forests and grasslands, providing technical and financial assistance to state, private, and tribal forestry agencies, and conducting forestry research. It is also the largest forestry research organization in the world.

#### **Text:**

Women had worked in clerical positions as “typewriters” in the Washington [D.C.] headquarters office since the agency’s Division of Forestry days. Before World War II, the agency hired very few women for professional positions.

Eloise Gerry, the first woman appointed to the professional staff of the Forest Products Laboratory, just after its opening in 1910, is a noteworthy figure not only because of her scientific achievements but also as an exception to the men’s-club attitude that prevailed well into the late twentieth century.

In the 1910s, the agency began hiring women as draftsmen, bibliographers, and what would later be called information specialists but made it clear that women were not welcome to apply for jobs that took them into the field [forests]. That remained the agency’s position until the 1970s.

Serving as a clerk provided the other major opportunity for women in the Forest Service. Before Chief Pinchot reorganized the Forest Service and established regional offices in 1908, women rarely worked in the forest supervisor’s office.

The reorganization created new jobs and the opportunity to move west. Initially, men deemed the work too rough for women, contending it required a “two-fisted ranger” or forest officer to assemble and ship fire tools, round up volunteer firefighters from bars and saloons, and perform other nonclerical tasks.

As the men advanced, however, women found themselves tackling the work of the “two-fisted ranger” as well as paperwork. Office work quickly became a “pink collar” job.

#### **Answer:**

What was the general attitude about women working in forestry in the twentieth century?



## Student Handout #5

“We Feminine Foresters’: Women, Conservation, and the USDA Forest Service, 1850-1970” [excerpt]  
RD Kline, UNH Scholars Repository

### **Fire Lookouts**

Through the early 1920s, there were at least eighteen female lookouts in the West. Numerous ranger’s wives also served as lookouts if necessary. As more applications piled up from women, they were informed that to qualify, they must be a good mountain climber and not fear mountain lions, electrical storms or gales, and tall ladders, and be willing to live a life of solitude.

Iva Gruenewald described her lookout on Tumwater Mountain near Leavenworth on the Wenatchee National Forest as anything but glamorous, "There was no cabin, or lookout tower but a tent down in a sheltered place among a few trees. My 'office' was a very rocky higher peak, no shelter from wind, or sun, just a map, a phone and an alidade to locate fires in all four directions.”

In 1943, Ella Clark served as a fire lookout on Flattop Mountain in southern Washington. She recounted her experience positively, writing, “I was entirely alone, but I was never lonely... I was never afraid.”

### **Clerical Experts and Administrative Trailblazers**

Starting as a stenographer in 1920 on the Crater (Rogue-River) National Forest, Janie Smith’s unmatched work ethic earned her rapid promotions. By 1957, she had become the only woman in the Forest Service to hold the title of Administrative Officer. Her deep institutional knowledge made her indispensable to five successive forest supervisors. Often described as the heart of the Rogue-River National Forest, Smith exemplified how women—though often kept from field roles—exerted significant influence and leadership through their administrative expertise.

### **Conservationists**

The stories of Forest Service men and their development of the agency and contributions to science and research, timber and fire, range and grazing, wilderness management, and outdoor recreation are well documented within agency, environmental, and public lands histories. The broader national narrative of conservation follows this pattern, relegating women to the sidelines (or the home) of work as “nature’s housekeepers.” Women have been acknowledged for their efforts in campaigning for pure food, clean spaces, and the protection of other mothers (humans and animals) within conservation discussions. They have not been, however, recognized as active managers, decision makers, pathbreakers, or contributors to the conservation of the American environment.

**Answer:** How did women’s roles in forestry change over time? How did they not change?

Student Handout #6

**Women in Forestry Jigsaw Note-Catcher**

Directions: First, become an expert about a woman in forestry that you chose to study. Meet with your jigsaw team (other students who studied the same person). Read the text then fill out the notes collaboratively. Then, you'll meet back with your community board team and share what you learned. Team members will add information to their graphic organizer. Your team will use this graphic organizer to create your board.

	Forestry person:	Forestry person:
Brief biographical summary: <b>who was she?</b>		
What was her <b>role in forestry?</b>		
How did she <b>get the job?</b>		
What did she <b>accomplish?</b> What was the <b>impact?</b>		
How might she have <b>inspired</b> others to work in forestry?		
What is one " <b>golden line</b> " from the text that is important to understanding her situation or understanding who she was?		
Other information you found important.		

	Forestry person:	Forestry person:
Brief biographical summary: <b>who was she?</b>		
What was her <b>role in forestry?</b>		
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