Make your visit to Lowell National Historical Park official! Participate in the park stamp program. Ask a park ranger for an official park stamp at any of the following locations. Collect all 8!

- Lowell National Historical Park
- Boott Cotton Mills
- Mill Girls & Immigrants Exhibit
- Francis Gate
- River Transformed Exhibit
- Moody Street Feeder Gatehouse
- Trolley
- Pawtucket Gatehouse
Welcome to Lowell National Historical Park!

You are at a very special place. This place is so special that the United States made it into a national park.

Lowell National Historical Park was created because what happened here is very important in the history and culture of the United States. The park tells the story of the people and the progress of the American Industrial Revolution. We preserve Lowell today because it holds this story.

The National Park Service preserves and protects our most important natural, historical, and cultural areas. National parks are preserved for the enjoyment and education of present and future generations. This includes you!

As you complete your Junior Ranger book, you will learn about what happened here and why it is important. Have fun and enjoy your visit to Lowell!

Color the Park

The Boott Mills Clock Tower is a symbol of the shift from farm to factory life.

The clock and the bell controlled the daily lives of workers by keeping them to a strict schedule.

This was a major lifestyle change for working people in America.

Extra Activity:
Take pictures of park buildings and show a ranger.
Can you identify this historic structure?
There were many steps cotton went through before being turned into cloth. Many of these steps could be done by hand as well as by the machines in this exhibit.

1) **Try hand carding.** Is hand carding easy or hard? On the farms you would have helped your parents make cloth by carding wool by hand. In the mills, the big carding machine carded the cotton very quickly. **Which way looks safer? Which way looks easier?**

2) **Try hand spinning.** After cotton was carded, it was spun into thread - making it stronger. In mills, this was done on a spinning **frame** but on farms this was done on a spinning **wheel**. You can find a spinning wheel in the museum. **Name two differences between the spinning wheel and the spinning frame.**

3) **Try hand weaving.** This is the process that makes cloth. Find one thing that is the same on both the hand loom and the power loom.

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1) **Front Desk Area**
Find the city model of Lowell in 1876. What are the red buildings? What are the blue? Find the **Boott Cotton Mills** button on the model. This is where you are now. You can also find the **Suffolk & Tremont Mills** where you may have visited earlier. The **Lowell Manufacturing Company** is the location of the Visitor Center.

2) **Spindle City Display**
Find the photographs of mill workers on the wall behind the model of Lowell. Study their faces, their expressions, and their body language. How do you think mill workers felt about working here? What words could describe their feelings?

3) **The Weave Room**
Today, weavers operate power looms to show park visitors how they work. If this were an actual factory, this room would be very hot and humid, and the air would be filled with cotton dust. All of these looms would be operating - imagine the noise! As you watch them making cloth, look underneath the looms. **What do you see? Would you like to work here?**

Write down three words that you would use to describe the weave room to a friend or family member.
Mill City Word Search

Answers are forward, backwards or diagonal.

c i s h u t t l e r u l
l a s t i t l h s e b e
o u n i n e y n u w a d
t s t a w e t t o o b e
h t i o l r t r h p o r
o n l l r b a e g r w r
o a o t u r b i n e e a
k r a p l a n o i t a n
t g o l r o t h d a v g
o i i r o o r h r w e e
r m m e r r i m a c k r
w m e i n o t t o c r a
l i u e t g e w b a s r

merrimack  loom  weave  ranger
canal  immigrants  waterpower  national park
mill  cotton  boott  cloth
turbine  trolley  lowell  shuttle

Boott Cotton Mills Bingo

Try to find the answers to these questions while looking around the museum. You get a “Bingo” if you can find the answers to four questions in a row either up and down, across or diagonally.

<table>
<thead>
<tr>
<th>What is a nickname for the City of Lowell?</th>
<th>Which people picked the cotton before the Civil War?</th>
<th>What did Paul Moody build with Francis Cabot Lowell?</th>
<th>What high-tech company produced computers in Lowell?</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______</td>
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</tr>
<tr>
<td>Name an Asian country that currently produces textiles</td>
<td>What is the date on the seal of the Boott Cotton Mills?</td>
<td>What was the original name of the City of Lowell?</td>
<td>What design is on the “mill girl” dress?</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
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<td>_______</td>
</tr>
<tr>
<td>Who is the Boott Mills named after?</td>
<td>Name a type of fabric made in the Boott Mills.</td>
<td>Where was the carding frame made?</td>
<td>Where did Francis Cabot Lowell build his first mills?</td>
</tr>
<tr>
<td>_______</td>
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<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>How many steps in the “Bale to Bolt” process?</td>
<td>Who was the first “mill girl”?</td>
<td>What tool does a drawing-in girl use?</td>
<td>What year did the Boott Mills close?</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
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</tbody>
</table>

Extra Activity:
Practice “Drawing In” in the Boott Museum.
January 15, 1845
Dear Brother,
I received your letters last evening, and will now try and answer your questions as well as I can. The girls I room with are all from Vermont and good girls too. They have come to work here for many different reasons, including: __________

I live in a nice house, have enough to eat and that which is good enough. My favorite food so far is __________________________. I like my boarding place very well. Our keeper, Mrs. Mathews, spends her days in a variety of chores such as __________________________. After work we explore many hobbies and interests. I particularly enjoy __________________________. I have been careful with my earnings, but I have recently purchased for myself ____________.

If I thought I could make a decent living back home I would come back there but I must work where I can get more pay. Write as soon as you can & as often as you feel like it. I always want to hear from you.

Yours, ________________

Extra Activity: Listen to the conversation in the Mill Girls’ Bedroom.
Here is an activity that you can do while visiting the City of Lowell. In Lowell, the park is the city and the city is the park. Lowell was a planned Industrial City. Its founders carefully created a system of mills, canals, housing, streets, and public buildings that were designed to work together. The whole city was created to do one thing: to make cloth, on a large scale.

As you walk or ride around Lowell today, look for the historic objects in the pictures below. Check them off if you see them.

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**Downtown Scavenger Hunt**

1) Look around at some of the items people brought with them. Find and check off all 7 items below.

- Green Dress
- Straw Hat
- Violin
- Buddha Statue
- Hebrew/English Bible
- Family Photo Album
- Typewriter

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**Immigrants Exhibit**

As you enter the balcony, you will be in the Immigrants Exhibit. Immigrants are people who came here from other countries, and many of them worked here in the mills. Look at the timeline on the wall to your right. Did any of your relatives come from another country? If so, where?

Walk down the stairs and look at the artifacts in the display cases. When immigrants came to America, they brought many items with them. Some items helped them remember where they came from.

1) Look around at some of the items people brought with them.

Find and check off all 7 items below.

- Green Dress
- Straw Hat
- Violin
- Buddha Statue
- Hebrew/English Bible
- Family Photo Album
- Typewriter

2) Search the exhibit and find out why people left their home countries.

What jobs were available in Lowell for immigrants?

Name 2 different countries people moved away from to live in Lowell.

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**Extra Activity:**

- Walk the Canalway Trail or Riverwalk.

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**Extra Activity:**

- Watch an oral history video.
When work conditions became worse the mill girls did this. Brings the weft thread across the power loom (moves back and forth). Another name for cloth; what the Lowell mills produced. An improvement of the waterwheel. Lowell quickly grew from a small mill town into this. Eli Whitney’s invention used to clean the seeds out of cotton. Used to transmit power directly to the machines in a mill. Key structure in the canal to monitor and control water. Helped the city to grow by providing transportation. Carried water to the mills so it could be used for power.

**Shuttle Maze**

Thread your yarn through the shuttle maze. Begin at “Start” and find your way to the “Finish”.

Shuttles were used to carry the weft thread back and forth through the shed on the loom.

Shuttles sometimes skipped out of the shuttle box and shot through the air, becoming a dangerous missile.

**Extra Activity:**
Practice threading a Shuttle in the Boott Museum.

**Word Scramble**

Unscramble the words in the left column and write them in the spaces below. Clues are located in the right column.

- IKREST [When work conditions became worse the mill girls did this.]
- TLTUSHE [Brings the weft thread across the power loom (moves back and forth).]
- XTITEELS [Another name for cloth; what the Lowell mills produced.]
- BTURENI [An improvement of the waterwheel.]
- NURLSAIDT TYCI [Lowell quickly grew from a small mill town into this.]
- TOONTC ING [Eli Whitney’s invention used to clean the seeds out of cotton.]
- VIDRE LBTE [Used to transmit power directly to the machines in a mill.]
- GHTEOASUE [Key structure in the canal to monitor and control water.]
- YLTORLE [Helped the city to grow by providing transportation.]
- SCALAN [Carried water to the mills so it could be used for power.]
Explore the Visitor Center

Start your visit to the park at the Visitor Center on Market Street. The Visitor Center exhibits will tell you stories about the people, places, and history of Lowell.

1) Find the large map of Lowell and count the number of mill buildings. How many mills are located on the map?

2) Find three historic objects or artifacts. Think about how people used these objects and why they are important. Write down the three objects you found.

3) Watch the video “Lowell: The Industrial Revolution” and answer the following questions:

A. What powered the mills?

B. What did they make in the Lowell mills?

C. Why is Lowell a national park?

Extra Activity:
Visit the Children’s Corner. Read a book, weave, or experiment with the gears.

River Transformed Exhibit

The River Transformed Exhibit is a great place to learn about power, and how power was used in the mills. Remember that the power to run the machines came from falling water.

Turbines use falling water to create power. Here we can see how the power that was made in the basement moved through the mill to be used by the machines.

Identify parts of the diagram by filling in the correct words from the list below.

- Looms
- Turbine
- Line shaft
- Gears
- Drive Belt
- Flywheel

Extra Activity:
Ride the Trolley to the River Transformed Exhibit.
Congratulations!

We are proud that you have decided to become a Junior Ranger. Lowell is the home of many stories. These stories can be told by park rangers, found in historic buildings, the museum and exhibits, or on the canals.

To become a Junior Ranger, you must find these stories.

Instructions
1) To receive your Junior Ranger badge and certificate, you must complete five pages in this book.

2) We suggest completing two “extra activities” - located at the bottom of the page.

3) Find a ranger and ask him/her to review your completed book. If your book is complete you will receive a badge and certificate!

Word Scramble
IKREST - STRIKE
TLTUSE - SHUTTLE
XTITEELS - TEXTILES
BTURENI - TURBINE
NURLSAIDT TYCI - INDUSTRIAL CITY
TOONTC ING - COTTON GIN
VIDRELIBTE - DRIVE BELT
GHTEOASUE - GATEHOUSE
YLTORLE - TROLLEY

River Transformed Exhibit
1. Line shaft
2. Loom
3. Drive belt
4. Gears
5. Flywheel
6. Turbine

Book Cotton Mills Bingo

<table>
<thead>
<tr>
<th>Spindle City</th>
<th>Slaves</th>
<th>Power Loom</th>
<th>Wang Computers</th>
</tr>
</thead>
<tbody>
<tr>
<td>China, Taiwan, India, Vietnam, Philippines</td>
<td>1835</td>
<td>East Chelmsford</td>
<td>Flowers</td>
</tr>
<tr>
<td>Kirk Boot</td>
<td>Pick one from the “wall of cloth”</td>
<td>Lowell Machine Shop</td>
<td>Waltham, Mass.</td>
</tr>
<tr>
<td>10</td>
<td>Deborah Skinner</td>
<td>Little Steel Hook</td>
<td>1954</td>
</tr>
</tbody>
</table>

Word Search

Shuttle Maze

Learn More! Become a WebRanger

A WebRanger is: a care-taker, an adventurer, a learner, a seeker, a discoverer. A WebRanger could be...you! You can become a member of a growing group of young people who are interested in the world around them and involved with their nation’s heritage. WebRangers spread their knowledge of National Parks to their friends, families, and schoolmates. Build your own Ranger Station, complete activities, and have fun!

Start online: www.webrangers.us