

grades
4-6



America's Industrial Revolution

impact on technology and innovations



As you travel through *Greenfield Village*[®] and *Henry Ford Museum*[®], discover and examine the various factors that enabled the United States to grow from a pre-dominately agricultural, rural nation to a more industrial, urban one.

Greenfield Village

From Home to Factory Production

An important part of the Industrial Revolution was the change from making things by hand at home to making things with machines in factories or mills.

sites to visit: (see Greenfield Village map)

1 Daggett Farmhouse (1760)

- Describe the following steps in making cloth that take place in the Daggett Home:

Carding: _____

Spinning: _____

- Do you think carding and spinning were easy or hard? Why?

- Colonial families like the Daggetts took part in the market economy by buying things that they could not make or grow. Look around the home and find three things that they might have purchased or traded for.

2 Gunsolly Carding Mill (1850-1890)

- Compare and contrast carding at the Daggett Farm and at the Gunsolly Carding Mill.

drawing conclusions:

- How did new technology change the way products were made?

probe ►► | into the 21st century

Check the manufacturing labels on your own clothing. Where is your clothing made today? What are the advantages and disadvantages of making clothing there and in that way?

How do you think modern farm work is different from work on Susquehanna Plantation and Firestone Farm? How is it the same?

Agriculture: Regional Differences, Technological Changes

New farming methods and tools became available before the Civil War. However, many Southern plantation owners continued to use enslaved labor to plant and harvest their crops.

sites to visit: (see Greenfield Village map)

- 3 Susquehanna Plantation (1860)
- 4 Firestone Farm (1885)

- Compare and contrast Susquehanna Plantation and Firestone Farm



	Susquehanna Plantation	Firestone Farm
Location/Region	_____	_____
Who were the workers?	_____	_____
What types of crops did they grow?	_____	_____
What tools did they use?	_____	_____

drawing conclusions:

Choose and circle one of the following roles, and then answer the question below. As

- the owner of Susquehanna Plantation,
- an enslaved worker on Susquehanna Plantation,
- the owner of Firestone Farm,

should you purchase new tools and equipment to grow and harvest your crops? Why or why not?

Greenfield Village Continued

Transporting People and Goods

Railroads made possible the movement and migration of people, products and ideas.

site to visit: (see Greenfield Village map)

5 Detroit, Toledo & Milwaukee Roundhouse (1884)

- Why did railroads need roundhouses?

- How did railroads change the economy of the United States?

6 J.R. Jones General Store (1886)

- Find four products that are available in this store because of railroads:

What types of transportation are used today for moving people and products? What are the opportunity costs of these types of transportation for producers? What are the opportunity costs of these types of transportation for consumers?

- Railroads brought national-brand name products to Waterford. Which of those products do you still find on store shelves today?

- J.R. Jones faced competition from other Waterford businesses. Can you find some of the advantages or conveniences that this store offered to its customers in the 1880s?

drawing conclusions:

- How did railroads help producers?

- How did railroads help consumers?

Inventing for the People

New inventions and innovations during the Industrial Revolution changed the way we live.

sites to visit: (see Greenfield Village map)

7 Menlo Park Laboratory (1879)

- List two of Thomas Edison's innovations or inventions.

- Are they still used today? If so, how have they changed?

8 George Washington Carver Cabin (replica built in 1942)

Watch the short video about George Washington Carver when you enter the cabin.

- What were some of George Washington Carver's innovations?



- How did they help farmers or change farming?

drawing conclusions:

- Some have called Thomas Edison the Wizard of Menlo Park and George Washington Carver the Wizard of Tuskegee Institute. Why do you think they earned these nicknames?

probe ►► into the 21st century

Creativity and innovation are considered essential skills for students and workers today. What can you learn from the experiences of Thomas Edison and George Washington Carver about creativity and innovation that you can apply to your life today?



Henry Ford Museum

America's Industrial Revolution Itinerary

Industry and Mass Production

The mass production of Henry Ford's Model T changed the way things were made and the way workers worked.

sites to visit: (see Henry Ford Museum map)

- 1 From Craftmanship to Mass Production video
- 2 Made in America: Manufacturing

- Watch the one-minute video *From Craftmanship to Mass Production*. What is its main idea?

- Select a product in the Made in America: Manufacturing exhibit and complete these questions:

Type of product: _____

What materials is it made of?

Do you think it was made by hand, or was it mass produced? Why?

Who do you think used this product?

How has this type of product changed over time?

drawing conclusions:

- How do you think mass production changed the way people lived and worked?

probe ►► into the 21st century

Imagine a machine you would like to invent. What would your machine do? Or what would it make? Describe it in words or pictures.

Powering the Industrial Revolution

New power sources meant that mills and factories could now be built anywhere and could operate at anytime.

sites to visit: (see Henry Ford Museum map)

- 3 Tower of Power
- 4 Made In America: Power

- Find the Tower of Power.
How many light bulbs can you light up?

For how long?

- Look for the number of light bulbs that other engines or generators can light up.

Find and write the name of an engine powered by:

Steam: _____

Gasoline: _____

Water: _____

Wind: _____



drawing conclusions:

- What do you think were some of the advantages and disadvantages of these new power sources?

probe ►► into the 21st century

What are today's challenges for meeting our transportation and manufacturing needs while at the same time protecting the environment?

Henry Ford Museum Continued

Workers and the Assembly Line

New manufacturing methods such as the moving assembly line required new skills and new ways of working

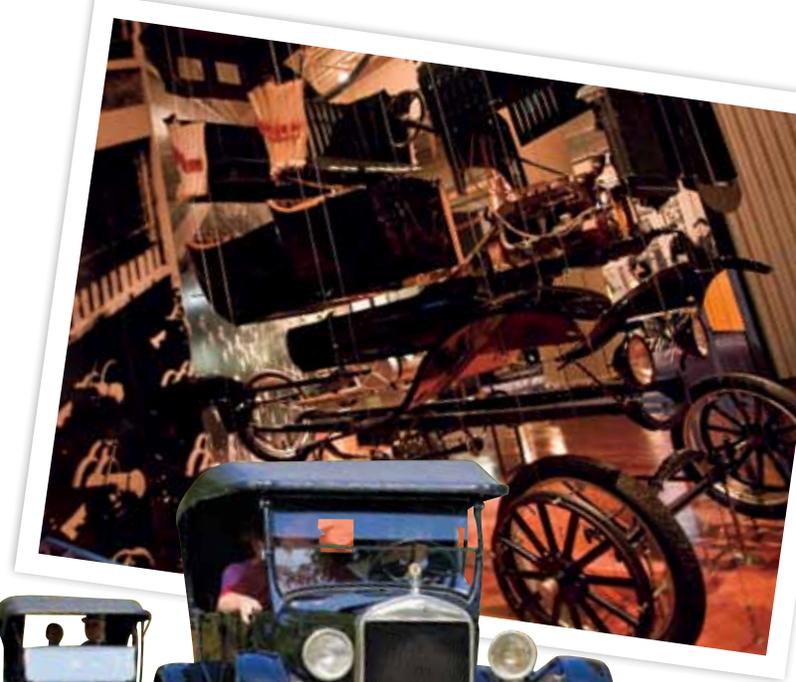
sites to visit: (see Henry Ford Museum map)

- 5 Managing Mass Production & People behind the Machines
- 6 Creating the Model T

- Find evidence in these exhibits that provides clues about automobile factory workers.

How do you think the division of labor and specialization on the assembly line changed the way people felt about their work?

- How did mass production affect the price of cars?



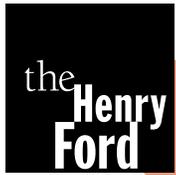
drawing conclusions:

- Do you think mass production was good or bad for workers? Why?

- Do you think mass production was good or bad for manufacturers? Why?

probe  into the 21st century

What challenges do workers face today?
What skills do you think workers need today?



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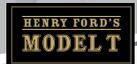


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Benson Ford Research Center

Josephine Ford Plaza



m

Chapel Lane

Christie Street

Junction Street

Bagby Avenue

Washington Blvd.

State Street

Main Street

Ford Road

Post Road

Christie Street

Maple Lane

Burbank Lane

Maple Lane

Burbank Lane



3

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b

Greenfield Village

- General Tickets & Membership
- Gift Shop
- Restrooms
- Information
- Public Telephone
- Mold-A-Rama Souvenirs
- Special Needs Rentals
- Emergency Issues**
please contact any staff member

sites to visit:

From Home to Factory Production

- 1 Daggett Farmhouse
- 2 Gunsolly Carding Mill

Agriculture: Regional Differences, Technological Changes

- 3 Susquehanna Plantation
- 4 Firestone Farm

Transporting People and Goods

- 5 Detroit, Toledo & Milwaukee Roundhouse
- 6 J.R. Jones General Store

Inventing for the People

- 7 Menlo Park Laboratory
- 8 George Washington Carver Cabin

If you have the time, visit

Home to Factory Production

- a Weaving Shop
- b Cotswold Forge
- c Armington and Sims Machine Shop

Agriculture: Regional Differences, Technological Changes

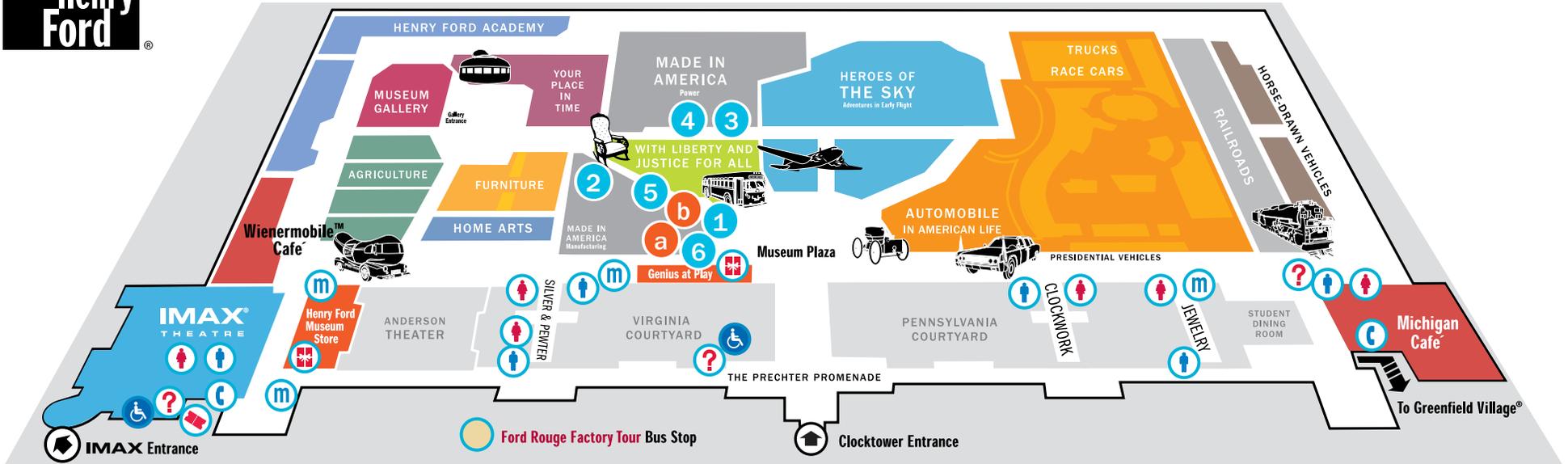
- d Soybean Lab

Transporting People and Goods

- Weiser Railroad
- e Smith's Creek Depot

Inventing for the People

- f Wright Cycle Shop
- g Wright Home



Henry Ford Museum

- General Tickets & Membership
- Gift Shop
- Women's Restrooms
- Men's Restrooms
- Information
- Public Telephone
- Mold-A-Rama Souvenirs
- Special Needs Rentals

Emergency Issues
please contact any staff member

sites to visit:

Industry and Mass Production

- 1** From Craftmanship to Mass Production, video
- 2** Made in America: Manufacturing

Powering the Industrial Revolution

- 3** Tower of Power
- 4** Made in America: Power

Workers and the Assembly Line

- 5** Managing Mass Production and People behind the Machines
- 6** Creating the Model T

If you have the time, visit

The Assembly Line and Workers

- a** Build a Model T Guided Activity
- b** Henry's Assembly Line Guided Activity

reflective Post-Visit Thought-Starter

How has the Industrial Revolution affected the lives of you and your classmates? Give examples.