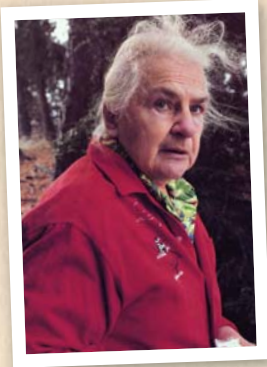




# DOROTHY MOLTER MUSEUM

## A Little Museum with Great Reach



The Dorothy Molter Museum is located just 16 miles from the Canadian border as the crow flies, but its reach extends all through Minnesota and to the nation beyond.

Because of its website and the Internet, the museum is now a rich history and nature resource for students and families anywhere, not just those who visit.

Celebrating the life of Dorothy Molter, the museum is a one-of-a-kind resource, as Dorothy was a one-of-a-kind individual.

Known widely as “the Root Beer Lady,” Molter lived more than 56 years in isolated independence on the Isle of Pines on Knife Lake in the heart of the Boundary Waters Canoe Area Wilderness.

Her dogged individualism captured the imagination of people across the state and the nation, particularly after she refused to leave when the area was taken over by the federal government to create the wilderness area.

She was visited by thousands of canoeists a year, who rallied to her support after sampling her famous homemade root beer, or receiving the aid and assistance she delivered as a trained nurse.

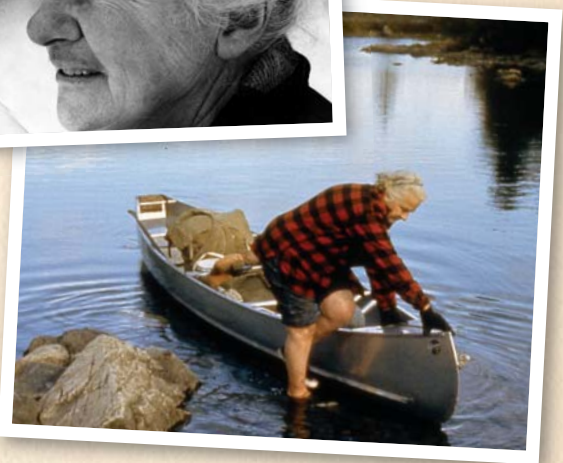
Featuring two of the cabins she lived in on the Isle of Pines, the museum showcases Dorothy’s rugged lifestyle, and the resourcefulness that enabled her to live alone in the wilderness year after year.

It celebrates the love she had for nature and the respect she had for nature. And it celebrates the strength any individual can draw from finding true independence in life.

The values at the core of her spirit made Dorothy Molter an inspiring and remarkable woman. Those values also embody the spirit that shaped the character and growth of all Minnesota.



### UNIT 1



### PRE-VISIT ACTIVITY

## Think About a Wilderness Life

What would it take to live in the wilderness? Before visiting the Dorothy Molter Museum, it is helpful to get in a “wilderness frame of mind.” Visit the museum website at [www.rootbeerlady.com](http://www.rootbeerlady.com). Click on the “Gallery” link in the toolbar at the top. This will take you to a slide show of actual photos from Dorothy Molter’s life, compiled by Pat Surface and Spiritwood Music. Click on the arrow to start the show. As the photos are displayed, pay special attention to those that show how Dorothy lived and any challenges she faced (you can pause on any you wish to study by clicking on the box at the lower left of the display). With family or friends, talk about how Dorothy’s life on the Isle of Pines is different from the life you live. List three things you would like if you lived as Dorothy did. List three things you think would be challenges. Then, after visiting the museum or exploring the museum website, complete the activity sheet “Dorothy’s Daily Life” to examine how Dorothy lived in the wilderness.

**Minnesota Learning Standards:** Understanding how families live today and in earlier times, recognizing that some aspects change over time while others stay the same; comparing family life in the community from earlier times and today (Social Studies: History I.A.1).



**UNIT 1**

**ONSITE/TAKEAWAY ACTIVITY**

**Dorothy's Daily Life**



The Dorothy Molter Museum features two cabins that Dorothy lived in on the Isle of Pines. They were removed from the wilderness after Dorothy died, initially by dogsled and then, when warm weather deteriorated trail conditions, by ATVs and snowmobiles. The cabins include the furniture and utensils that she used to live her life. They include the snowshoes and canoe equipment she used to get around. They include weapons and fishing gear she used to hunt and fish for food. History experts study the things people used in their lives to better understand what their lives were like. Such things as tools, utensils, dishes and furniture are known as “artifacts.” During or after a visit to the museum, pick an item you have seen that you think would have been very important to Dorothy when she lived in the wilderness. Write down details of what it looked like and for what it was used. Write how easy or difficult it was to use, compared to things used today. Then write why you think it was important to Dorothy. Use descriptive adjectives and adverbs to detail how things look or were used and to make your writing come alive.

**Item displayed at the museum**

---

**What does it look like?**

---

---

---

---

---

---

---

---

**For what was it used?**

---

---

---

---

---

---

---

---

**How easy was it to use?**

---

---

---

---

---

---

---

---

**Why was it an important item for Dorothy Molter when she lived on the Isle of Pines?**

---

---

---

---

---

---

---

---

**Minnesota Learning Standards:** Understanding that we can learn about the past from different sorts of evidence; comparing different kinds of historical sources and describing the different sorts of information the sources provide, including artifacts and photographs (Social Studies: History IV.B.1); using precise words and phrases, relevant descriptive details, figurative and sensory language to convey experiences and events (Language Arts 6.7.3.3).

## UNIT 2

# An Independent Woman

Dorothy Molter was a strong and independent woman.

Early in life, she had to learn how to deal with setbacks, and the experience made her stronger as an adult.

Born in Arnold, Pennsylvania, she was the third of six children of Mattie and John Molter, a railroad police captain. When she was just seven years old and in second grade, her mother died. In the next few years, the family moved often. The children were sometimes split in pairs to live with relatives, and they eventually spent several years in an orphanage in Cincinnati, Ohio. After five years, John Molter remarried and reunited the family, first in Garrett, Indiana and then in Chicago, Illinois.

A shy child, Dorothy blossomed in high school and was a member of the basketball, tennis, swimming and rifle teams.

Her swimming and rifle skills would later serve her well after she became a nurse and began living her life on Knife Lake and the Isle of Pines.

She first visited the area at age 23 in the summer of 1930, joining her father and stepmother on a fishing trip. She just “fell in love with the canoe country,” she said later, and began spending more and more of her time there.

At first she worked for Bill Berglund, an ex-lumberjack who was running a fishing camp on the lake. Later she cared for Bill when he became old, and eventually inherited the camp.

While popular with summer canoeists for her root beer, camping supplies and nursing care, she loved the colder seasons the best. She liked the challenges of survival and the isolated beauty of being in a wilderness area nearly alone.



She learned to co-exist with timber wolves, avoid bears, and hunt and fish for meat.

She didn't mind portaging canoes around rapids or snowshoeing for hours to reach a road.

She didn't mind the deep cold and long, long nights of winter.

“I like the winter the best, even though the thermometer here has fallen as low as 57 degrees below zero,” she once said. “I never tire of tramping across the frozen lakes or through the deep silence of the forest in winter.”

## PRE-VISIT ACTIVITY

### What Would It Take?

Dorothy Molter lived alone in an isolated wilderness area for years and years. She didn't have electricity or plumbing. She paddled a canoe to get from place to place. She gathered berries to eat, and brewed her own root beer to drink. She seined for minnows and caught fish with them. She cut ice from Knife Lake in the winter and stored it in an “ice house” to keep foods cool in the summer. She had many visitors in the summer but might go weeks in the winter without seeing anyone at all.

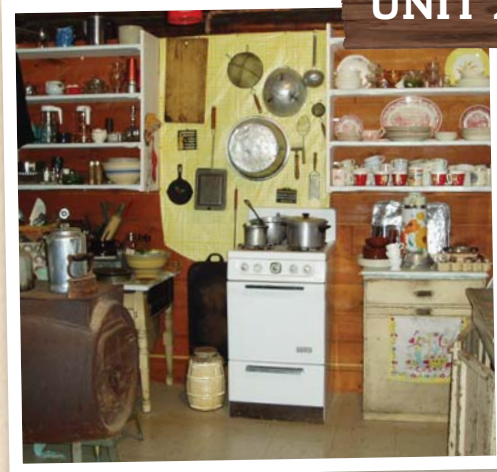
What kind of qualities would a person need to live a life like this? Discuss these qualities — also called character traits — with family or friends. Then use a sheet of paper to list qualities you think would be most important to live as Dorothy did. Give a reason for each. For example:

**Courage** — Dorothy would need to face dangers or challenges by herself.

**Minnesota Learning Standards:** Recognizing the importance of individual action and character in shaping civic life; identifying people who have dealt with challenges and made a positive difference in other people's lives and explaining their contributions (Social Studies: Government/Citizenship VII.A.1).

**UNIT 2**

**ONSITE/TAKEAWAY ACTIVITY**



## **An Independent Lifestyle**

The Dorothy Molter Museum celebrates the life of a fiercely independent woman. In its displays of photographs and items she used in life, the museum sheds light not only on Dorothy's life but on the lifestyle in the wilderness area 50 to 100 years ago. During or after a visit to the museum, or after a visit to the museum website, select an item, photograph or collection of items that shows how independent Dorothy was in the way she lived. In the spaces below, write out three reasons you feel the item or collection shows her independence. Then think about your own life. Are there things you own or use that show how you can be independent, or want to be?

**Item from Dorothy Molter's life**

---

**First reason it shows her independence**

---

---

---

---

---

---

---

---

---

---

**Second reason it shows her independence**

---

---

---

---

---

---

---

---

---

---

**Third reason it shows her independence**

---

---

---

---

---

---

---

---

---

---

**Item you use in your life**

---

**How it shows your independence**

---

---

---

---

---

---

---

---

---

---

**Minnesota Learning Standards:** Understanding how families live today and in earlier times, recognizing that some aspects change over time while others stay the same; comparing family life in the community from earlier times and today (Social Studies: History I.A.1).

## UNIT 3

## Living a Pioneer's Life

Dorothy Molter was a strong and plain-spoken woman. She didn't swear or curse, but she didn't mince words either.

Her philosophy for surviving in the wilderness could be summed up in the sign she nailed up at her home on the Isle of Pines on Knife Lake.

"Kwitchurbeliakin," it advised.

Deal with your problems. Do what needs to be done. Don't waste time belly-aching and complaining when you could be working, achieving and making things better for yourself and others.

That approach to life served Dorothy well for the more than 56 years she lived in the Boundary Waters Canoe Area Wilderness.

It served as she split piles of firewood to heat her home. It served when she cut blocks of ice and hauled them up from the lake to her ice house. It served when she canoed more than 15 miles to get supplies, carrying her canoe and a backpack over five portage areas between lakes.

It served her when she was making up to 12,000 bottles of root beer a year for visitors, going through up to 10 cases a day in canoe season.

It served her when she put her nursing skills to use to handle sicknesses and injuries of friends or visitors.

She dealt with problems, whether it was hauling water from the lake to wash clothes or keeping a boy alive until an airlift arrived after he had been struck by lightning.

It was what you did in a pioneer life.

"This kind of country was all new to me, coming from the city," she said in Wade Black and Judith Hadel Morrisey's movie biography: *Dorothy Molter: Living in the Boundary Waters*. "I had never even been in a canoe until I came up here."

She learned what she could from Bill Berglund when she worked for him at the fishing camp he ran on Knife Lake. The rest she picked up on her own.

She liked doing things people said she couldn't do, and surviving when no other woman was living as she did.



"It's been a good world for me," she said at the end of the film. "[You] make your own world and take what comes. If it isn't what you want, it's probably something you deserve."

### PRE-VISIT ACTIVITY

#### A Pioneering Spirit

Dorothy Molter lived like a pioneer in the Boundary Waters region along the U.S.-Canadian border. She worked hard every day and solved her own problems. Her pioneer spirit earned her great respect throughout the region and across Minnesota. With family or friends, talk about challenges a pioneer like Dorothy would face and the skills she would need to meet those challenges. Click on the "About Dorothy" link on the website of the Dorothy Molter Museum to learn more about the way Dorothy lived. Talk about the challenges she faced in her life. Then watch the YouTube video of singer Elisa Korenne performing her song "Root Beer Lady" at [http://www.youtube.com/watch?v=rVef\\_fmVLnl](http://www.youtube.com/watch?v=rVef_fmVLnl)

Talk about details Elisa focuses on in the song — and why you think she picked them. Then write a new verse for the song adding details about Dorothy's life that you learned on the museum website.

**Minnesota Learning Standards:** Demonstrating how humans influence the environment and in turn are influenced by it (Social Studies: Geography V.D.1); demonstrating understanding of the personal, social, cultural and historical contexts that influence the arts (Arts 4.1.3).

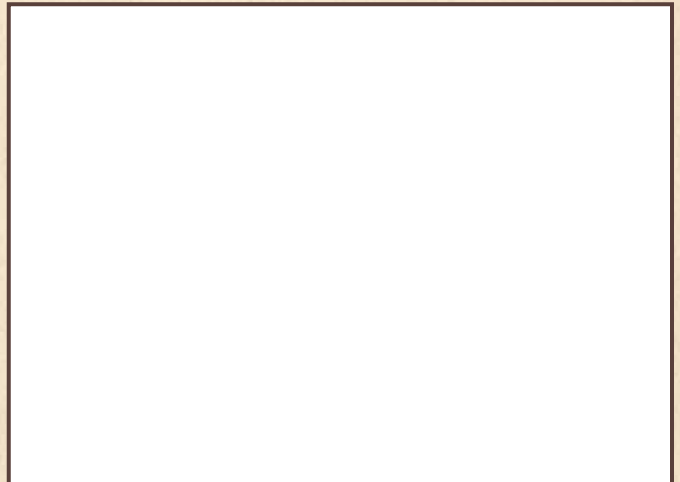
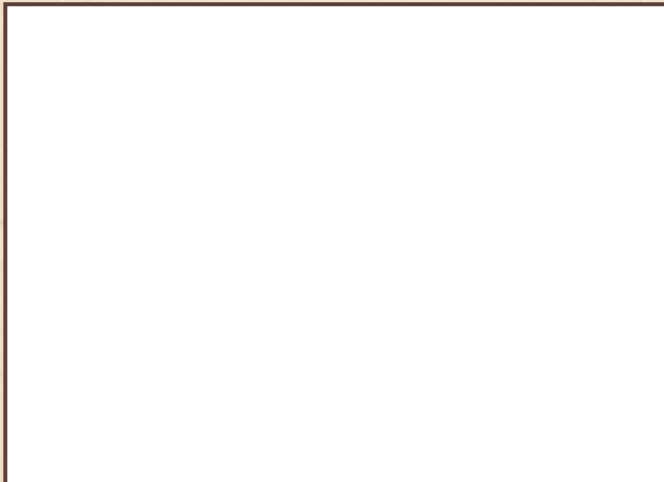
UNIT 3

ONSITE/TAKEAWAY ACTIVITY



## Dorothy Molter: Wilderness Pioneer

Dorothy Molter had a pioneer spirit. She was fearless and she liked challenges. She liked trying things she had never done before, and she liked doing things people said she couldn't do. She thought nothing of canoeing or snowshoeing for hours to get supplies or help a friend. She had one of the first homemade snowmobiles in Minnesota and bought one of the commercially made Polaris snowmobiles, a 1957 Sno-Traveler. During or after a visit to the museum, pick a photo or item that is displayed that shows how Dorothy had a pioneer spirit. Imagine Dorothy living like a pioneer in the Boundary Waters Canoe Area Wilderness. Then use the spaces below to draw a comic strip showing Dorothy Molter acting like a wilderness pioneer. Use dialogue boxes or bubbles to have Dorothy talk about what she is doing, and how that makes her feel.



**Minnesota Learning Standards:** Demonstrating how humans influence the environment and in turn are influenced by it (Social Studies: Geography V.D.1); creating original media artworks to express ideas, experiences or stories (Arts 0.2.1.2.1).

## UNIT 4

## Why Wilderness Matters

The Boundary Waters region along the border between the United States and Canada is one of the most spectacular wilderness areas in the world.

Its beautiful lakes were carved by glaciers out of the rock of the Earth's surface, and they have remained practically unchanged since the ice of the glaciers left the area more than 10,000 years ago.

The area is home to moose, wolves, bears, bobcats, bald eagles and loons. Its waters are alive with game fish like northern pike, walleye, largemouth bass, smallmouth bass and lake trout.



Because the region has natural features found nowhere else in the world, the U.S. government has targeted the area for protection for more than a century.

In 1902 the U.S. Land Office withdrew 500,000 acres of land in the area from settlement and development, and between 1905 and

1908 another 659,700 acres were protected. In 1926, 640,000 acres in the area were established as protected, roadless wilderness. Today the amount of protected land is more than one million acres within the Boundary Waters Canoe Area Wilderness.

The canoe wilderness, which is part of the 3.9 million acre Superior National Forest, is the largest U.S. wilderness east of the Mississippi River and features more than 1,000 protected lakes and more than 1,200 miles of canoe routes.

This area, which first attracted Dorothy Molter more than 80 years ago, now draws more than 250,000 visitors a year.

The area "is considered by some as the most beautiful wilderness they have ever seen," the Boundary Waters Canoe Area recreation organization declares on its website. "The [area] is a true wilderness experience, without motors, no electricity, no telephone lines and no roads to the inner lakes."



Terry Schocke Photo

The area allows visitors to travel back in time, and experience the awe that the first explorers or settlers might have felt when first seeing the region.

"Wilderness offers freedom to those who wish to pursue an experience of expansive solitude, challenge and personal integration with nature," the U.S. Forest Service declares on its website.

Dorothy Molter, in her lifetime, did exactly that.

### PRE-VISIT ACTIVITY

## The Beauty of the Wilderness

The Dorothy Molter Museum teaches visitors about the wilderness environment that Dorothy loved and helps them learn why the Boundary Waters region had such an attraction for her. With family or friends, talk about things you would look for at the museum that would reveal Dorothy's love of nature and the Boundary Waters region. Look at photos in the gallery slideshow on the museum website and discuss ones that show activities that reflect her love of nature. Then visit the recreation website [www.bwca.com](http://www.bwca.com) to view photos of the Boundary Waters Canoe Area Wilderness. Click on the link for the Boundary Waters Photo Contest of 2010. View photos in the gallery by clicking on them to enlarge. Pick one photo you like and write a poem, rhyme or song expressing how it makes you feel about the wilderness environment. Use active verbs and colorful adjectives to express your emotions.

**Minnesota Learning Standards:** Interpreting information presented visually, orally or quantitatively (Language Arts 3.2.7.7.); writing creative texts to develop real or imagined experiences (Language Arts 4.6.3.3).

**UNIT 4**

**ONSITE/TAKEAWAY ACTIVITY**



# Pay Attention to Nature

Dorothy Molter paid close attention to nature. And in 56 years living in the Boundary Waters region she learned a great deal about animals, birds, the environment and the seasons. During or after a visit to the Dorothy Molter Museum, choose an item or a display that you think reveals Dorothy’s interest in nature. Or pick something you saw on the grounds of the museum — a bird, a plant, a flower — that you think might have interested Dorothy. Use the spaces below to describe the item you chose, why it interested you, what it reveals about Dorothy’s love of nature or why Dorothy would have been interested in it. Do some research with the Internet and other resources to learn more about the item you selected. Write a paragraph or short essay describing an interesting fact or feature you learned about the item through your research. Look for ways to use descriptive language in your writing.

**Describe the item you chose.**

---

---

---

---

---

---

---

---

---

---

**What does it reveal about Dorothy’s love of nature?**

---

---

---

---

---

---

---

---

---

---

**Why does it interest you?**

---

---

---

---

---

---

---

---

---

---

**Why would Dorothy have been interested in it?**

---

---

---

---

---

---

---

---

---

---

**Minnesota Learning Standards:** Demonstrating how humans influence the environment and in turn are influenced by it (Social Studies: Geography V.D.1); understanding that we can learn about the past from different sorts of evidence (Social Studies: History IV.B.1); using precise words and phrases, relevant descriptive details, figurative and sensory language to convey experiences and events (Language Arts 6.7.3.3).



# Preserving the Wilderness: Tradeoffs, Conflict & Compromise

When a natural area is as important as the Boundary Waters region, it takes a lot of work to protect it. And it takes a lot of time.

Efforts to protect what is now the Boundary Waters Canoe Area Wilderness began more than 100 years ago, and continue each time a new set of rules or regulations is drawn up.

Protecting an area as beautiful as the Boundary Waters region is something people of all backgrounds support.

But sometimes changes designed to protect an area for future generations have a negative effect on individuals living in the area at the time new rules are passed.

Dorothy Molter was one of those people, and her case sparked debate that extended from her cabin on the Isle of Pines to Washington, D.C.

Dorothy first came to the Boundary Waters in 1930 and became owner of the Isle of Pines fishing camp in 1948.

At the time, visitors and supplies would fly in on float planes that could land on lakes, stay for a visit and fly out.

In 1949, President Harry Truman issued an executive order banning float planes from landing on lakes or flying lower than 4,000 feet over the wilderness area.

In 1964 the U.S. Congress passed the federal Wilderness Act, and the canoe wilderness became part of the National Wilderness Preservation System.

That same year, Dorothy's property was slated to be condemned and purchased by the United States government. She was informed she would no longer be allowed to live on the Isle of Pines or rent the cabins and was ordered to leave the area.

When Dorothy's friends rallied to support her, the outcry was so great the U.S. Forest Service changed its mind and decided she could stay until 1975.

When 1975 came, the Forest Service appointed her a "volunteer in service" and said she could remain at Isle of Pines for the rest of her life.

She did remain there to live, even after the 1978 Boundary Waters Canoe Area Wilderness Act banned snowmobiles and restricted use of motorboats in the area after 1984.



UNIT 5

## PRE-VISIT ACTIVITY

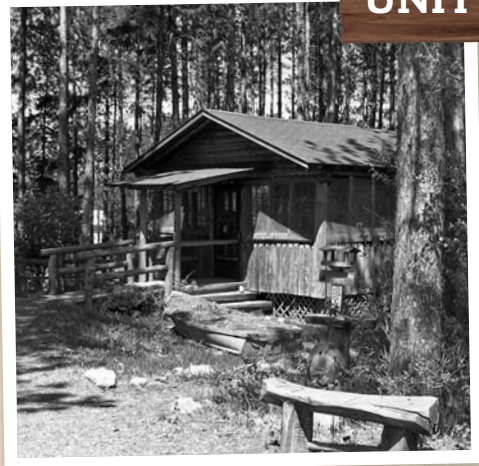
### Finding a Balance

Protecting the environment can sometimes be a balancing act. Government leaders need to balance the benefits that environmental protections provide the public at large against the impact those protections might have on individual people. Dorothy Molter found herself drawn into a debate on the need for balance when the government wanted her to leave her home on the Isle of Pines to create a wilderness area that had no homes or businesses in it. With family or friends, talk about what government leaders should consider when enacting rules or laws to protect the environment. Then talk about the solution Dorothy reached with the U.S. Forest Service that allowed her to stay in her home but not operate as a fishing camp or business. This kind of decision is called a "compromise," in which each side gives in a little. Talk about other situations in your school or community in which a compromise might provide a solution to a problem. Write a paragraph describing one situation.

**Minnesota Learning Standards:** Evaluating rules and laws using criteria of good laws, including what is fair and reasonable (Social Studies: Government/Citizenship VII.B.4).

**UNIT 5**

**ONSITE/TAKEAWAY ACTIVITY**



**Facts of the Case**

Dorothy Molter became known throughout Minnesota and across the nation when the U.S. Forest Service threatened to condemn her home and order her to leave after the U.S. Congress passed the Wilderness Act of 1964. The act made the Boundary Waters Canoe Area part of the National Wilderness Preservation System. During a visit to the Dorothy Molter Museum, find the binder of letters connected to Dorothy’s case. Or find accounts or news stories online. Pick one and use the spaces below to write out five Key Facts contained in the information. Remember that the Key Facts of one letter or news story may be different from another letter or story if they were written at different times.

**Key Fact Number 1**

---

---

---

---

---

---

**Key Fact Number 2**

---

---

---

---

---

---

**Key Fact Number 3**

---

---

---

---

---

---

**Key Fact Number 4**

---

---

---

---

---

---

---

---

---

---

**Key Fact Number 5**

---

---

---

---

---

---

---

---

---

---

**Minnesota Learning Standards:** Analyzing historical evidence and drawing conclusions; comparing perspectives in primary and secondary sources and determining how the different perspectives shaped the authors’ views of historical events; (Social Studies: History IV.C.2,4).

# Character Counts: The Value of Helping Others

To live in the wilderness, people need to have strong character.

They need traits like courage, responsibility and self-discipline just to survive. And they have to have a willingness to look out for each other and help each other out.

Dorothy Molter helped hundreds of people during the 56 years she lived in the Boundary Waters Canoe Area.

As a trained nurse, she helped residents and visitors alike, sewing up cuts, making splints for broken bones and removing fish hooks from ears or other body parts.

She used a hand ax to cut crutches out of birch saplings, patched gashes from falls or accidents and snowshoed miles to treat sick neighbors.

She once saved the lives of a father and son who were hit by lightning in a sudden summer storm.

With her caring spirit, Dorothy became known as the "Florence Nightingale of the Wilderness," a nickname harking back to the famous battlefield nurse of the 1800s.

And like Nightingale, she never got rattled when faced with an injury or accident.



"People get themselves into the darndest scrapes," she told the Saturday Evening Post magazine in 1952. "You'd think that after ... years of North Woods nursing, I'd seen everything. But I'm always finding new ways a human being can hurt himself."

In her later years, she was pleased that she had been able to help so many people.

"If anybody wants to remember," she said when interviewed for the movie biography *Dorothy Molter: Living in the Boundary Waters*, "I'd just as soon they remember me for the various kinds of help I've given."

## PRE-VISIT ACTIVITY

### People Helping People

Dorothy Molter was a caring person who helped hundreds of people in her life. Her willingness to help others earned her the respect of both residents and visitors and a reputation as the "Florence Nightingale of the Wilderness." With family or friends, talk about how people visiting or living in a wilderness area could help each other. Visit the Dorothy Molter Museum website and look for photos in the gallery showing ways people could help each other with their skills or with items they own. Make a list of different types of help that people in the wilderness could offer to each other. Then visit the Boundary Waters Canoe Area recreation website at [www.bwca.com](http://www.bwca.com), which helps people plan visits to the Boundary Waters. Click on the Basic Information link in the toolbar at left. Look over the help and information tips listed and discuss which would be the most important to know for a first-time visitor.

**Minnesota Learning Standards:** Demonstrating how people are connected to each other and the environment; identifying factors that draw people to local communities; analyzing how the physical environment influences human activities (Social Studies: Geography V.D.1-2).

**UNIT 6**

**ONSITE/TAKEAWAY ACTIVITY**

**You Can Help the Museum**



Dorothy Molter spent a lifetime helping others. In her later years, friends, neighbors, snowmobile clubs and Forest Service employees would help Dorothy, splitting wood, cutting ice or bringing in supplies. They wanted to help Dorothy as she had helped others. During or after a visit to the Dorothy Molter Museum, or its website, think about the variety of things the museum offers students, schools, families, the community or people in other parts of the state. With friends or family, brainstorm ways that students or the community could help the museum do new things, offer new displays, teach new classes or provide different learning opportunities. Help can come in many forms, from volunteering on a spring cleanup, to raising money, to thinking up new ideas for exhibits. In the spirit of Dorothy Molter, use the space below to outline one idea to help the museum. Mail or email your idea to the museum, using the contact information on the museum website.

**My idea to help the museum**

---

---

---

---

---

---

---

---

---

---

**Why I think it would be a good idea to try**

---

---

---

---

---

---

---

---

---

---

**How it would help visitors enjoy the museum**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**Minnesota Learning Standards:** Understanding the importance of participation in civic life and demonstrating effective civic skills; explaining the importance of participation and cooperation in the community and how people can make a difference in others' lives (Social Studies: Government/Citizenship VII:A.1).

## An Independent Businesswoman

When Dorothy Molter first moved to the Boundary Waters Canoe Area, she didn't plan to become a businesswoman.

Trained as a nurse in Chicago, she was just looking for a job in the hard times of the Great Depression.

"There were too many nurses trying to get work in hospitals in Chicago," she recalled in the film biography *Dorothy Molter: Living in the Boundary Waters*. "I didn't have that problem up here. I wasn't paid anything, but it didn't cost anything to live."

She went to work for Bill Berglund at his Isle of Pines fishing camp, and as he grew older she put her nurse's training to use caring for him.

When Bill died in 1948, his brother and sister deeded the camp over to Dorothy.

She didn't have any business training, other than what she had picked up working with Bill. But now the camp was her livelihood.

She ran it from 1948 to 1975, successfully attracting a steady stream of visitors, and selling supplies and her famous root beer from the store she set up outside her Summer Tent.

She had to adjust when rules and conditions changed, as when the float planes that brought in supplies were banned from landing on lakes in the wilderness area.

The ban on planes indirectly inspired her most famous enterprise — the root beer.

"I used to have pop up here, but after the planes stopped flying I stopped," she recalled in the film of her life. "I wasn't about to pack cases of pop over portages. But I had so many root beer bottles on hand I just kept them. One summer I ran across them, and we got the idea to make root beer.

"The root beer idea took up pretty good," she said. "I made 12,000 bottles a year and whatever was left over I left in the root cellar for the following spring."

When the federal government threatened to condemn her property and order her to close the camp, Dorothy had to adjust again. She sold her property to the government but could no longer rent out her cabins or sell her root beer. Instead, she took "donations" and was able to make a living that way.

### UNIT 7



It was a business model for a non-business, and it allowed her to support herself.

Visitors continued to seek her out, even though she was "out of business."

Some 6,000 canoeists would sign her guest list each summer, and on some days she would go through up to 10 cases of root beer.

"That," she said in the film, "is when it's work."

### PRE-VISIT ACTIVITY

## The Spirit of Entrepreneurship

When people go into business for themselves, they are called "entrepreneurs" (EN-tre-pren-OORS). Entrepreneurs have to have a creative approach to business, ideas for products and services that people will want, and a willingness to change when circumstances change. In all these ways, Dorothy Molter was a successful entrepreneur. She found ways to live and support herself in the Boundary Waters for more than 50 years, even when faced with new obstacles and challenges. With family or friends, imagine what it was like for Dorothy to take over the Isle of Pines camp. Talk about things she would need to do to be successful and what skills she would have to have. Then visit the photo gallery on the website of the Dorothy Molter Museum. Pick a photo of Dorothy that shows her practicing a skill that would help her run a fishing camp, and write a paragraph explaining how the skill would help her.

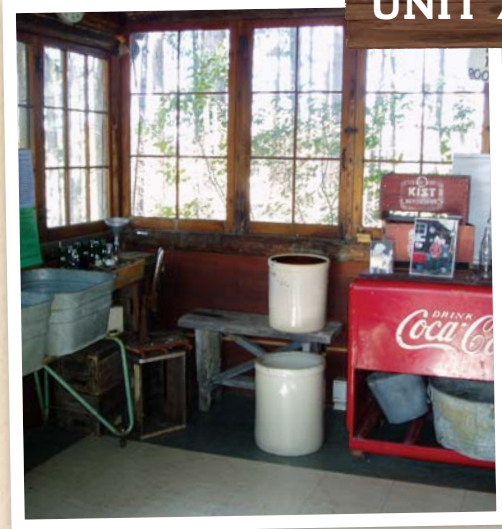
For added fun, write a paragraph describing a business you would like to run, why and how it would operate.

**Minnesota Learning Standards:** Understanding the risks and opportunities associated with entrepreneurship; describing the role of innovation and profit motive in helping reduce problems associated with scarcity (Social Studies: Economics VI.A.2).

UNIT 7

ONSITE/TAKEAWAY ACTIVITY

The Root Beer Business



One key to a successful business is having a product or service people want to buy. Another is learning how to deliver your product or service in an efficient and effective way. Dorothy Molter had never made root beer before, but she learned how to do it effectively in a way that would provide visitors what they wanted and allow her to make money. During or after a visit to the Dorothy Molter Museum, think about the display at the Winter Cabin that re-creates the space where Dorothy sold root beer outside her Summer Tent. Study the display and look at pictures of Dorothy making root beer. In the spaces below, write out five things Dorothy needed to do to make and sell root beer successfully.

Example: Set up a process for making large amounts

1.

Horizontal lines for writing answer 1.

2.

Horizontal lines for writing answer 2.

3.

Horizontal lines for writing answer 3.

4.

Horizontal lines for writing answer 4.

5.

Horizontal lines for writing answer 5.

Minnesota Learning Standards: Understanding basic principals of economic decision-making; applying a decision-making process to make informed choices; analyzing how people respond predictably to positive and negative economic incentives (Social Studies: Economics: VI.B.2-3).

## UNIT 8

# The Science of Making Root Beer

Dorothy Molter won wide fame as “the Root Beer Lady” for making and serving her special brand of the beverage on the Isle of Pines on Knife Lake.

Her root beer was seen as a natural attraction because she made it by hand from lake water, bottled it under the trees, capped it with a hand press, chilled it with ice she cut from the lake in winter and sold it in the open air.

But making root beer was also a kind of science experiment that Dorothy repeated thousands of times in the years she spent on Knife Lake.

The brew that canoeists would paddle miles to sample was created with a scientific process worthy of any science class.

With sugar, yeast and root beer extract, she employed a process called natural carbonation to produce a drink that not only tastes delicious but has the fizz that makes root beer and other pops special.

Natural carbonation works by creating a gas called carbon dioxide.

In the making of root beer, the gas is produced by mixing the sugar with the yeast. The chemical reaction that occurs when this happens produces the bubbles that make root beer or pop fizzy.

Dorothy and members of her family made thousands of bottles of root beer using this method — sometimes as many as 12,000 bottles in a single year.

It required concentration, attention to detail and the ability to repeat every step in the process the same way each time so that the root beer tasted consistently good.

Over the years, Dorothy became expert at the process, but not everyone was.

In Bob Cary’s book *Root Beer Lady*, she confessed that her father Cap “never could get the hang of it, [and] his root beer was just awful. He liked to make it, but we tried all kinds of ways to keep him away — he never did get a batch right.”

Dorothy’s brew, however, attracted visitors from miles around, intent on learning her secret.

“Some paddlers ... ached to discover just what rare ingredients, what roots and herbs Dorothy gathered



from the forest to create such an unusually tasty beverage,” Cary wrote.

“For those who asked, Dorothy simply and honestly replied, ‘It’s Hires Root Beer Extract. You can get it at any grocery store.’”

But it always tasted better sipped on a hot summer day at the Isle of Pines.

## PRE-VISIT ACTIVITY

### Dorothy’s Root Beer

Thousands of people visited Dorothy Molter to sample her famous root beer, to meet her and to experience her hospitality and personality. Through its exhibits, video and photographs, the Dorothy Molter Museum gives visitors a way to “meet” Dorothy today, to experience her personality and learn how she lived. One of the top attractions is the re-creation of the area where Dorothy met visitors and served her famous brew. Go to the museum website and look for news about this year’s root beer brewing. Then click on the Gallery link to see photos of Dorothy’s life. Pause on ones that involve making or selling root beer by clicking on the box at the lower left corner of the screen. Study the details of the photos, and look closely at the faces of Dorothy and the people sampling her root beer. With family or friends, talk about what emotions you think they are feeling, based on the expressions on their faces. Finish by learning more about making root beer by viewing this How To video online:

<http://www.wikihow.com/Make-Root-Beer>

**Minnesota Learning Standards:** Interpreting information presented visually, orally or quantitatively (Language Arts 3.2.7.7.); engaging effectively in collaborative discussions, building on others’ ideas and expressing their own clearly (Language Arts 5.8.1.1).

## UNIT 8

## ONSITE/TAKEAWAY ACTIVITY

## Dorothy's Root Beer Recipe

One of the most popular displays at the Dorothy Molter Museum is the porch of the Winter Cabin, where the museum has re-created the space where Dorothy sold root beer outside her Summer Tent.

During or after a visit to the museum, think about what you learned about root beer making from the display and discussions with your tour guide about the process. Sample some of Dorothy's Root Beer, which is still made and distributed by the museum. At home, use your math skills and the recipe at right to make some root beer with your family. Then answer the Root Beer Math questions below.

### Root Beer Math Questions

1. If a liter equals just under 34 ounces, how many ounces of root beer will be made with the 2-liter recipe?

---

2. If a bottle of Dorothy's Root Beer contains 12 ounces, how many complete bottles will be produced by the 2-liter recipe?

---

Will there be any root beer left over? How much?

---

3. If you wanted to make 6 liters of root beer instead of 2, how much sugar would you need?

---

How many tablespoons of root beer extract?

---

How many teaspoons of yeast?

---

**Minnesota Learning Standards:** Solving real-world and mathematical problems requiring addition, subtraction, multiplication and division of multi-digit whole numbers. (Math 5.1.1.4); recognizing that fractions can be used to represent parts of a whole (Math 3.1.3.1).

## Making Root Beer Like Dorothy's

### Equipment & Supplies

- 1 clean 2-liter plastic pop bottle with cap
- 1 funnel
- 1 cup measuring cup
- 1/4 tsp measuring spoon
- 1 tablespoon measuring spoon
- 1 cup table sugar
- 1 tablespoon Hires or Zatarains's Root Beer Extract
- 1/4 teaspoon powdered baker's yeast
- Cold fresh water

### Instructions

1. With a dry funnel, pour into the bottle in sequence: 1 level cup of table sugar and 1/4 teaspoon powdered baker's yeast (fresh and active)
2. Shake to distribute the yeast grains into the sugar.
3. Swirl the sugar/yeast mixture in the bottom to make it concave to catch the extract.
4. With the funnel, add 1 tablespoon of root beer extract on top of the dry sugar
5. The extract sticks to the sugar, which will help dissolve the extract in the next steps.
6. Half fill the bottle with fresh cool tap water. Rinse in the extract, which sticks to the tablespoon and funnel.
7. Swirl to dissolve the ingredients.
8. Fill up to the neck of the bottle with fresh cool tap water, leaving about an inch of head space, and securely screw cap down to seal.
9. Invert repeatedly to thoroughly dissolve.
10. Place at room temperature for three to four days until the bottle feels hard to a forceful squeeze.
11. Move to a cool place (below 65 F).
12. Do NOT leave the finished root beer in a warm place once the bottle feels hard. After a couple weeks at room temperature, especially in the summer, enough pressure may build up to explode the bottle!
13. Refrigerate overnight to thoroughly chill before serving. When opening, crack the lid of the chilled root beer just a little to release the pressure slowly.

*Copyright © David B. Fankhauser, Ph.D.*

**Credits:** This student and family learning guide was written and designed by Hollister Creative for the Dorothy Molter Museum.

- The writer was Peter Landry.
- The graphic designer was Jon Barthmus.

Copyright © 2011 Dorothy Molter Museum. All rights reserved.