

Name: \_\_\_\_\_

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## 8th Grade U.S. History

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### Ch. 12 Homework Packet The North- Industrial Revolution



#### Requirements:

- All margin questions must be answered in complete thoughts and sentences.
- Chapter Summary must be completed to the best of your ability.
- Students must make at least three marginal annotations or “mental moves” per page. Marginal annotations should be purposeful and can take the form of any of the following:

#### **Predicting:**

I predict that...  
In the next part I think...

#### **Visualizing:**

I picture...  
I can see...

#### **Questioning:**

A question I have is...  
Could this mean...

#### **Making Connections:**

This is like...  
This reminds me of...

#### **Identifying a Problem:**

I got confused when...  
I'm not sure of...

#### **Fixing Problems:**

I'll reread this part...  
I'll read on and check back...

#### **Summarizing:**

The big idea is...  
I think the point is...

## The North

### Section 1



#### MAIN IDEAS

1. The invention of new machines in Great Britain led to the beginning of the Industrial Revolution.
2. The development of new machines and processes brought the Industrial Revolution to the United States.
3. Despite a slow start in manufacturing, the United States made rapid improvements during the War of 1812.

### Key Terms and People

**Industrial Revolution** a period of rapid growth in the use of machines in manufacturing and production

**textiles** cloth items

**Richard Arkwright** an inventor who patented a large spinning machine, called the water frame, that ran on water power and created dozens of cotton threads at once

**Samuel Slater** a skilled British mechanic who could build the new textile machines

**technology** the tools used to produce items or to do work

**Eli Whitney** an inventor with an idea for mass-producing guns

**interchangeable parts** pieces that are exactly the same

**mass production** the efficient production of large numbers of identical goods

### Academic Vocabulary

**efficient** productive and not wasteful

### Section Summary

#### THE INDUSTRIAL REVOLUTION

In the early 1700s, most people in the United States and Europe made a living by farming. Female family members often used hand tools to make cloth for families. The sale of extra cloth earned money. Skilled workers such as blacksmiths set up shops to earn money by manufacturing goods by hand.

The **Industrial Revolution** would completely change that way of life. By the mid-1700s, cities and populations had grown. Demand increased for **efficient** and faster ways to make items.

**In what way were goods made in the early 1700s?**

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**Section 1, continued**

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**Textiles** provided the first breakthrough. **Richard Arkwright** invented a machine that lowered the cost of cotton cloth and raised production speed. The machine was large and needed a power source. Most textile mills were built near streams to use running water for power.

**In what way did Arkwright's machine make history?**

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**NEW MACHINES AND PROCESSES**

**Samuel Slater** knew how to build machines that were used in Britain to make cloth more efficiently. He emigrated to the United States, and with Moses Brown opened a mill in Pawtucket, Rhode Island. The mill made cotton thread by machine. It was a success. Most mills were in the northeast, the region with many rivers and streams for power.

**What information did Slater bring with him to the United States?**

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In the 1790s U.S. gun makers could not produce muskets quickly enough to satisfy the government's demand. Better **technology** was needed. **Eli Whitney** had the idea of manufacturing using **interchangeable parts**. Whitney assembled muskets for President Adams. His idea worked. **Mass production** was soon used in factories making interchangeable parts.

**What was Whitney's revolutionary idea?**

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**MANUFACTURING GROWS SLOWLY**

U.S. manufacturing spread slowly. People who could buy good farmland would not work for low factory wages. British goods were cheaper than American goods. However, during the War of 1812 many Americans learned that they had relied on foreign goods too much. In 1815 the war ended and free trade returned. Businesspeople wanted to lead the nation into a time of industrial growth.

**Why had Americans relied on foreign goods too much?**

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**CHALLENGE ACTIVITY**

**Critical Thinking: Rating** In comparing the three inventors in Section 1, rate them from 1 to 3. Defend your rating order in a brief essay.

## The North

### Section 2



#### MAIN IDEAS

1. The spread of mills in the Northeast changed workers' lives.
2. The Lowell system revolutionized the textile industry in the Northeast.
3. Workers organized to reform working conditions

## Key Terms and People

**Rhode Island system** Samuel Slater's strategy of hiring families and dividing factory work into simple tasks

**Francis Cabot Lowell** a New England businessman who built a loom that could both weave thread and spin cloth in the same mill

**Lowell system** Lowell's practice of hiring young unmarried women to work in his mills

**trade unions** groups of skilled workers that tried to improve members' pay and working conditions

**strikes** union workers' refusal to work until their employers met their demands

**Sarah G. Bagley** a mill worker who founded the Lowell Female Labor Reform Association

## Academic Vocabulary

**concrete** specific, real

## Section Summary

### MILLS CHANGE WORKERS' LIVES

Samuel Slater had difficulty hiring enough people to work in his mills. Young male apprentices often left because their work was boring. Slater began hiring entire families to move to Pawtucket.

Slater constructed housing for the workers. He paid workers in credit at the company store rather than paying them cash. This way Slater could reinvest money in his business. Children usually earned in one week what an adult was paid for one day's work. Slater's method was known as the **Rhode Island system**. Many northeastern mill owners imitated Slater's system.

**How much did child workers earn in factories?**

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Section 2, *continued*

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**THE LOWELL SYSTEM**

**Francis Cabot Lowell** developed a different approach called the **Lowell system**. It transformed the Northeast’s textile industry. With the aid of a company, Lowell built mills in Waltham and Lowell, both in Massachusetts. The factories were clean, and the workers’ boardinghouses were neat.

Many young women, called Lowell girls, journeyed from across New England to earn money instead of earning nothing on the family farm. The Lowell girls were encouraged to take classes and join clubs. However, they worked 12- to 14-hour days, and cotton dust caused health problems for them.

**Name one advantage and one disadvantage of Lowell mill work.**

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\_\_\_\_\_

**WORKERS ORGANIZE**

Factory workers’ wages went down as people competed for jobs. Immigrants also competed for jobs. The Panic of 1837 led to unemployment for many. Skilled workers started **trade unions** for protection. Sometimes union members held **strikes**. But most strikes were not very successful.

**Sarah G. Bagley** battled for the workers. She was the first highly ranked woman in America’s labor movement. In 1840 President Martin Van Buren had given a 10-hour workday to many federal employees. Bagley wanted the 10-hour workday for all workers.

The Unions won some **concrete** legal victories. Some states passed 10-hour workday laws. But companies often found ways to get around them. Other states did not pass the 10-hour workday laws. Union supporters kept fighting for improved working conditions during the 1800s.

**Why did workers’ pay decrease?**

\_\_\_\_\_

\_\_\_\_\_

**What did workers achieve in the mid-1800s?**

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**CHALLENGE ACTIVITY**

**Critical Thinking: Contrasting** Write a letter to the editor contrasting the lives of workers in Slater’s mills and Lowell’s mills.

## The North

### Section 3



#### MAIN IDEAS

1. The Transportation Revolution affected trade and daily life.
2. The steamboat was one of the first developments of the Transportation Revolution.
3. Railroads were a vital part of the Transportation Revolution.
4. The Transportation Revolution brought many changes to American life and industry.

## Key Terms and People

**Transportation Revolution** a period of rapid growth in the speed and convenience of travel

**Robert Fulton** an American who had the first full-time commercial steamboat in the United States

**Clermont** a steamboat that could travel up the Hudson River with no trouble

**Gibbons v. Ogden** the first U.S. Supreme Court ruling on commerce between states

**Peter Cooper** an American who built the *Tom Thumb*, a small steam train with great power and speed

## Section Summary

### TRADE AND DAILY LIFE

Along with the Industrial Revolution, the **Transportation Revolution** changed life in the 1800s by speeding travel and decreasing cost of shipping goods. People and information began traveling at much higher speeds. New towns and businesses sprang up with improved communication, travel, and trade. The steamboat and the railroad, new kinds of transportation, quickened the pace of American life.

### STEAMBOATS

In the late 1700s American and European inventors advanced steam-powered boats. **Robert Fulton** tested the *Clermont* in the United States. The successful test helped launch the steamboat era.

Why did information begin traveling at higher speeds?

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In what way might the pace of American life have increased?

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**Section 3, continued**

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Steamboats cut months off the time needed to travel from one place to another. They made trips up rivers cheaper and easier. Shipping goods from East to West, West to East, or overseas also was easier.

Sometimes the changes in transportation led to legal conflicts. In a landmark case, *Gibbons v. Ogden*, the court ruled that federal shipping laws overruled state shipping laws.

**How did steamboats affect shipping?**

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**AMERICAN RAILROADS**

In 1830 **Peter Cooper** built the *Tom Thumb*, a small but fast train. Excitement over rail travel grew in the mid-1800s. By 1860 about 30,000 miles of railroad tracks joined nearly every major eastern U.S. city. Trains took goods to faraway markets. Train travel averaged about 20 miles per hour and could be dangerous because of fires and derailment. But the dangers did not discourage travelers who wanted to go places faster.

**Circle the sentence that explains why travelers put up with the dangers of railroad travel.**

**TRANSPORTATION REVOLUTION BRINGS CHANGES**

Trains brought new residents and raw materials for industry to cities, spurring growth. Coal replaced wood as a source of fuel because of its greater efficiency. That led to growth in the mining industry. Steel was used for railroad tracks, so the demand for steel increased. Railroad transportation also helped logging expand because wood was needed to build new houses in the growing cities. Chicago, on Lake Michigan, became a hub for national transportation.

**What helped the steel industry?**

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**CHALLENGE ACTIVITY**

**Critical Thinking: Designing** Design a four-page brochure advertising the wonders of travel by steamboat or train.

## The North

### Section 4



#### MAIN IDEAS

1. The telegraph made swift communication possible from coast to coast.
2. With the shift to steam power, businesses built new factories closer to cities and transportation centers.
3. Improved farm equipment and other labor-saving devices made life easier for many Americans.
4. New inventions changed lives in American homes.

## Key Terms and People

**Samuel F. B. Morse** the inventor of the telegraph

**telegraph** a device that could send information over wires across great distances

**Morse code** a system in which dots and dashes are used to stand for each letter of the alphabet

**John Deere** a blacksmith who first used the steel plow design

**Cyrus McCormick** the developer of a new harvesting machine called a mechanical reaper

**Isaac Singer** an inventor who made improvements in the design of the sewing machine

## Section Summary

### TELEGRAPH SPEEDS COMMUNICATION

**Samuel F. B. Morse** invented the **telegraph** in 1832. Morse used the work of two other scientists in making this practical machine. Telegraphs carry pulses, or surges, of electric current over wires. The operator touches a bar, called a telegraph key, that sets the length of each pulse. At the wire's other end, the pulses change into clicks. A short click is a dot; a long click is a dash.

Morse's assistant, Alfred Lewis Vail, developed the **Morse code**. Some people did not think Morse could actually read messages sent across long distances. But during the 1844 Democratic Convention in Baltimore, Maryland, a telegraph wired news of a nomination to politicians who were in Washington. Soon telegraphs were relaying messages for

What was the invention of the telegraph based on?

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Did everyone accept the telegraph's power at first?

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**Section 4, continued**

businesses, the government, newspapers, and private citizens. Telegraph lines were strung on poles next to railroad tracks across the country.

**Why did telegraph messages become so widely used?**

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\_\_\_\_\_

**STEAM POWER AND NEW FACTORIES**

Most factories, operating on water power at first, had to be built near water. With the use of steam engines, factories could be built almost anywhere. Still, most were in the Northeast. By 1860 New England had as many factories as all of the South had. Many new factories were near cities and transportation centers, giving them better access to workers. In addition, by the 1840s new machinery could produce interchangeable parts.

**Why could newer factories be built almost anywhere?**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**IMPROVED FARM EQUIPMENT**

**John Deere** was selling 1,000 steel plows a year by 1846. **Cyrus McCormick** mass-produced his reapers in a large Chicago factory. His company advertised, provided service, and let customers buy on credit. The plow and the reaper allowed Midwestern farmers to harvest huge wheat fields.

**Circle the sentence that explains what new methods McCormick used to persuade people to buy his reapers.**

**CHANGING LIFE AT HOME**

The sewing machine was among the American inventions that made home life easier. **Isaac Singer** modified the sewing machine and worked hard to sell his product. Prices of many household items had decreased, giving many more people the ability to afford them.

**Why did the purchase of many household items increase?**

\_\_\_\_\_

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\_\_\_\_\_

**CHALLENGE ACTIVITY**

**Critical Thinking: Evaluating** Write a brief essay explaining which invention mentioned in this section made the biggest change in people's lives.

## The North

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### CHAPTER SUMMARY

#### The Industrial Revolution

Caused by



invention of machines

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led to



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#### The Transportation Revolution

Caused by



invention of the railroad

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led to



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### COMPREHENSION AND CRITICAL THINKING

As you read the section summaries, fill in the blanks above and answer the questions below.

- 1. Comparing** Compare one cause of the Industrial Revolution with one cause of the Transportation Revolution.

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- 2. Identify Cause and Effect** Name two ways in which the Industrial Revolution changed the lives of the American people.

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- 3. Identify Cause and Effect** Name two ways in which the Transportation Revolution changed the lives of the American people.

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