

Lesson Title: Manufacturing During WWII

Author: The National Museum of Military Vehicles



Mission:

This Lesson Plan has been developed by the National Museum of Military Vehicles (NMMV) to facilitate scholastic visits to our institution. This Lesson Plan provides instructors with the framework to develop a detailed lesson plan for a field trip to the NMMV, by providing references to Wyoming State educational standards. This Lesson Plan is intended to serve as a starting point, recognizing that every School District has different standards and formats for their Lesson Plans.

Description:

This lesson explores how American manufacturing powered the Allied victory in WWII. Through pre-visit classroom activities, a guided museum tour at the National Museum of Military Vehicles, and post-visit reflections, students examine industrial production, workforce shifts, and economic trade-offs. They analyze real artifacts, connect historical innovations to modern industry, and reflect on the societal impact of total war mobilization.

Grade Level: 6-8 and 9-12

Theme: American manufacturing powered the Allied victory

Lesson Duration: 2 class periods (Pre-visit and Post-visit; 45 minutes each) with a Visit to the National Museum of Military Vehicles

Learning Objectives

By the end of this unit, students will be able to:

- Describe how industrial manufacturing and production capacity contributed to the Allied war effort in WWII.
 - Identify specific examples of wartime manufacturing (vehicles, ships, weapons, logistics) and connect them to exhibits at NMMV.
 - Analyze the societal, economic, and workforce changes that manufacturing for a total war required (e.g., women in factories, mass production, conversion of civilian industry).
 - Reflect on how the legacy of that manufacturing era influences technology, industry, and society today.
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Key Words/Vocabulary

- Capital Resources: Man-made tools, machines, buildings, and equipment used to produce goods and services.
- Scarcity: The condition of having limited resources to meet unlimited wants and needs.
- Labor: Human effort used in production, including physical and mental work.
- Trade-off: Giving up one thing to get something else; a choice between alternatives.
- Land: Natural resources used to produce goods and services, like water, soil, minerals, and forests.
- Economy: A system for producing, distributing, and consuming goods and services in a society.
- Opportunity Cost: The value of the next best alternative that is given up when a choice is made.
- Production Possibilities Frontier (PPF): A graph that shows the maximum combinations of goods or services that can be produced with available resources and technology.
- Productivity: The amount of output produced per unit of input, like how much a worker can make in an hour.
- Propaganda: Information, often biased or misleading, used to promote a particular idea, cause, or point of view.

Pre-Visit (1 class period)

Materials

- NMMV video on WWII Manufacturing (from the museum's YouTube channel) — you may use this as a launch:

[NMMV video “WWII Showed How Strong American Manufacturing Is the Foundation of American Freedom”](#)

- Handouts for notetaking
- [A brief reading or summary of how the U.S. mobilized industry in WWII](#)
- [Map of museum layout](#) & [list of key galleries](#) to visit at NMMV.

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Activities

1. Hook / Engagement

- Show the video from NMMV to the class.
- Ask students: *“What surprised you about how American manufacturing changed during WWII? What questions do you have?”*
- Collect a few responses on a whiteboard: e.g., “How did factories switch from making cars to making tanks?”, “Who worked in the factories?” etc.

2. Mini-lecture / Discussion

- Provide a short overview using [Ken Burns Documentary](#): before WWII many industries produced consumer goods; during the war, U.S. industry shifted to full wartime production: vehicles, ships, aircraft, weapons, ammunition, etc.
- Discuss the idea of [“Arsenal of Democracy”](#) and how the U.S. manufacturing base was a major factor in the war effort.
- Highlight workforce changes: women and minorities entering factories; assembly-line innovations; standardization; scale of production.

3. Guided Questions

- Students think about/write about:
 - a) Name three major types of items manufactured for the war.
 - b) Why was having large-scale manufacturing capacity important?
 - c) How might a museum exhibit at NMMV show evidence of this manufacturing (for example: vehicles, assembly lines, logistics)?
 - d) What questions do you have that you hope to answer when visiting the museum?

4. Preparation for Museum Visit

- Provide each student (or pair) with a “scavenger prompt” sheet for the visit.
- Go over museum logistics: date/time of visit, gallery path, behavior expectations, how students will interact with the museum guide.

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On-Site Museum Visit (at NMMV)

With Museum Guide

- The museum guide will lead students through galleries emphasizing manufacturing, logistics, and production for WWII.

Student Activities

- Students (in pairs or small groups) use their scavenger prompt sheet: locate artifacts, ask the guide questions, record responses.
 - Encourage students to research or ask the guide: “Where was this vehicle built? How many units were produced? What factory? Who made it?”
 - At end of tour, gather students for a guided debrief: the guide will summarize how manufacturing capacity affected the war outcome.
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Post-Visit (1 class period + extension)

Reflection & Discussion

1. Class discussion

- What did you find most interesting or surprising about manufacturing in WWII?
- How did the museum experience (seeing real artefacts) deepen your understanding compared to classroom material?
- Which questions from your pre-visit worksheet were answered? Which remain?

2. Reflective Writing / Project

- Students write a short essay or journal entry: *“If I were a factory worker in the U.S. during 1943, what would my day be like, what would I produce, and how would I feel about it?”*
- Or: *Choose one exhibit you found and explain how it symbolizes the manufacturing effort in WWII — include the artifact, its factory origin, number produced, and how it impacted the war.*

Lesson Title: Manufacturing During WWII

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3. Extension Activity: Manufacturing Today

- Ask students to research a modern manufacturing plant (automobile, aerospace, etc.) and compare/contrast with WWII-era manufacturing: scale, workforce composition, automation, global supply chains.
- Present findings to class.
- [Wyoming and the WW2 Home Front](#) Article

4. Assessment

- A short answer: How did manufacturing enable the Allies to sustain a long war?
- A visual question: showing a photo of an exhibit or vehicle from the museum and ask students to identify what manufacturing story it illustrates.

Logistics & Tips for the Teacher

- For the teacher: assign students into pairs each with a different “theme” for scavenger hunt (e.g., vehicles, workforce, conversion of industry, logistics). This helps cover more ground.
- Provide clipboards/pencils or tablets for students.
- After the visit, schedule time for students to share their favorite find and question with the class, this helps cement learning.
- Consider having station “expert corners” in class post-visit where each pair sets up a display or slide about their scavenger find.

Wyoming Social Studies Standards for grades 6–8 and 9–12 by addressing key benchmarks in history, economics, and civic understanding.

Grades 6-8 Standards Alignment

Social Studies: History

- *SS8.1.1*: Analyze how major events are related to one another in time.

Lesson Title: Manufacturing During WWII

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- Students explore the shift from consumer goods to wartime production and its impact on WWII outcomes.
- *SS8.1.3*: Examine the causes and effects of conflicts and cooperation among groups and nations.
 - The lesson highlights how U.S. industrial capacity supported Allied cooperation and victory.

Social Studies: Economics

- *SS8.3.1*: Explain how scarcity and choice influence decisions made by governments and individuals.
 - Students discuss trade-offs in converting civilian industries to military production.
- *SS8.3.2*: Describe how supply and demand, productivity, and competition influence prices and wages.
 - Wartime manufacturing innovations and labor shifts (e.g., women in factories) illustrate these concepts.

Social Studies: Civics

- *SS8.2.3*: Describe the responsibilities of citizens and the importance of civic participation.
 - The lesson encourages reflection on the role of American workers and societal mobilization during WWII.

Grades 9-12 Standards Alignment

Social Studies: History

- *SS12.1.2*: Evaluate the causes and effects of historical events and developments.
 - Students analyze how manufacturing capacity shaped the war's trajectory and post-war society.
- *SS12.1.4*: Analyze how historical contexts shape and continue to influence people's perspectives.

Lesson Title: Manufacturing During WWII

Author: The National Museum of Military Vehicles



- The legacy of WWII manufacturing is connected to modern industry and technology.

Social Studies: Economics

- *SS12.3.1*: Analyze how scarcity and opportunity cost influence decision-making.
 - Students explore the economic shifts required for total war mobilization.
- *SS12.3.3*: Evaluate how economic systems impact the production and distribution of goods and services.
 - The lesson examines the transformation of U.S. industry and logistics during WWII.

Social Studies: Civics

- *SS12.2.4*: Analyze the role of citizens in shaping public policy and contributing to society.
 - Students reflect on workforce changes and civic responsibility during wartime.

English Language Arts (ELA) Standards

Grades 6-8

- *RI.6.1-RI.8.3*: Cite textual evidence, determine central ideas, analyze structure and purpose.
- *W.6.2-W.8.3*: Write explanatory and narrative texts using evidence and structure.
- *SL.6.1-SL.8.4*: Engage in collaborative discussions and present findings clearly.

Grades 9-12

- *RI.9.1-RI.12.3*: Analyze complex texts, evaluate arguments, and determine author's purpose.
- *W.9.2-W.12.3*: Compose analytical and narrative writing with clear reasoning and evidence.
- *SL.9.1-SL.12.4*: Initiate and participate in discussions, present information effectively.

Lesson Title: Manufacturing During WWII

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Science Standards (Engineering Design)

Grades 6-8

- *MS-ETS1-1*: Define criteria and constraints of a design problem.
- *MS-ETS1-2*: Evaluate competing design solutions using a systematic process.

Grades 9-12

- *HS-ETS1-1*: Analyze societal needs and constraints in design problems.
- *HS-ETS1-3*: Evaluate solutions based on prioritized criteria and trade-offs.

Career & Technical Education (CTE) Standards

Grades 6-12

- *CTE-MFG.01*: Understand manufacturing processes and systems.
- *CTE-MFG.02*: Apply safety, quality, and productivity principles.
- *CTE-WR.01*: Demonstrate communication, teamwork, and problem-solving skills.

National Museum of Military Vehicles (NMMV) – WWII Manufacturing Lesson Pack



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Museum Visit – Scavenger Prompt Sheet

Instructions: As you explore the NMMV galleries, use this sheet to record your findings. Work in pairs and fill out each section.

#	Prompt	Notes / Observations
1	Find a mass-produced vehicle or machinery (e.g., tanks, trucks, transport).	
2	Identify a factory converted from civilian to military production	.
3	Find an exhibit about workforce change (women, new labor roles).	
4	Observe how logistics or supply chains were handled.	
5	Sketch or describe an interesting artifact and its manufacturing story.	
6	Ask the guide: What was the biggest manufacturing challenge in WWII?	
7	Bonus: Find a U.S.-built vehicle used overseas—what does this show about production?	

Class Share & Reflection: Discuss what surprised you most and one question you still want to explore.

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Pre- & Post-Visit Reflection Worksheet

Pre-Visit:

1. List three facts you learned about U.S. manufacturing in WWII after watching the NMMV video:

a) _____

b) _____

c) _____

2. Why was large-scale manufacturing important during WWII?

3. What are two questions you hope to answer during the museum visit?

a) _____

b) _____

Post-Visit:

4. Describe one exhibit or artifact that stood out and why.

5. How did seeing real objects change your understanding of WWII manufacturing?

6. Was one of your pre-visit questions answered? Explain.

7. Imagine being a factory worker in 1943 — describe a day in your life.

8. How has WWII manufacturing influenced modern industry (give two examples)?

a) _____

b) _____
