Lesson 11.7 "Kids Teach the Industrial Revolution"

Unit 11: Big Factories and New Industries

Lesson Objectives

- Students will work collaboratively to create mind maps that answer unit focus questions.

- Students will organize information from the unit and plan their projects.

- Students will create a product using text and images to teach kids about the Industrial Revolution in New Hampshire.

Lesson Competencies

- I can interpret and use information delivered orally or visually and respond by asking relevant questions, summarizing key points, or elaborating on ideas. (ELA 7)

- I can locate, organize, and analyze information from print and non-print sources to support my development of central ideas and subtopics. (ELA 8)

- I can integrate information, distinguish relevant-irrelevant information (e.g., fact/opinion), and (visually, orally, in writing) present what was learned. (ELA 8)

- I can use illustrations to add interesting and relevant details and elaboration to my storyline or focus. (ELA 4)

- I can develop my ideas using sources to gather concrete details, facts, quotes, and other information related to my focus. (ELA 5)

Essential Questions	How has New Hampshire come to be the way it is? How has New Hampshire been shaped by many voices?
Focus Questions	How did industrialization change the way people worked in New Hampshire? How did people change the way they lived because of industrialization in New Hampshire? How did New Hampshire modernize because of industrialization?
Estimated Time	Five 40-minute class sessions
Materials & Equipment	Chart paper to create mind maps on focus questions Mind maps worksheets and answer keys for reference as needed Project instructions and rubrics as needed Brainstorming worksheets as needed Materials to create projects, including historical images

Educator Introduction & Rationale

Between 1840 and 1920, the Industrial Revolution changed the way people lived and worked in New Hampshire and helped modernize the state. Among the first to experience the Industrial Revolution in the United States, New Hampshire changed forever with the expansion of railroads throughout the state and growth of industries in cities. People moved to the cities, bought machine-made goods, and walked on streets illuminated by electric lights at night. New Hampshire went from having one city with a population of around 8,000 people in 1840 (Portsmouth) to 10 cities with populations over 10,000 people in 1920.

This is the final lesson in Unit 11: Big Factories and New Industries and is a project lesson. Students will create either an alphabet book, an explainer video, or an illustrative narrative to teach other students about the Industrial Revolution in New Hampshire and its impact on people's lives. Although lessons 11.2 "Bells and Conveyor Belts," 11.5 "Growing Cities," and 11.6 "Modernization" are important for students to complete the project successfully, achievement of the learning objectives in all earlier lessons is recommended so that students produce more thoughtful and thorough projects.

These three projects have been designed to help different kinds of learners succeed. Whichever project students pick, all will review their learning on the unit and cement their knowledge as they figure out how to teach it to another. Students should use information from the unit to complete the project, including information from lessons the class did not complete. All student readings from the Unit 11 Learn It! pages will be helpful. See the Resources tab on the Unit 11 Unit Plan page on the educator side of the "Moose on the Loose" website for resources beyond the curriculum. Additionally, feel free to access the resources for this unit, which can be found on the "Find It!" page for Unit 11.

Adapt all the material in this lesson, as necessary, to meet the needs of the students in your classroom. Please note, lesson vocabulary and definitions are at the end of this document. You may wish to preview these with your students. There are no separate reinforcement or extension activities in this lesson, as those goals can be met by revisiting important topics in the unit or extending the project with additional materials.

Learning Activity

Activation **Experts in industrialization.** Inform the class that together you will create mind maps to review what the class has learned about the Industrial Revolution, using the unit's focus questions. Write the different focus questions on three sheets of chart paper and place around your classroom. Give each student a marker and have students walk around the room and use their class materials to answer the questions as best they can. Share and review as best for your class at the end of the activity. Keep mind maps available throughout the project and distribute blank mind maps for students who may need to record a mind map for their use during the project.

Direct Instruction **Experts in industrialization.** Since students are now experts in industrialization, they will choose a project to create that allows them to teach others what they've learned. Their choices are:
1. Alphabet Book
2. Illustrated Narrative
3. Explainer Video

Either assign projects or let students pick their type of project. This project can also be done in groups or as individuals; decide what is best for your class.

The alphabet book is preferred for students who need structure and succeed best following specific directions. The illustrated narrative might appeal to students who are storytellers; encourage them to think creatively about what kind of story they can write for this time and topic. Students who want to blend technology and history might choose the explainer video.

Note that there are different instructions and rubrics for each type of project. Hand out instructions and rubrics for projects and review as best for your class. Best practice is to help students envision what an "Above Standard" project might look like, using the rubric and instructions. Determine and be explicit about due dates; posting them in an appropriate place in the classroom works well. Each project also has a brainstorming page. Whichever projects students complete, encourage them to fully plan out their projects before launching into creating them.

Independent Practice **Creating the projects.** Give students time in class to plan and complete their projects. Some of the work may also be done at home. Give students access to the unit images for their projects; think also about allowing students to create their own images or search for other public domain images online.

Encourage creativity when students are constructing their projects but be sure to remind students that they will still need to be historically accurate in their projects.

Student Reading	**Research.** Direct students to make use of the primary and secondary sources included in the unit as they research and create their projects. Students can access all the sources for the unit through the Unit 11: [Find It!](#) page.
Summative Assessment	**Present the projects.** When students have completed their projects, they should grade themselves on the appropriate rubric before they hand in the projects and rubric.

Give students a chance to present their expertise. They can share these projects in groups, other classes, or even in a local public space like the town library or school lobby. Invite students to present their projects and teach others what they have learned in the Big Factories and New Industries unit. |
| **Reinforcement & Extension** | Provided through differentiation of project. |

Supporting Materials

New Hampshire Historical Society Resources

1. Award-Winning Amoskeag Cloth, 1870
2. New Hampshire's Clay Industries, 1950
3. Dover Factories, 1828–1830
4. Mills for Sale, 1860
5. Logging Workmen and Horse Team, undated
6. Inside a Paper Mill, circa 1927
7. Sawyer Woolen Mills, 1884
8. Women's Shoe Sole, 1938–1988
9. Hand-Woven Cloth, 1800–1860
10. Shoe Advertisement, circa 1875–1890
11. Weaving Machines at Amoskeag Manufacturing Company, 1872–1935
12. Varick's Store, 1882
13. Desk Telephone, circa 1910–1930
14. Electric Trolley Car, 1910
15. Lightbulbs, 1908
16. Artist in the Country, 1869
17. Stacked Lumber Waiting for Transport, 1894–1948
18. Bird's Eye View of Berlin, 1888

Other Resources

Sources courtesy of Manchester (NH) Historic Association:
- Shoe Machine, undated
- Woman at Loom, undated
- One Day's Production of Amoskeag Gingham, undated
- Mill Workers on Strike, 1922
- Amoskeag Mill Timetable, 1855

Sources courtesy of the Dover Public Library:
- Textile Mill Workers and Bobbins, undated
- New England Mill Girls, undated
- Spinning Room in a Textile Mill, undated
- Textile Mill Workers, undated
- Cocheco Mill Company Drivers, undated

Sources courtesy of the Library of Congress:
- Panoramic View of Manchester Millyard, 1903
- Loading Cotton Bales onto Trucks, 1939
- Stereoscope Factory, 1905
- Aerial View of Manchester, 1967
- Girl Working at Amoskeag Manufacturing Company, 1909
- Shoe Factory Advertisement, 1885

Sources from other organizations:
- Laconia Car Company, 1905–1945; Laconia Public Library
- Westinghouse Electric Advertisement, 1914; New-York Historical Society Library

Standards

"Moose on the Loose" Content:

- ✓ Students will understand that improved technology such as the steam engine and telegraph made transportation and communication faster and easier. They will understand that this led to rapid industrialization in the state and the world and the growth of various industries and manufacturing. (3-5.T5.1)
- ✓ Students will understand that industrialization in the 19th century changed patterns of settlement as well as the way people lived in New Hampshire. (3-5.T5.3)

"Moose on the Loose" Skills:

- ✓ Gathering, Interpreting, and Using Evidence (3-5.S1.1)
- ✓ Communicating and Critiquing Conclusions (3-5.S2.1, 3-5.S2.2)
- ✓ Effective Historical Thinking (3-5.S3.1)
- ✓ Understanding Economics and Economic Systems (3-5.S5.1)

New Hampshire Social Studies Frameworks:

- ✓ Economics: Cycles in the Economy (SS:EC:4:3.1)
- ✓ Geography: Places and Regions (SS:GE:4:2.2)
- ✓ Geography: Human Systems (SS:GE:4:4.1)
- ✓ US / NH History: Economic Systems & Technology (SS:HI:4:4.1, SS:HI:4:4.2, SS:HI:4:4.3)
- ✓ US / NH History: Social/Cultural (SS:HI:4:5.3)

NCSS Themes:

- ✓ Theme 3: People, Places, and Environments
- ✓ Theme 7: Production, Distribution, and Governance
- ✓ Theme 8: Science, Technology, and Society

C3 Frameworks:

- ✓ Determining Helpful Sources (D1.5.3-5)
- ✓ Exchange and Markets (D2.Eco.3.3-5)
- ✓ Human Population: Spatial Patterns and Movements (D2.Geo.8.3-5)
- ✓ Historical Sources and Evidence (D2.His.9.3-5)
- ✓ Gathering and Evaluating Sources (D3.1.3-5)
- ✓ Communicating Conclusions (D4.2.3-5)

Common Core ELA Grade 3:

- ✓ Integration of Knowledge and Ideas in Informational Text (RI.3.9)
- ✓ Range of Reading and Level of Text Complexity in Informational Text (RI.3.10)
- ✓ Text Types and Purposes in Writing (W.3.2, W.3.2b)
- ✓ Production and Distribution of Writing (W.3.4)
- ✓ Research to Build and Present Knowledge (W.3.8)
- ✓ Conventions of Standard English (L.3.2, L.3.2f, L.3.2g)

Common Core ELA Grade 4:

- ✓ Integration of Knowledge and Ideas in Informational Text (RI.4.9)
- ✓ Range of Reading and Level of Text Complexity in Informational Text (RI.4.10)
- ✓ Text Types and Purposes in Writing (W.4.2b, W.4.2d)
- ✓ Production and Distribution of Writing (W.4.4)
- ✓ Research to Build and Present Knowledge (W.4.8)
- ✓ Conventions of Standard English in Language (L.4.2, L.4.2d)
- ✓ Vocabulary Acquisition and Use (L.4.6)

Common Core ELA Grade 5:

- ✓ Integration of Knowledge and Ideas in Informational Text (RI.5.9)
- ✓ Range of Reading and Level of Text Complexity in Informational Text (RI.5.10)
- ✓ Text Types and Purposes in Writing (W.5.2b, W.5.2d)
- ✓ Production and Distribution of Writing (W.5.4)
- ✓ Research to Build and Present Knowledge (W.5.8)
- ✓ Conventions of Standard English in Language (L.5.2, L.5.2e)
- ✓ Vocabulary Acquisition and Use (L.5.6)

Lesson Vocabulary

assembly line　(noun) An arrangement of machines, equipment, and workers in which work passes from station to station in a direct line until the product is complete

capital　(noun) 1 The money and goods that a person owns
2 One of the four factors of production; the human-made items used to make a product, like factories and machines

child labor　(noun) Children working in ways that is physically, mentally, or socially dangerous and limits their education

consumer　(noun) Someone who buys products or goods

cottage industry　(noun) Making products to sell when people work in their own homes and use their own equipment

currency　(noun) Money in any form

efficiency　(noun) The ability to accomplish a job in a short period of time and with little effort

entrepreneurship　(noun) 1 Setting up a business
2 One of the four factors of production; the people and systems that connect the other three factors and help them grow

factors of production　(noun) Four economic resources necessary to create a successful product: capital, entrepreneurship, labor, land

factory　(noun) A building designed to house machines and other technology

garment worker　(noun) A person who works making items of clothing

hydropower　(noun) Using water to power machines and other technology

Industrial Revolution　(noun) A period of major change in the economy focusing on the change from making things at home to making things in factories

industrialization　(noun) The shift to making many products on a large scale, using machinery and factories

industry　(noun) 1 Making products by using machinery and factories
2 A group of businesses that provide a particular product or service

immigrant　(noun) A person who moves from one country to live in another country

labor　(noun) 1 Work, especially hard physical work
2 One of the four factors of production; the human workers needed to make a product

labor union	(noun) An organization that workers join to protect their rights and interests
land	(noun) One of the four factors of production; the natural resources needed to make a product
leisure	(noun) Using free time for enjoyment
lumber	(noun) Wood that has been processed from a tree into usable boards or pieces
manufacturing	(noun) Making products, especially with machines in factories
mass production	(noun) Making goods in large numbers, usually by machinery
mechanization	(noun) Replacing human workers with machinery and other technology
modernization	(noun) When society, people, and activities change to include recent technology or information
picket	(verb) To protest or demonstrate outside a location
product	(noun) An object made by labor, either by hand or by machine
raw material	(noun) Material that has not yet been processed or manufactured into a final form
rural	(adjective) An area of land that is primarily used for farming, where there are no large towns or cities
standardize	(verb) To measure items or activities based on one measurement of the item or activity
steam power	(noun) The use of water vapor to power machines and other technology
strike	(noun) When a group of workers organize together and stop working in order to force their employer to agree to their demands, usually for higher pay, shorter hours or safer working conditions
tenement house	(noun) Crowded living apartments, usually unsafe with poor sanitation
textiles	(noun) Types of cloth or fabric
urban	(adjective) A large town or city, where there are lots of buildings and people
urbanization	(noun) The growth of cities as a response to more and more people moving from the countryside into cities
water power	(noun) Using moving water to power machines
wood pulp	(noun) Very small pieces of wood crushed into a spongy, thick material that is used to make paper