

Modern Manufacturing Unit

[PDF](#) for resources mentioned in unit

	Day 1	Day 2	Day 3	Day 4	Day 5
Learning Target	I can identify what modern manufacturing is and the key components of the manufacturing cycle	I can analyze and research a manufacturing tool or machine to create a presentation	I can present my findings to my classmates and answer questions about my research	I can identify manufacturing industries in America and their influence on the economy.	I can research a local Idaho manufacturing company to create a slogan or jingle that highlights the manufacturing company.
Idaho Standard	Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.	Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.	Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.	Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.	Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.
Agenda	<ol style="list-style-type: none"> The Manufacturing Process (PPT) for Activity 1 Terms/Definitions from handout (page 8) Explain Manufacturing Cycle Diagram from handout (page 9) 	<ol style="list-style-type: none"> Applying the Manufacturing Cycle Create presentation, poster, or write a paper on one of the machines listed in the handout 	<ol style="list-style-type: none"> Present in small groups or whole class 	<ol style="list-style-type: none"> Idaho Manufacturing PPT Watch videos on GoGo squeeZ and Johnson Thermal Systems Handout list of Idaho Manufacturers and have students decide which company they'd like to research 	<ol style="list-style-type: none"> Divide the class into groups of 2-4 people Brainstorm: Each group decides what local Idaho manufacturing company Handout Activity 6 (page 17) Research and develop a jingle or a slogan
Visuals / Materials	<ul style="list-style-type: none"> The Manufacturing Process PowerPoint Dream it Do it handouts (pages 8-9) 	Applying the Manufacturing Cycle from Dream it Do it handout (pages 10-11)		<ul style="list-style-type: none"> Idaho Manufacturing PPT Idaho Manufacturers Handout GoGo squeeZ video : https://youtu.be/KKYdREQGL30 Johnson Thermal Video: https://youtu.be/SssoJpc7CLs 	Activity 6. See Dream it Do it PDF linked above

Lesson Overview	Day 1	Day 2	Day 3	Day 4	Day 5
Mini-Lesson / Essential Question	<p>EQ: What is modern manufacturing?</p> <p>You will do a brief PPT on what modern manufacturing is. Students should take notes</p>	<p>EQ: What is modern manufacturing?</p> <p>Go over expectations / activity 2</p>	<p>EQ: What is modern manufacturing</p>	<ol style="list-style-type: none"> 1. Review PPoint with students about manufacturing companies in Idaho 2. Have students watch Johnson Thermal and Gogo squeeZ videos 3. Have students discuss questions: <ol style="list-style-type: none"> a. How does this fit with you learned about manufacturing earlier? b. How does this affect what you think of manufacturing? c. Did you know Idaho had manufacturing like this? 	<ol style="list-style-type: none"> 1. Review expectations of assignment from Activity 6
Independent Work	<ol style="list-style-type: none"> 1. Students complete the “Manufacturing Terms & Definitions” by using their notes or by researching with a partner 2. Then give students Handout 1: The Manufacturing Cycle (From Dream it Do it) 3. Review each step from the Manufacturing Process PPT 	<ol style="list-style-type: none"> 1. Students choose one of the tools or machines listed in the activity 2. They must include the following in their presentation: <ul style="list-style-type: none"> • Visual of machine • Explain where and by who the machine is used • Describe a product made by this machine • Where is this product made? • Explain which portion of the manufacturing cycle this machine is used for (could be more than one focus) 	<p>Have students not presenting take notes and ask questions after presentations</p>	<ol style="list-style-type: none"> 1. After class discussion have students look through the Idaho Manufacturer handout and decide which company they’d like to research. 2. Have students either create a PPT or business card that includes the following items: <ul style="list-style-type: none"> • Name of company • One product the company makes / produces • List what the company does • Location • Draw a picture of the product • List 2 interesting facts about the company’s history 	<ol style="list-style-type: none"> 1. Each group needs to choose an Idaho manufacturing company (Idaho Manufacturing Companies handout) 2. Research the company and take notes on the handout 3. Use research to develop a slogan or jingle that highlights the company 4. Be prepared to present it to the class and explain why your group chose to highlight certain aspects

	Day 6	Day 7	Day 8	Day 9	Day 10
Learning Target	I can recognize manufacturing careers and organizations to gather relevant information	I can recognize manufacturing careers and organizations to gather relevant information.	I can gather information from various sources to determine key manufacturing careers.	I can recall information about manufacturing to create an essay on “Does Manufacturing Value to the Future American Workforce and Economy? Why or Why not?”	I can recall information about manufacturing to create an essay on “Is Manufacturing Important to the US Economy? Why or Why Not?”
Idaho Standard	<p>Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.</p> <p>CCS W8: Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of other while avoiding plagiarism and following a standard format for citation.</p> <p>CCS W6: Use technology, including the internet, to produce and publish writing and present the relationship between information and ideas clearly and efficiently</p>	<p>Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.</p> <p>CCS W8: Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of other while avoiding plagiarism and following a standard format for citation.</p> <p>CCS W6: Use technology, including the internet, to produce and publish writing and present the relationship between information and ideas clearly and efficiently</p>	<p>Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.</p> <p>CCS W8: Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of other while avoiding plagiarism and following a standard format for citation.</p> <p>CCS W6: Use technology, including the internet, to produce and publish writing and present the relationship between information and ideas clearly and efficiently</p>	<p>Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.</p> <p>CCS W8: Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of other while avoiding plagiarism and following a standard format for citation.</p> <p>CCS W6: Use technology, including the internet, to produce and publish writing and present the relationship between information and ideas clearly and efficiently</p>	<p>Standard 3: Economics (WHC/GEH) Students in World History and Civilization explain basic economic concepts and identify different influences on economic systems.</p> <p>CCS W8: Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of other while avoiding plagiarism and following a standard format for citation.</p> <p>CCS W6: Use technology, including the internet, to produce and publish writing and present the relationship between information and ideas clearly and efficiently</p>
Agenda	<ol style="list-style-type: none"> Review Idaho Manufacturing Careers, Wages, and Education Infographic Expectations for Career Stations Stations 	<ol style="list-style-type: none"> Finish Stations from Dream it Do it Handout (pages 20-26) 	<ol style="list-style-type: none"> Handout Johnson Thermal Systems and GoGo squeeZ activity sheet Watch Johnson Thermal Systems video Complete the worksheet using the video and briefly researching each career 	<ol style="list-style-type: none"> Quiz/Worksheet (Page 29 – 30) in Dream it Do it Essay/Wrap up 	<ol style="list-style-type: none"> Complete Essays Peer Review/Edit/Revise
Visuals	<ul style="list-style-type: none"> Handout 1 (Idaho Manufacturing Careers, Wages, and Education infographic) Station Articles (Page 20 – 26 in Dream it Do it PDF) 		<ul style="list-style-type: none"> Johnson Thermal Systems video GoGo squeeZ video 	<ul style="list-style-type: none"> Activity 9 (pages 29-30 in Dream it Do it) Making the Future Video 	

Lesson Overview	Day 6	Day 7	Day 8	Day 9	Day 10
Mini-Lesson / Essential Question	<ul style="list-style-type: none"> Go over handout 1 with students to introduce manufacturing careers and possibilities Have students take notes on each career, focusing on: <ul style="list-style-type: none"> Education / Program length What career field it is Possible career titles Average national earnings or earnings in Idaho 1 question they have 	<ul style="list-style-type: none"> Review expectations again 	<ul style="list-style-type: none"> Review questions with students on handout so they know what key information to look for 	<ul style="list-style-type: none"> Have students test their knowledge using Activity 9 (pages 29 – 30) Making the Future Manufacturing Video 	
Independent Work	<ol style="list-style-type: none"> Have students work in small groups or individually to rotate through the stations. Students need to analyze each career and take notes on the following: <ul style="list-style-type: none"> Education / Program length What career field it is Possible career titles Average national earnings or earnings in Idaho 1 question you have 	<ol style="list-style-type: none"> Have students finish the stations If you have time, have students choose one career they might want to go into and have them research one of the career possibilities and share with a classmate 	<ol style="list-style-type: none"> Watch the video and answer the questions Students can research the careers listed on the worksheets. Students must summarize each career in two sentences. 	<ol style="list-style-type: none"> After watching the video, have students brainstorm ideas of <ul style="list-style-type: none"> How did people figure out their potential with careers in manufacturing? How is the manufacturing industry tapping into different parts of the country and economy? Then have students write an essay using their notes and handouts from the unit to answer the question: Does Manufacturing Value to the Future American Workforce and Economy? Why or Why Not? <ul style="list-style-type: none"> Use textual evidence from your research and notes to support your answer Give at least 3 examples in your essay of why manufacturing offers value to the future workforce and economy 	Students finish working on their essay. If time allows, have students peer review & edit each other's essays.

Sources

An Introduction to Manufacturing: Teacher Guide [PDF]. (2012). Bemidji: Bemidji State University.

http://www.dreamitdoitok.org/uploads/2/8/1/4/28146813/teacher_toolkit.pdf

Videos

GoGo squeeZ: <https://www.youtube.com/watch?v=KKYdREQGL30>

Johnson Thermal Systems: <https://www.youtube.com/watch?v=SssoJpc7CLs>

Making the Future Part 2: What Future Will You Create? <https://youtu.be/J1GbyhdHuBg>

Handouts

Manufacturing Careers in Idaho <https://forgingfuturesidaho.org/talent-pipeline-services/for-educators/>

Manufacturers in Idaho <https://forgingfuturesidaho.org/talent-pipeline-services/for-educators/>

Career Investigation – Johnson Thermal Systems <https://forgingfuturesidaho.org/talent-pipeline-services/for-educators/>

Career Investigation – GoGo squeeZ <https://forgingfuturesidaho.org/talent-pipeline-services/for-educators/>

PowerPoints

The Manufacturing Process <https://forgingfuturesidaho.org/talent-pipeline-services/for-educators/>

Idaho Manufacturing <https://forgingfuturesidaho.org/talent-pipeline-services/for-educators/>