

Made in Eastern Oregon

Through partnership with:
Eastern Oregon Workforce Board
Intermountain Education Service District
Regional Manufacturing Teachers
Blue Mountain Community College

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Overview

Made in Eastern Oregon is a set of information and lessons for teachers to use in combination with the Made in Eastern Oregon Video Series. Set up as an instructor accessible Canvas course, teachers can copy the course directly into their personal Canvas account to adjust and build as needed with editable files, pages, and resources. This document is simply the content of the online Canvas curriculum, but in a document form for downloading with active links.

It's hoped that this curriculum is more of a starting point for a larger regional resource bank for Eastern Oregon manufacturing teachers.

It includes:

1) Student Perceptions Regarding Manufacturing.

Manufacturing perceptions pre-survey, combined with a general overview of what manufacturing is and how the public views this industry and jobs. This is a great jumping off point for introducing students to these high-wage high-demand jobs, and how they may fit into careers within the manufacturing sector.

2) The Complete Made in Eastern Oregon Video Series

Six separate short videos highlighting manufacturing companies in our region. There's a worksheet with questions that go along with the videos. Although not covering all manufacturing in the Eastern Oregon region, it's a good starting point to see where things are happening and what unique products are created in our own backyard.

3) Company Research Activity

This module and accompanying worksheet are designed to give students the ability to choose a manufacturing business within our region that they are interested in, and learn a bit more about it.

4) Manufacturing Technologies

What types of tools and equipment are used within the manufacturing sector? What does the manufacturing cycle look like? Students will be able to apply the manufacturing cycle through a hands on activity, and learn a bit more about bringing a product from idea to reality.

5) Careers in manufacturing

Videos links for manufacturers returning to the US and what skills are needed to apply for many open manufacturing jobs, combined with a student activity researching Columbia Basin regional technical college programs will help students see the workforce need as well as pathways to get those jobs.

Some content is original, and other content is adapted from Made in Florida, Dream it. Do it., and other online resources as appropriate to fit the needs of each unit.

For teachers to access the curriculum, they should use this link: <https://imesd.instructure.com/enroll/X7YKXK> as many links on the following pages require access to the curriculum.

Email addresses need to be recognized within IMESD, and it can be added on for any regional CTE (Career and Technical Education) instructor. For adding an email into the system, teachers should contact shane.weston@imesd.k12.or.us or joel.sou@imesd.k12.or.us.

UNIT 1: Student Perceptions Regarding Manufacturing

- **Manufacturing Perceptions Survey - (w/student worksheet)**

[Made in Eastern Oregon Pre-Survey \(.pdf\)](#)

[Made in Eastern Oregon Pre-Survey \(.docx\)](#)

The links will access the files directly, and initiate a download. The .docx file will allow editing as needed to adjust for different classes.

This pre-survey is designed to gauge student thoughts about manufacturing, and may also serve as a post survey to follow-up.

- **What is Manufacturing? - 10 min video**

The following is an 11 minute video created by Utah Manufacturing Association. Although this is not Eastern Oregon specific, it gives an overview of types of positions and opportunities that are also very much available in our region.

[What is manufacturing?](#)

- **Public Perceptions on Manufacturing – (Instructor supplementary data only)**

Review the embedded info-graphics regarding public perception of US Manufacturing. These are industry info-graphics based on a yearly study, and are meant to help the US Manufacturing industry engage the public.

The first is from 2014, and the second is recent to this curriculum creation in 2017. Both were created by Deloitte. These are meant as supplemental data for student handouts and discussions, and can also be posted in the classroom.

[2014 Public Perceptions](#)

[2017 Public Perceptions](#)

Here is also the extended data from the 2017 Public Perceptions Study. It's worth a look for a more in-depth look into data collected from the study. Information is still easily accessible to high school students.

[2017 Public Perceptions Study \(Full\)](#)

- **Discover US Manufacturing - (w/student worksheet)**

Before taking a look specifically at Eastern Oregon, it's important to look at US manufacturing in general.

This lesson will guide you to 12 different US manufacturing companies. Take a look at their websites; find where they are located in the US along with their corporate headquarters. What do they manufacture? What industries are there associated with? Do their products show up in your home?

Print out the worksheet, and take a look online. There are just a few details to collect on each company, so use any extra time to explore each company a bit. These are companies rated in the [Top 50 Manufacturing companies in the US for 2017](#).

[Discover US Manufacturing \(docx\)](#)

[Discover US Manufacturing \(pdf\)](#)

UNIT 2: The Complete Made in Eastern Oregon Video Series

- This unit contains videos created during student field trips to various manufacturers in Eastern Oregon, with a highlight on Baker and Morrow counties. It's meant as an introduction to a few of the manufacturing businesses within our region.

Made in Eastern Oregon Video Series

Assignment for students to complete while watching the videos:

[Made in Eastern Oregon Video Tour Questions.pdf](#) 

[Made in Eastern Oregon Video Tour Questions.docx](#) 

[Boardman Foods and Tillamook Cheese](#)

[Cutters Edge; Baker City](#)

[Behlen Country; Baker City](#)

[Natural Structures Inc.; Baker City](#)

[Power Production; Boardman](#)

[Workforce Training Center BMCC: Boardman](#)

[Conclusion: Made in Eastern Oregon](#)

- Links to company websites highlighted in the videos, for possible further research/enrichment exercises:

[Boardman Foods](#)

[Tillamook Dairy](#)

[Cutters Edge](#)

[Behlen Country](#)

[Natural Structures](#)

[Pacific Power](#) -- [Coyote Springs Power Plant](#)

UNIT 3: Eastern Oregon: A Hotspot for US Manufacturing

- This activity is designed for students in small groups to research a regional manufacturing company and jobs available there, then present findings to the class.

A company list and website links are included.

Through this activity, students will learn about a specific company through research. They will also learn about other companies through presentations from other groups.

The PowerPoint presentation is meant for discussion and contains only company logos based on their location within our region:

[Regional Manufacturing Companies.pptx](#) 

The student activity/worksheet is available in pdf and Word format:

[Digging Deeper - Regional Companies.docx](#) 

[Digging Deeper - Regional Companies.pdf](#) 

- The following are supplemental links for instructor use, and are organized by county or city.

Manufacturing companies in Baker County, Oregon:

[Cutters Edge](#)

[Natural Structures](#)

[Behlen Country](#)

[Marvin Wood Products](#)

[Ash Grove Cement](#)

Manufacturing companies in Union County, Oregon:

[Boise Cascade](#)

[Skip-Line, Inc](#)

[Barreto Manufacturing](#)

[Elkhorn Valley Windfarm](#) (North Powder)

[Rich's Portable Cabins](#) (North Powder)

Manufacturing companies in Morrow County, Oregon:

[Threemile Canyon Farms](#)

[Portland General Electric](#) (Coal fire plant, and Coyote Springs NG plant)

[Boardman Foods](#)
[Calbee North America](#)
[Pacific Ethanol-Columbia](#)
[ZeaChem](#)

Manufacturing companies in Hermiston, Oregon:

[JM Eagle](#) (Umatilla)
[NW Metal Fabricators](#)
[Lamb Weston](#)

Manufacturing companies in Pendleton, Oregon:

[Keystone RV](#)
[Hill Meat Company](#)
[Newly Wed Foods](#)
[Barhyte Specialty Foods](#)
[Grain Craft](#)
[Blue Mountain Lumber Products](#) (reith)
[Boise Cascade](#) (Pilot Rock)
[Pendleton UAS Range](#)

- Manufacturing companies organized by sector

Food Processing

[Boardman Foods](#)
[Calbee North America](#)
[Lamb Weston](#)
[Hill Meat Company](#)
[Newly Wed Foods](#)
[Fry Foods](#) (Ontario)
[Barhyte Specialty Foods](#)
[Grain Craft](#)
[Kraft Heinz](#) (Ontario)
[Smith Frozen Foods](#)

General information regarding the growing regions in Oregon: [ORGrowingRegions.pdf](#) 

Energy Production

Hydropower, Wind Farms, and Natural Gas Power plants provide the energy required to power machinery and turn raw materials into a finished product. This power is then distributed by various local power companies to homes and businesses across our region.

Hydropower

[Hydroelectric Power on the Columbia River](#)

[Army Corps of Engineers Columbia Dams](#)

Wind Farms

[Wind Farms \(USGS Interactive Map\)](#)

[Wind Farms in Oregon](#) (And a launching spot for EXTENSIVE information on energy in Oregon)

[Elkhorn Valley Windfarm \(Union County\)](#)

[Wind Power Planning \(Umatilla County\)](#)

Natural Gas and Coal

[Boardman Coal Plant](#)

Other projects, including Boardman Solar Power (in planning phase)

[Proposed or operating power production/transmission](#)

Wood Products

[Marvin Wood Products](#)

[Boise Cascade](#)

[Blue Mountain Lumber Products](#)

UNIT 4: Manufacturing Technologies

- Tools and Machines

What types of tools and machines are used in manufacturing goods? This activity will allow some research into different equipment, and what it's used to make. After viewing the video students will work in small groups to research a machine or tool, and create a short presentation to educate the class on this piece of equipment.

The video is a sample of automated machines, and the worksheet link is below:

[24 of the Most Mesmerizing Machines](#)

Students Worksheet for Tools and Machines:

[Machines and Tools.docx](#) 

[Machines and Tools.pdf](#) 

- Manufacturing Cycle

a) Manufacturing Cycle Definitions

The next section jumps into the manufacturing process and definitions pertinent to student understanding. After reviewing the process and definitions, students are able to try out the manufacturing cycle in small groups by creating and promoting a prototype car.

General student worksheet for the (six step) manufacturing cycle, and a matching of words to definitions.

[The Manufacturing Cycle Definitions.docx](#) 

[The Manufacturing Cycle Definitions.pdf](#) 

b) Manufacturing Cycle Activity

This activity gets students into trying the manufacturing cycle, and working in production teams. It requires fairly simple supplies which are available locally: Cardboard, Duct Tape, CDs, Rubber bands, etc. Check the supply list, and adjust as needed.

[Manufacturing cycle Activity.pdf](#) 

[Manufacturing cycle Activity.docx](#) 

UNIT 5: Careers in Manufacturing

- Manufacturing Jobs in the US

Two videos pertinent to the current state of manufacturing in the us, and how many open positions are remaining unfilled. Why some manufacturers are returning to the U.S.

[Why some manufacturers are returning to the U.S](#)
[Three million open jobs in U.S., but who's qualified?](#)

- Regional Schools and Training Programs

Student activity and worksheet to research regional schools and training programs for manufacturing careers.

Student worksheet:

[Career Training.docx](#) 

[Career Training.pdf](#) 

School links if needed:

[Blue Mountain Community College](#) -- Pendleton, Hermiston
[BMCC Career Pathways](#)

- Industrial and Engineering Systems
- Various including Electrical and plant operations

[Walla Walla Community College](#)

[Workforce Training Programs](#)

- Energy -- wind, plant operations, electrical
- Industrial Maintenance
- Engineering Technology

[Columbia Basin Community College](#) -- Tri-Cities

[Perry Technical Institute](#) -- Yakima

A variety of [programs](#) for direct to workforce training

[Treasure Valley Community College](#)