

LESSON 2

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SUMMARY

Grade 7, U.S. History through the Civil War

Time Allotment is optional: From one to two class periods.

Curriculum Areas: History, Computer Skills, and Language Arts

RATIONAL

Early Armory production changed dramatically with the inventions introduced in the early 1800's. These inventions ushered in a new system of production that utilized mechanized interchangeable parts instead of teams of skilled craftsmen.

GOAL

This lesson is a guided reading of "The American System." Students will be able to understand the contributions of the Springfield Armory to the development of the system of interchangeable parts in the United States.

OBJECTIVES

The web site and questions will guide students through reading, see videos, and a discussion of the value of interchangeable parts to manufacturing in the U.S.

MATERIALS

Worksheet / pen
Dictionary

Guided Reading/The American System

Go to Themes #1 "The development of technological processes at the Springfield Armory. Click on VII "Successful Achievement of Mechanized Interchangeable Production. Read and then answer these questions.

1. What did Thomas Blanchard invent?
2. Explain Simeon North's invention.

Go to the video entitled Blanchard Lathe II.
(For more detail refer to the video entitled Blanchard Lathe I.)

Click “Back” and then click on IV “Creation of standards of gauging in ‘Armory Practice’ at Springfield Armory”.

Read and then answer this question.

3. Explain what a gauge is and how it was used at the Springfield Armory in 1818. You may need a dictionary for this question.
 - This may be a great place to try the “Handmade vs. Interchangeable Parts Activity” just below the text.

Click “Back” and then click on VI “Interchangeable manufacture of Hall’s rifles 1820’s–1840’s”.

Read and then answer this question.

4. What was the connection between John Hall and Simeon North?

Click “Back” and then click on VIII “International recognition of American ‘Armory Practice’”

Read and then answer this question.

5. Why was the Robbins and Lawrence exhibit at the Crystal Palace Exhibition important to the American system of manufacturing?

Watch both videos by clicking on the pictures.

Discuss the questions and the videos with the students.

Assessment/Evaluation: When you have finished with the discussion of the questions, collect the worksheets. Have students add any information they have acquired during the discussion to their written work.

Answers

1. Thomas Blanchard invented a stock turning lathe.
2. Simeon North developed a milling machine for cutting metal parts.
3. A gauge is an instrument for measuring or testing. The first gauges at the Springfield Armory were used to manufacture components or parts for weapons. Earlier gauges were only used in measuring finished products, not the smaller parts of that product.
4. Simeon North, a private arms contractor, used Hall’s gauges to produce rifles that were practically interchangeable with the ones produced at Harper’s Ferry. The two different and distant factories were the first to produce a uniform product.
5. The Robbins and Lawrence exhibit was important because it was simple and had only six rifles. The remarkable part was that they were dismantled and reassembled to demonstrate interchangeability of parts to the world.

NAME _____

SPRINGFIELD ARMORY WORKSHEET

INDUSTRIALIZATION 2 /Walker

Web site <http://ccbit.cs.umass.edu/springfieldarmory/>

Go to Themes #1, and then click on VII. Read and then answer questions number 1 and 2.

1. What did Thomas Blanchard invent?

2. Explain Simeon North's invention.

Click on the video entitled "Blanchard Lathe II".

Click "Back" and then click on IV. Read and then answer question number 3.

3. Explain what a gauge is and how it was used at the Springfield Armory in 1818.
You may need a dictionary for this question.

Click "Back" and then click on VI. Read and then answer question number 4.

4. What was the connection between John Hall and Simeon North?

Click "Back" and then click on VIII. Read and then answer question number 5.

5. Why was the Robbins and Lawrence exhibit at the Crystal Palace Exhibition important to the American system of manufacturing?

Finish by watching both videos. Click on the pictures.
Be ready to discuss your answers with the class.