

Discovering the Industrial Revolution in Killingly Connecticut

TEACHING AMERICAN HISTORY PROJECT

Lesson Title - Discovering the Industrial Revolution in Killingly, CT From Joseph Lewerk

Grade – 9 - 12

Length of class period – 90 minutes

Inquiry – (What essential question are students answering, what problem are they solving, or what decision are they making?)

How is the birthplace of the American industrial revolution in Pawtucket, Rhode Island connected to the history of manufacturing in eastern Connecticut's town of Killingly?

Objectives (What content and skills do you expect students to learn from this lesson?)

Work with a group, compare and contrast industrialization in Pawtucket, Rhode Island and Killingly, Connecticut.

Analyze why these similarities and differences exist.

Write an essay that explains the similarities and differences and offer an explanation as to why the similarities and differences exist.

Materials (What primary sources or local resources are the basis for this lesson?) – (please attach)

1. Slater Mill historical background materials and mill photos (appended below)
2. Miles of Millstreams, Section IV, The Age of Small Mills, Killingly Historical Society, 1976 (attachment) - Used with permission of Marilyn Labbe from the Killingly Historical Society on behalf of the authors: Margaret Weaver, Geraldine A. Wood and Raymond H. Wood.

Activities (What will you and your students do during the lesson to promote learning?)

1. Students in small groups (3-4 homogeneously grouped) will brainstorm what they know about industrialization, especially any local connection. Ideas will then be shared by the class and recorded on the board by the teacher.
2. Working in the same small groups students will examine the materials in Handout 1 related to the industrialization effort started by Samuel Slater in Pawtucket, Rhode Island, constructing a timeline charting key developments beginning with Slater's time in England.
3. Continuing to work in the same small groups students will use the content of the Killingly Historical Society's Miles of Millstreams, Section IV to complete the questions on student Handout 2.

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4. Using information compiled in the activities above, students will complete the individual assessment question as a homework assignment.
Teacher monitors and assists students as necessary in completing the above tasks.

How will you assess what student learned during this lesson?

1. Student completion of an industrial revolution timeline.
2. Student completion of questions related to the development of industry in Killingly.
3. Individual student completion of an essay comparing and contrasting industrial development in Pawtucket, Rhode Island and Killingly, Connecticut with an analysis of the reasons for the similarities and differences.

Connecticut Social Studies Framework Grade Level Expectations (Draft July 2011)

- 1.1.1. Significant events and themes in United States history. Apply chronological thinking to examine relationships among events and explain causes and effects of events.
- 1.1.5. Significant events and themes in United States history. Evaluate the changing nature of the U.S. economy.
- 1.2.14. Significant events in local and Connecticut history and their connections to United States history. Analyze how events and people in Connecticut reflect and have contributed to developments in United States history.
- 1.2.15. Significant events in local and Connecticut history and their connections to United States history. Describe how major event in U.S. history affected Connecticut citizens.

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Student Handout 1

AMERICAN INDUSTRIAL REVOLUTION

The revolution in the mass production of goods that began in Europe quickly became rooted in America. The American phase of this revolution began in the Blackstone River valley of Massachusetts and Rhode Island with the ripples of that revolution eventually traveling the 30 miles to Eastern Connecticut.

Read the material from the three documents below and construct an “American Industrial Revolution” timeline beginning with Samuel Slater’s activities in England.

DOCUMENT 1

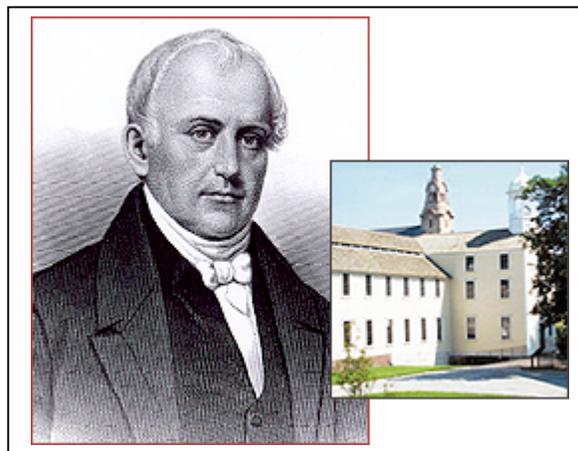
SAMUEL SLATER

Born: 1768, Derbyshire, England

Died: 1835, Webster, MA

Photos: (left) Samuel Slater, American Textile History Museum; (right) Slater Mill

Slater divided factory work into such simple steps that children aged four to ten could do it -- and did. While such child labor is anathema today, American children were traditionally put to work around the farm as soon as they could walk and Slater's family system proved popular.



American Factory System

This industrial spy became the father of the American factory system.

English Factory Worker

Samuel Slater has been called the "father of the American factory system." He was born in Derbyshire, England on June 9, 1768. The son of a yeoman farmer, Slater went to work at an early age as an apprentice for the owner of a cotton mill. Eventually rising to the position of superintendent, he became intimately familiar with the mill machines designed by Richard Arkwright, a genius whose other advances included using water power to drive his machines and dividing labor among groups of workers.

Sneaky Departure

In 1789, Slater emigrated to the United States. He dreamed of making a fortune by helping to build a textile industry. He did so covertly: British law forbade textile workers to share technological information or to leave the country. Slater set foot in New York in late 1789, having memorized the details of Britain's innovative machines.

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Rhode Island Mill

With the support of a Quaker merchant, Moses Brown, Slater built America's first water-powered cotton spinning mill in Pawtucket, Rhode Island. By the end of 1790, it was up and running, with workers walking a treadmill to generate power. By 1791, a waterwheel drove the machinery that carded and spun cotton into thread.

America's Industrial Revolution

Slater employed families, including children, to live and work at the mill site. He quickly attracted workers. In 1803, Slater and his brother built a mill village they called Slatersville, also in Rhode Island. It included a large, modern mill, tenement houses for its workers, and a company store -- a small pocket of industry, a ready-made rural village. Slater's factory system became known as the Rhode Island System. It was soon imitated -- and improved upon by innovators like Francis Cabot Lowell -- throughout New England. Slater died in 1835.

Source: http://www.pbs.org/wgbh/theymadeamerica/whomade/slater_hi.html



Wilkinson Mill

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DOCUMENT 2

Birthplace of the American Industrial Revolution



Workers at a mule spinner making thread

President Andrew Jackson:

"I understand you taught us how to spin, so as to rival Great Britain in her manufactures; you set all these thousands of spindles at work, which I have been delighted in viewing, and which have made so many happy, by a lucrative employment."

Samuel Slater: "Yes Sir. I suppose that I gave out the psalm and they have been singing to the tune ever since."

Georae S. White. Memoir of Samuel Slater

The Blackstone River Valley of Massachusetts and Rhode Island is the "Birthplace of the American Industrial Revolution," the place where America made the transformation from Farm to Factory. America's first textile mill could have been built along practically any river on the eastern seaboard, but in 1790 the forces of capital, ingenuity, mechanical know-how and skilled labor came together at Pawtucket, Rhode Island where the Blackstone River provided the power that kicked off America's drive to industrialization.

In 1789, Providence merchant Moses Brown was attempting to build a new factory to spin cotton fiber into thread at the falls of the Blackstone River in Pawtucket, RI. Along with a source of water power, Pawtucket also had a century old tradition as home to tool and machine makers, and Brown had plenty of capital to invest in the project. However, months of work led only to frustration, Then in December 1789, Brown hired Samuel Slater, a recent immigrant from England. Slater had spent seven years working in a textile mill in England, rising to the position of overseer of machinery and mill construction. When he arrived in Pawtucket, Slater determined that Brown's machinery would not work, but Slater was convinced that he could modify it into working order. He set to work and one year later in December 1790 the experimental mill was in operation - the first successful water powered cotton-spinning factory in the United States, and the beginning of a new age of industrialization.



Slatersville, RI - America's first planned mill village.

The success of the Slater Mill inspired other entrepreneurs to build their own mills, first throughout the Blackstone Valley and then eventually all over New England. To take advantage of water power sources, new mill villages were built where once only field and forest stood.

Here investors built not only mills, but homes, schools and churches for their workers. The lifestyle changes for these new mill workers, mostly Yankee farmers, were dramatic. On the farm, the seasons and the sun governed the workday. Once in the mill, the rhythm of nature was replaced by the tolling of the factory bell.

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Time became a commodity, to be strictly measured and sold at a set rate. The artisan's skill or farmer's produce no longer had as much value as the sheer amount of time a worker was able to stand beside their ceaseless machine.

As new and larger mills were constructed over the 1800's, new sources of workers were needed to fill them. Among the first new workers were Irish immigrants, many of whom had come to the area in the 1820's to help construct the Blackstone Canal. During the 1860's and 1870's, mill owners began to recruit French Canadians to leave their farms in Quebec and become mill workers in the Blackstone Valley. More workers followed them from nations like Poland, Sweden and Portugal. Even today, immigrants are still arriving in the Blackstone Valley from places like Central America and Cambodia to find work in the remaining mills here.

The arrival of these workers changed the face of the Blackstone Valley in many ways. New languages filled the air as different cultures and traditions were added to the story of the valley. Woonsocket provided the best example of this change, as it became in effect a French-speaking city. These new immigrants found themselves trying to strike a delicate balance between becoming Americans while preserving their traditional cultures.



Blackstone Canal, Uxbridge, MA

In conjunction with the Industrial Revolution was the need for a transportation revolution to cheaply and efficiently move heavy cargo between the mills on the river and the port of Providence. The river itself was impassible to large boats, and horse drawn wagons too slow and expensive.

The first solution was the construction of the Blackstone Canal in 1824-1828. The canal was faster than roads, but more importantly much cheaper. Each canal barge could haul 30-35 tons of cargo pulled by only two horses. To read the welcoming comments expressed by Colonel Merrick, Selectman for the Village of Worcester upon the arrival of the Lady Carrington, the first canal boat to arrive in the Port of Worcester. The canal, though an improvement was still flawed, and it is not until the coming of the Railroad that the industrial revolution can explode throughout the Blackstone Valley and America. The Boston to Worcester line in 1835, followed by the P&W in 1847 allowed for the fast, cheap and reliable transport of raw materials, finished goods and farm products between the villages of the Blackstone Valley and the ports of Providence and Boston. Rail service also made practical the conversion of the textile mills of the valley from waterpower to steam power by the 1860's and 1870's.

These forces, combined with a little hard work, made the Blackstone Valley an economic and industrial powerhouse. Today, the elements that turned this quiet valley into an industrial powerhouse are still present. The river, the canal, the mill villages, the agricultural landscape and many of the mills are still here – part of the living landscape of the Blackstone River Valley.

Source: <http://www.nps.gov/blac/historyculture/index.htm>

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DOCUMENT 3

Immigration and Settlers

The story of the Blackstone Valley is the story of people at work. Whether a Nipmuc warrior hunting along a pristine river, a Yankee craftsman inventing a new tool in his workshop, or a 12-year old girl from Quebec toiling at a loom, each added their voice, their sweat and their genius to the creation of the Blackstone Valley. Today, citizens from every corner of the world call the Blackstone Valley home. Here are just a few of their contributions to our tale.



Many early English settlers in the Blackstone River Valley built stone-ender houses, where a massive chimney took up an entire wall. This is the Eleazer Arnold House (1693) in Lincoln, RI.

NATIVE AMERICANS

The earliest residents of the Blackstone Valley were the Paleo-Indians, who arrived in this region about 12,000 years ago. By the early 17th century, three principal tribes lived here: the Narragansett, the Nipmuc and the Wampanoag. They followed a semi-nomadic life, occupying fields for the planting of corn, beans and squash until forced by soil depletion to move on. The Native Americans also depended upon hunting and fishing in the waters of the Blackstone River Watershed as other sources of food. The Native Americans' hold on the region was shattered by their defeat by the English settlers during the King Philip's War (1675-1676). Few sites of this era remain, but many of the trails created by the Native Americans gradually transformed into the modern roads we know today, and those with a trained eye can still see signs and reminders of those days. The Native Americans of the Blackstone River Valley did not disappear after the King Philip's War. The Nipmuc, Narragansett and Wampanoag peoples are all still active members of the Blackstone Valley Community.

EARLY ENGLISH SETTLERS

The first European settler in the Blackstone Valley was fittingly enough the Reverend William Blackstone, who built his home, Study Hall, in what is now Cumberland, Rhode Island in 1635. Blackstone was not however the first European to ever see this area, as other explorers, hunters, fisherman and trappers had previously visited the Blackstone River Valley. Roger Williams and a small band of followers established Providence within a year of Blackstone's settlement. Within a few years, scattered farms and a few small hamlets began to pop up all over what was then the American frontier. The majority of these early colonists were English and most, especially in Rhode Island, were seeking a place where they could live with a freedom of religion denied them in England or Massachusetts. There was a small number of people who came from other lands, including French Huguenots and Africans who came here in bondage. Settlers from England and Scotland would dominate the Blackstone River Valley through the early days of the industrial revolution. Almost everyone living in the Blackstone Valley during the colonial era farmed, but by the mid-

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1600s the settlers had begun to tap into the waterpower opportunities of the region with grist mills, saw mills and iron forges.

THE IRISH

The advent of the Industrial Revolution meant that the Blackstone River Valley needed a large number of mill workers. In the early years of the mill era, the majority of mill workers were native-born Yankees who were encouraged to come off the farm in return for a steady income. Within a few decades, however, the surplus of local labor did not meet the mills' demands. One of the first groups to answer the call for laborer was the Irish. The first major wave of Irish immigrants came to the Blackstone River Valley in the 1820s, and most came here to build the Blackstone Canal. These Irish canal diggers were professionals at their craft, having worked on canals in England, Ireland and many on the Erie Canal in New York. Upon their arrival here, the Irish found themselves subject to prejudices, particularly for their Catholic faith. At first, the Irish were allowed only to work at manual task, such as canal and railroad construction. Soon though, the need for labor forced mill owners to hire them. By the mid-1800s, the Irish were the major immigrant work force in the Blackstone Valley, a larger waves of immigrants continued to arrive here, especially during the Potato Famine years. As the Irish population grew, several of their entrepreneurs began to make their way up the ladder to management and mill owners. One example was Joseph Bannigan who created the small Woonsocket Rubber Company and became the President of U.S. Rubber.



Joseph Bannigan

THE FRENCH CANADIANS

The boom of the Blackstone River Valley was based on waterpower, but by the middle of the 19th Century, steam power had come to the forefront. Steam power meant that larger mills could be built, and that they no longer needed to be situated only along the river. Steam power also drove the railroads that allowed productivity to rise. This new productivity required even more workers, and mill agents traveled north to Quebec to recruit French Canadians to leave their farms and take up millwork. The offer was an attractive one, especially considering the short growing season of Quebec and the traditionally large families of the Quebecois. At first, many viewed this offer as a short-term opportunity to earn some needed cash before returning to farm life. While travel back to Canada was common, most immigrants made their home here and the French Canadian population in the Blackstone Valley boomed throughout the second half of the 1800s. Their communities were usually tight knit in an attempt to preserve their faith, language and culture. The French Canadians came to dominate certain towns, in particular Woonsocket, which evolved into what was effectively a French speaking city by 1900. The presence of this French speaking work force even

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helped to attract investors from Belgium and France to build mills in the region to avoid paying import tariffs. While the French accent is less commonly heard on the streets of the Blackstone Valley, the French Canadian community remains vital here.



Swedish steel worker in
Worcester's Quinnsigamond
Village.

THE SWEDES

Unlike most ethnic groups that scattered across the Valley, the Swedish immigrants concentrated in a few select communities. This was not due to bias, but because of they were specifically recruited to work in the steel and wire industries that were found mostly in Worcester, Providence and East Providence. The largest Swedish population in the region was found in Worcester's Quinnsigamond Village, home to Washburn and Moen's wire mill. Agents for the wire works and others in the steel industry went to the iron regions of Sweden starting in the 1870s and recruited experienced workers on a wholesale basis. As opposed to the French Canadians, the Swedes sought to assimilate themselves into American culture as quickly as possible by learning English and becoming active in local political activities. The Swedes however, did continue to celebrate their own traditions and culture, which has become a part of the tapestry of the Blackstone Valley.

EASTERN EUROPEANS

Around 1900, a new wave of immigrants arrived in the Blackstone River Valley, this time from Eastern Europe especially from Poland and the Ukraine. Once again, the lack of available farmland in their native homes was a major incentive for emigration. Another reason to come to America was the lack of a national identity back home. At the time, there was no independent Ukraine or Poland. Each was divided between Russia and the Austro-Hungarian Empire. Upon arrival here, Eastern Europeans found that it was their turn to take the lowest paying jobs in the textile mills until they too became a more established force. Today, active Polish Clubs still can be found throughout the Valley today, and St. Michael's Ukrainian Catholic Church in Woonsocket continues to be a community center.

21st CENTURY IMMIGRATION

Though the massive waves of immigrants seen in the days of the textile boom are gone, people continue to arrive in the Blackstone River Valley seeking their piece of the American Dream. Today immigrants arrive here from Central and South America, South East Asia and almost every other corner of the globe. During the 1970s few young people of the Blackstone Valley wanted to take jobs in what they viewed to be a dying textile industry. Several factories began to recruit master weavers from Colombia, weavers who learned their craft on Draper Looms of the same vintage as those here in the Blackstone Valley. Dominicans, Mexicans, Guatemalans, and residents from many other Latin American nations joined the Colombians. Today, some neighborhoods, like along Dexter Street in Central Falls, Spanish signs hang on storefront where French or Polish was once spoken. In the past 20 years, Hmong and Cambodian immigrants have also

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arrived in growing numbers, refugees from their war torn homelands. Each of these nationalities faces the same struggles and barriers that earlier immigrants had to overcome. They too will succeed, and enrich the culture of the Blackstone River Valley.

Source: <http://www.nps.gov/blac/historyculture/people.htm>



Old Slater Mill

SUPPLEMENTAL ON-LINE ACTIVITY: Complete an on-line tutorial about the Blackstone River Valley at: <http://www.nps.gov/blac/supportyourpark/bv101.htm>

Complete the questions after every two units of the course, print out your certificate and request your pin.

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Student Handout 2

NAME _____ DATE _____ PERIOD _____

Miles of Millstreams, Killingly Historical Society, 1976

Chapter IV, *The Age of Small Mills*, pgs 59 – 96 (Attachment)

1. What made the Quinebaug and Shetucket River Valleys attractive to those wishing to set up manufacturing businesses?
2. What types of products were manufactured in the mills located in Killingly during this period?
3. How did entrepreneurs or investors decide where to locate mills?
4. Who worked in the mills during this period and what type of environment did they work in?
5. Which other businesses grew out of the presence of the mills?
6. Describe at least three positive and three negative changes that came about because of the mills. Why were these changes positive? Why were they negative?
7. By what means did people and goods move into and out of Killingly?
8. From where did people and goods arrive in Killingly?

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9. What was the destination of people and goods from Killingly?
10. What is the direct connection between the Slaters of Rhode Island and industrialization in Killingly?
11. Compare and contrast the photos of Killingly's Young's Mill (pg 96) and the Jacobs Manufacturing Co. (pg 95) with the photos of the Wilkinson and Old Slater Mills in Rhode Island contained in Handout 1. What explains the similarities and differences?

Miles of Millstreams, Killingly Historical Society, 1976



Danielsonville, Connecticut 1877

12. INDIVIDUAL ASSESSMENT: In a minimum 1 page essay describe the similarities and differences between industrial development in the Blackstone River Valley and our own Quinebaug and Shetucket River valleys. Using evidence from your research activities explain why these similarities and differences might exist.