

Activities/ Resources for Outcomes

Activities/ Resources for Outcome #1

Contextualized Reading Module Outcome #1 Activity 1

Student uses Materials Handling Equipment section as a handout from J. J. Keller's *OSHA Safety Training Handbook* (please note this handbook is not included in the curriculum and must be purchased. Check the OSHA website for free downloads on safety).

Student examines title, subtitles, and pictures.

Student Name: _____

Scan the reading on Materials Handling Equipment to locate answers to the Question List.

Question List

1. What does OSHA mean, and why is it important?
2. What are some hazards an equipment operator might encounter?
3. What types of equipment require frequent inspections?
4. Is a periodic inspection more or less complete?
5. What are the characteristics of a load?
6. What precautions must be followed for maintenance procedures?
7. What are two operating procedures?
8. What are two points for working safely?

Activities/ Resources for Outcome #2

Contextualized Reading Module Outcome #2 Activity 2

Student practices identifying main ideas and finding important details by using
Workplace Skills: Reading for Information Levels 3 and 4 from McGraw-Hill publishers.

Contextualized Reading Module Outcome #2 Activity 3

This is a jigsaw activity. Students use *Trelleborg Sealing Solutions Streamwood Employee Handbook* as a handout. **See PDF file Trelleborghandbook.**

Students get into small groups of 3 or 4. Each group chooses a section of the *Handbook*. For example, the sections chosen by four groups of students might be: Employment Status, Personal/Sick Leave, Vacation, Attendance and Punctuality. Students in each group read their group's selection and become experts on the information in the section they have chosen.

Students regroup. The new groups include an expert on each topic. Students orally report and share the information they have read.

Contextualized Reading Module Outcome #2 Activity 4

Students use contents of MSDS Lesson Plan:

- Reading an MSDS **Use PDF File: ToolkitMSDS**
- Biodiesel Sample Material Safety Data Sheet Questions. **Use PDF File: MSDS data sheet**
- Biodiesel Sample Material Safety Data Sheet Activity: Using the MSDS section title strips, students match each with a section of the MSDS document on which the section titles are deleted. **Use PDF Files: MSDS data sheet and MSDS Data sheet activity.**
- Household Products Activity Assignment
- MSDS Writing Assignment

Biodiesel Sample Material Safety Data Sheet Questions



1. CHEMICAL PRODUCT

What is the General Product Name? _____

2. COMPOSITION/INFORMATION ON INGREDIENTS

Does this product contain hazardous materials? _____

3. HAZARDS IDENTIFICATION

List the potential health effects if you get Biodiesel in your eye.

4. FIRST AID MEASURES

If you get Biodiesel on your skin, what should you do?

5. FIRE FIGHTING MEASURES

What are the special fire fighting procedures for Biodiesel?

6. ACCIDENTAL RELEASE MEASURES SPILL CLEAN-UP PROCEDURES

If you have an accidental spill of Biodiesel, you should remove sources of ignition and _____

7. HANDLING AND STORAGE

You should store Biodiesel in closed containers between what temperatures?

8. EXPOSURE CONTROL/PERSONAL PROTECTION

What type of protective clothing should you wear when working with Biodiesel?

9. PHYSICAL AND CHEMICAL PROPERTIES

What is the appearance and odor of Biodiesel?

10. STABILITY AND REACTIVITY

Is Biodiesel stable? _____

11. DISPOSAL CONSIDERATIONS

You should follow _____ disposal regulations when dumping Biodiesel.

12. TRANSPORT INFORMATION

What is the shipping classification for Biodiesel? _____

13. REGULATORY INFORMATION

Is this product listed on TSCA (Toxic Substances Control Act)? _____

Title Strips

CHEMICAL PRODUCT

**COMPOSITION /
INFORMATION ON
INGREDIENTS**

HAZARDS IDENTIFICATION

FIRST AID MEASURES

FIRE FIGHTING MEASURES

**ACCIDENTAL RELEASE
MEASURES SPILL CLEANUP
PROCEDURES**

HANDLING AND STORAGE

**EXPOSURE CONTROL /
PERSONAL PROTECTION**

**PHYSICAL AND CHEMICAL
PROPERTIES**

STABILITY AND REACTIVITY

DISPOSAL CONSIDERATIONS

TRANSPORT INFORMATION

**REGULATORY
INFORMATION**

Household Products Activity

Assignment: Find three chemical products in your home. List three of the active ingredients in each product. In class we will research the MSDS of the active ingredients in the household products you have listed. A sample has been provided for you.

CHEMICAL PRODUCT	ACTIVE INGREDIENTS
A. Lysol Disinfectant Spray	1. Alkyl
	2. Dimethyl Benzyl Ammonium Saccharinate
	3. Ethanol
B.	1.
	2.
	3.
C.	1.
	2.
	3.
D.	1.
	2.
	3.

Student Name: _____

MSDS Writing Assignment

Why is it important to review MSDS sheets?

Activities/ Resources for Outcome #3

Contextualized Reading Module Outcome #3 Activity 5

Student reads the article “Help Wanted on Factory Floor,” highlights new vocabulary, and discusses comprehension questions. **Use File: Help Wanted on Factory Floorrev**

Student reads the background information on a machinist and researches more information on machinists through the Internet.

Student reads an assigned section and orally reports.

Help Wanted on Factory Floor

(by James R. Hagerty, The Wall Street Journal, WSJ.com, May 6, 2011)



U.S. manufacturing companies, long known for layoffs and shipping jobs overseas, now find themselves in a very different position: scrambling for scarce talent at home.

Large and small manufacturers of everything from machine tools to chemicals are scouring for potential hires in high schools, community colleges and the military. They are poaching from one another, retraining people who used to have white-collar jobs, and in some cases even hiring former prisoners who learned machinist skills behind bars.

Even with unemployment near 9%, manufacturers are struggling to find enough skilled workers because of a confluence of three trends.

First, after falling for more than a decade, the number of U.S. manufacturing jobs is growing modestly, with manufacturers adding 25,000 workers in April, the seventh straight month of gains, according to payroll firm Automatic Data Processing Inc. and consultancy Macroeconomic Advisers. The Labor Department's jobs report on Friday is expected to show moderate employment growth in the overall economy.

Second, baby-boomer retirements are starting to sap factories of their most experienced workers. An estimated 2.7 million U.S. manufacturing employees, or nearly a quarter of the total, are 55 or older.

Third, the U.S. education system isn't turning out enough people with the math and science skills needed to operate and repair sophisticated computer-controlled factory equipment, jobs that often pay \$50,000 to \$80,000 a year, plus benefits. Manufacturers say parents and guidance counselors discourage bright kids from even considering careers in manufacturing.

The impending retirement of boomers isn't a problem for everyone. Advanced Technology Services Inc. of Peoria, Ill., sees the trend as a huge opportunity. ATS provides maintenance and related services for manufacturers. Jeff Owens, president of the company, says he expects demand for those services to surge as manufacturers

can't find enough qualified employees and need to outsource more tasks to firms like ATS.

ATS now has about 2,400 employees in the U.S. and aims to reach 2,800 by year-end. Nearly a third of the people ATS hires come from military backgrounds, often with experience in fixing tanks or airplanes. Aside from knowing how to fix machines, the military vets are good at "being on time, being clean-cut," Mr. Owens says.

ATS also helps pay for 40-week community-college training programs for some people it hopes to hire, and it funds scholarships for engineering students at universities. Two ATS managers spend nearly full time working with high schools, attending career days, conducting plant tours and meeting with guidance counselors.

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Machinist Background

One of the skilled manufacturing jobs mentioned in the article is a machinist. What does a machinist do?

Machinists are trained to use powerful yet precise metal cutting tools to produce accurate metal parts exactly to specifications provided in mechanical drawings.

Machinists must have knowledge of the properties of the material they will be cutting and the capabilities of the tool they will be using. This means they must know how much metal can be removed from a particular part, using a particular tool, in a given amount of time.

Machinists must also decide how the piece of material will be held on the machine while it is cut and in what order the cuts will be made. If special fixtures must be made to hold the part, they must make them as well.

Machinists must also be able to accurately measure the part while it is being made and when it is done to assure it is made to the specified limits of size tolerance.

Assignment

Use the website to choose one of these sections to read on Metal Machinist and prepare to give an oral report.

What is machining?

What does a metal machinist do?

What work is carried out by machinists?

Is machining a good career choice?

What employment and career opportunities are available in metal machining?

What skills must a machinist develop?

What training and qualifications are available for machinists?

What if I want more information?

Contextualized Reading Module Outcome #3 Activity 6

Safety at Work

- Student identifies factory setting signage for safety and plays teacher-created BINGO game. Student uses ESL Workplace Skills Lessons from Safety on the Job at the website:



<http://www.eastsideliteracy.org/tutorsupport/Work/WorkIdeas.htm>

- Student identifies types of accidents and details required on accident report form. Student uses ESL Workplace Skills Lessons from Reporting an Accident at the website: <http://www.eastsideliteracy.org/tutorsupport/Work/WorkIdeas.htm>
- Student locates information on eye protective wear from the jkkeller.com catalog, pages 70-71 and discusses questions on eye protection. **Use PDF file: eyeprotect catalog.**
- Student reads Eye Protection chapter in J.J. Keller's *OSHA Safety Training Handbook* and completes the Eye Protection Review questions on pages 49-50. **Use PDF file: Eye protect OSHA.pdf**

PPE: Eye Protection
Workplace Safety Magazine Activity

1. List three features of the Radnor Elite Plus Series Eyewear.

1. _____

2. _____

3. _____

2. Is the Radnor Elite Plus Series Eyewear available in a black frame with clear anti-fog lens?

3. What is the code # for the Radnor Elite Plus Series Eyewear with clear lens and a black frame?

4. How much would it cost to purchase 10 pairs of the Radnor Elite Plus Series Eyewear, code #WS-135-PSG?

5. List two features of the Radnor Visitor Spec Series Eyewear.

1. _____

2. _____

6. What is the code # for the Radnor Visitor Spec Series Eyewear?

7. How much would it cost to purchase 20 pairs of the Radnor Visitor Spec Series Eyewear?

8. Which glasses block 99.9% of harmful UV rays?

9. Which glasses have a scratch-resistant lens coating?

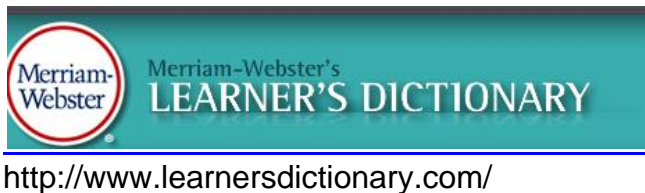
10. Why is it important to wear eye protection?

KMPozniak.03.2011

Activities/ Resources for Outcome #4

Contextualized Reading Module Outcome #4 Activity 7

Students use these websites to learn new vocabulary.



Students choose words to keep in “My Learner’s Dictionary.” For additional review, students make flash cards of new vocabulary.

ELEMENTS OF LANGUAGE

Word Watch

<http://hlla.hrw.com/la/eolang/ww/?grade=&group=>

Students choose a grade level Grades 6-12 from the drop down menu. They select a word group and then go to Jump To and click on Fab Vocab on the drop down menu. Options are to watch animation and hear pronunciation for the selected word. Click on these options for further information on the word:

- What does it mean?
- How do you use it in a sentence?
- What are some synonyms?
- What are some antonyms?
- What are some other meanings?

Student creates vocabulary quadrant cards.
For an example, see **Outcome 10 Activity 18**.

Contextualized Reading Module Outcome #4 Activity 8

- Students brainstorm to answer the question: What are the rating categories on an Employee Performance Appraisal form? They complete the concept web graphic organizer. **Use PDF file: Employee Appraisal and Use Word file: Concept Map Organizer**
- Students pair up to read the Non-Exempt Employee Performance Appraisal form. Students circle new vocabulary as they read. They use this website to find definitions of the new vocabulary.



<http://www.learnersdictionary.com/>

- Two student pairs form a small group to engage in a “think-pair-share” activity and share new vocabulary and concepts acquired in Appraisal form.
- Each group completes the Positive-Negative graphic organizer chart, using the vocabulary from the Performance Appraisal form.
- Each group completes the two sections on Performance Goals and Training Development Needs on Page 3 of the Performance Appraisal form. They also complete the Employee Signature line and Employee Comments section. **Use PDF file: Positive Negative Chart.**
- Results are shared by the class.

Contextualized Reading Module Outcome #4, Activity 9 Part I

- Students are introduced to relevant “green” vocabulary on the “Green” Word List and their definitions.
- Students complete “Green” Vocabulary Activity. **Use PDF file: Green Vocabulary**
- Students engage in an activity to review vocabulary. Students form a group of four. Each student writes a word/term from the reading on a blank sheet of paper in front of him or her. Then each student passes his or her paper to the right. Again, each student writes another word on the new sheet. This activity continues until the group members cannot think of additional words. The group compiles a word list and shares it with other class members.
- To extend the vocabulary review, students provide definitions of relevant terms.

“Green” Word List

bio-
biodegradable
bioregionalism
biosphere
CFL – compact fluorescent lamp
conservation

re-
recycling
renewable resource
retrofit
solar energy
sustainability

eco-
ecology
ecosystem
environment
environmentally friendly (eco-friendly and nature friendly)

wind power

hydro-
hydroelectricity
natural resource
non-renewable resource
organic matter or organic material
photo-
photovoltaics

The Central Illinois Adult Education Service Center (CIAESC) is a special project conducted under the provisions of the Workforce Investment Act, Title II Adult Education and Family Literacy, and is administered through the Illinois Community College Board. Federal funds provide 100% support. CIAESC is part of the Illinois Service Center Network.

Contextualized Reading Module Outcome #4 Activity 9 Part II

Students engage in a pre-reading activity in order to activate prior content knowledge. Students complete the first two sections of the KWL Chart on the topic “Green Manufacturing 101” from the website:



http://businessknowledgesource.com/manufacturing/green_manufacturing_101_029551.html

Use Word File: KWL Chart.

Each student silently reads the article.

Students complete these sentences.

1. When people think of manufacturing, they usually think of _____.
2. These days more people are becoming concerned with the _____.
3. Green manufacturing is a viable option for all manufacturing businesses because _____.
4. A big concern of manufacturing plants is that they are a source of _____.
5. Making a few changes in a manufacturing plant can make it more _____.
6. Two things you should know about green manufacturing are _____.

Students share their answers as a class. Students engage in a discussion of the article with teacher-directed question prompts.

To wrap up, students complete the What I Have Learned section on the KWL Chart and orally share their responses.

KWL Chart

Name _____

What I K now:	What I W ant to Know: or What I W onder:	What I Have L earned:

Contextualized Reading Module Outcome #4 Activity 9 Part III

Students are assigned the article “Benefits of Going Green in Your Manufacturing” from the website:



http://businessknowledgesource.com/manufacturing/benefits_of_going_green_in_your_manufacturing_027423.html

A. Read the article. Fill in the blanks with these words from the article. Use one word in two sentences.

1. Going green has been part of the _____ of several manufacturing companies lately.
2. Manufacturing equipment can be fast, reliable and _____.
3. Manufacturing companies are _____ their machines in order to go green.
4. One benefit to going green is the _____ on the environment.
5. Machinery that uses wind and solar energy is _____.
6. With _____ surrounding going green, it is a necessary trend in manufacturing.
7. To keep your company _____, it is important to go green.
8. Going green will _____ the consumer, the shareholders, and the company.
9. _____ energy sources are considered to be one of the fastest growing job markets.

renewable
public awareness
mission statement

impact
revamping
earth friendly

energy efficient
competitive

B. Write two questions to ask a classmate about this article.

Activities/ Resources for Outcome #5

Contextualized Reading Module Outcome #5 Activity 10

Student is introduced to initialisms and acronyms with emphasis on those related to manufacturing.

Student completes the activity handout and starts filling in the Abbreviations Log (see page 50 of this section).

PRE-READING ACTIVITY: ABBREVIATIONS

Directions: Discuss the following questions.

- What do the letters 'USA' stand for?
- Have you ever seen letters that represent a name, phrase or group of words?

READING ACTIVITY



Directions: Read and discuss the following information.

An Introduction to Abbreviations

- An **abbreviation** is a shortened form of a name, phrase or group of words.
- Two examples of abbreviations are: **initialisms** and **acronyms**.
- An **initialism** is an abbreviation that is formed by the first letters of a name, phrase or group of words. To pronounce an **initialism**, spell out each letter individually.

Example: <u>E</u> uropean <u>U</u> nion	=	EU
<u>I</u> nternational <u>T</u> echnical <u>U</u> nion	=	ITU
<u>M</u> iles <u>P</u> er <u>H</u> our	=	MPH
<u>U</u> niversity of <u>I</u> llinois at <u>C</u> hicago	=	UIC

- An **acronym** is a word that is formed by the first letters of a name, phrase or group of words. To pronounce an **acronym**, pronounce the letters as a word.

Example: Individual Retirement Account = IRA

North American Free Trade Agreement = NAFTA

Immigration and Customs Enforcement = ICE

National Organization of Women = NOW

Reading Activity – Let's Review



Directions: Work with a partner and choose the word that best completes each sentence.

- An _____ is a shortened form of a name, phrase or group of words.
abbreviation word phrase
- _____ examples of abbreviations are: initialisms and acronyms.
One Two Three
- An _____ is an abbreviation that is formed by the first letters of a name, phrase or group of words.
example initialism acronym
- To pronounce an initialism, _____ out each letter individually.
throw hear spell
- An _____ is a word that is formed by the first letters of a name, phrase or group of words.
initialism acronym pronunciation
- To pronounce an acronym, pronounce the letters as a _____ .
word letter song
- The initialism for 'Social Security Number' is _____ .
SSN SNS NSS
- The acronym for 'North Atlantic Treaty Organization' is _____ .
NATO OTAN NAOT

Activity – Matching

Directions: Write the letter of the correct **initialism** next to each name, phrase or group of words. Please write your answer in the space provided.

- | | | |
|-----------------------------------|-------|---------|
| 1. Full Time | _____ | A. SSA |
| 2. Human Resources | _____ | B. CEO |
| 3. Social Security Administration | _____ | C. PT |
| 4. Electronic Freight Invoice | _____ | D. BTU |
| 5. Part Time | _____ | E. CFO |
| 6. Chief Executive Officer | _____ | F. FT |
| 7. Personal Protective Equipment | _____ | G. MSDS |
| 8. British Thermal Unit | _____ | H. EFI |
| 9. Chief Financial Officer | _____ | I. HR |
| 10. Material Safety Data Sheets | _____ | J. PPE |



Activity – Let’s Abbreviate: Initialisms!

Directions: Write the correct **initialism** of each name, phrase or group of words. Please write your answer in the space provided. Practice pronouncing each initialism.

1. Environmental Protection Agency _____
2. Certified Purchasing Manager _____
3. Hazardous Materials Identification System _____
4. National Machining and Tooling Association _____
5. Statistical Process Control _____
6. Heating Seasonal Performance Factor _____
7. Energy Efficiency Ratio _____
8. Computer-Aided Engineering _____
9. Annual Fuel Utilization Efficiency _____
10. Air Conditioning _____
11. Department of Motor Vehicles _____
12. Americans with Disabilities Act _____

Activity – Let’s Abbreviate: Acronyms

Directions: Write the correct **acronym** of each name, phrase or group of words. Please write your answer in the space provided. Practice pronouncing each acronym.

1. Leadership in Energy and Environmental Design _____
2. Organization of the Petroleum Exporting Countries _____
3. Computer-Aided Design _____
4. Seasonal Energy Efficiency Ratio _____
5. Federal Emergency Management Agency _____
6. Heating, Ventilating and Air Conditioning _____

Outcome: Please list three facts that you learned about abbreviations.

1. _____
2. _____
3. _____

Abbreviations Log



Abbreviations	Definition	Type initialism, acronym

Activities/ Resources for Outcome #6

Contextualized Reading Module Outcome #6 Activity 11

Student follows directions in reading quiz activity. **Use Handout: Following Directions Activity**

Following Directions Activity

This quiz is to test your skill in reading and following directions. It should take you 2 minutes to complete.

Directions:

1. Read everything through carefully on this page before you do anything.
2. Print your name in the upper left-hand corner of this page.
3. Write the date below your name in the upper left-hand corner.
4. Circle the number “4” at the beginning of this sentence.
5. After the date written just below your name, write your birth date.
6. Draw a line through this sentence.
7. Put an “X” in the upper right-hand corner of this page.
8. Punch a hole with your pencil through the number “8” at the beginning of this sentence.
9. Draw a big smiley face in the middle of this paper.
10. Now that you have read everything through carefully, do only items 1 and 2.

Activities/ Resources for Outcome #7

Contextualized Reading Module Outcome #7 Activity 12

Student uses *Trelleborg Sealing Solutions Streamwood Employee Handbook* Table of Contents pages. **Use PDF file: Trelleborghandbook**

Student is introduced to new vocabulary on these pages.

Student engages in partner conversation activity.

Student writes four additional questions to ask the class.

Conversation Activity

Partner A

Ask your partner these questions. Your partner uses the *Trelleborg Sealing Solutions Streamwood Employee Handbook Table of Contents* to find the page number in the handbook to answer each question.

1. An employee has worked for this company for one year. How much vacation does he or she have?
2. An employee has not had a Performance Review for more than one year. What should he or she do?
3. What are the different types of employment status?
4. What is the definition of EEO?
5. What kinds of employment benefits does this company offer?

Conversation Activity

Partner B

Ask your partner these questions. Your partner uses the *Trelleborg Sealing Solutions Streamwood Employee Handbook Table of Contents* to find the page number in the Handbook to answer each question.

1. If an employee has jury duty, will he or she be paid by this company?
2. Can an employee wear a fish-net type shirt to work?
3. If an employee is injured at work, what is the procedure for reporting the accident?
4. Can an employee use a personal cellular phone on the production floor?
5. Are employee e-mail messages monitored by this company?

**Activities/
Resources
for
Outcome #8**

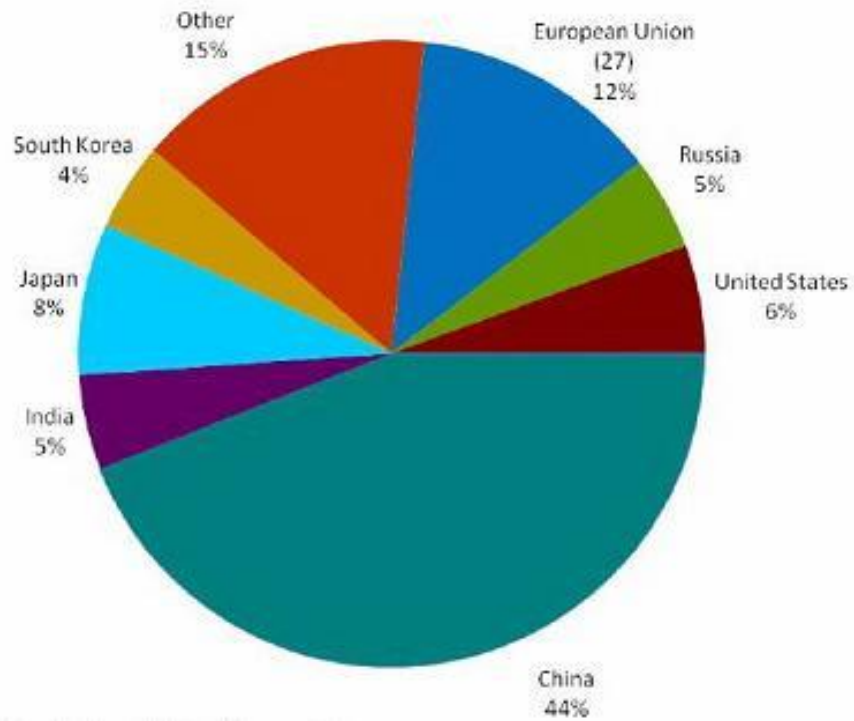
Contextualized Reading Module Outcome #8 Activity 13

Student is introduced to types of graphs such as circle/pie and bar.

Student finds information in graphics and adds missing information in graphics using teacher-selected sections of the resource *Workplace Skills: Locating Information*. Some appropriate sections may be Level 3 Lesson 1 Find Information in Graphics and Level 3 Lesson 2 Add Missing Information to Graphics. **Use Word files: SP11-BRIDGE-Bar_Graph and SP11-BRIDGE-CirclePie_Graph**

Circle Graph/Pie Graph

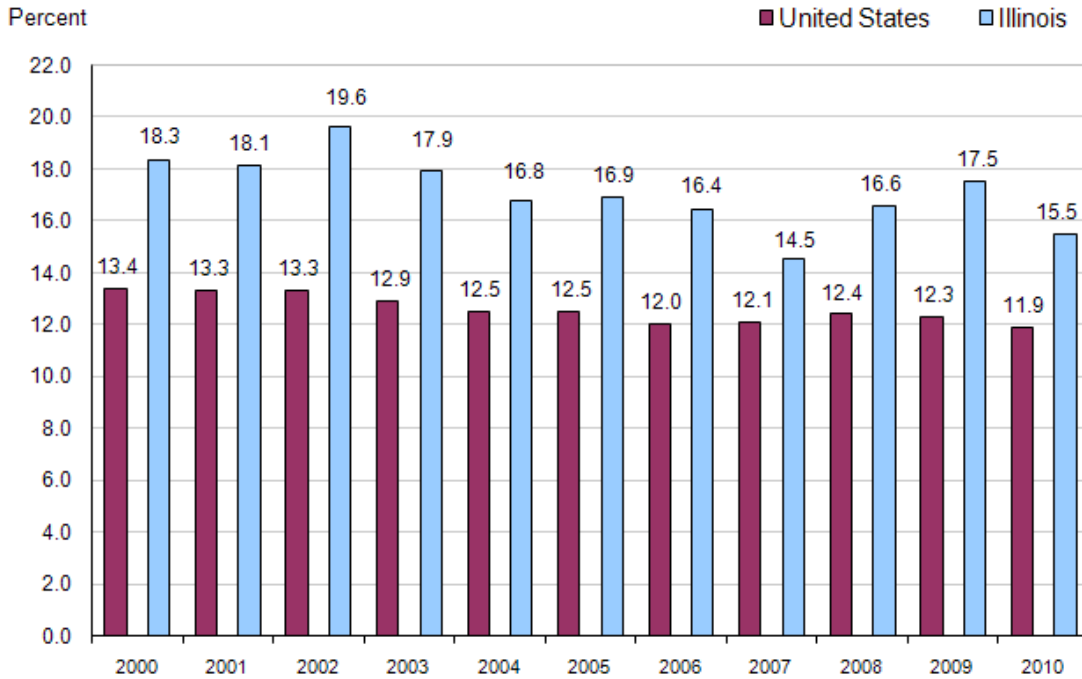
Share of World Crude Steel Production
November 2010



Source: United States Department of Commerce-International Trade Administration-Steel Industry Executive Summary: March 2011

Bar Graph

Chart 1. Members of unions as a percent of employed in the United States and Illinois, 2000-2010



Source: United States Department of Labor-Bureau of Labor Statistics-Union Membership in Illinois. <http://www.bls.gov/ro5/unionil.htm>

Contextualized Reading Module Outcome #8 Activity 14

Student reads the Career Cluster in Manufacturing description and lists the six Career Pathways. **Use Word files: Career Clusteractivity and 1MFGModel**

Student chooses one occupation of interest from a selected pathway. Using the Internet, student searches for information on this occupation.

Students orally share their findings.



Career Clusters

Career Clusters provide students with a context for studying traditional academics and learning the skills specific to a career, and provide U.S. schools with a structure for organizing or restructuring curriculum offerings and focusing class make-up by a common theme such as interest.

The 16 Career Clusters

	<p>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</p>
	<p>Careers in designing, planning, managing, building and maintaining the built environment.</p>
	<p>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</p>
	<p>Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.</p>
	<p>Planning, managing and providing education and training services, and related learning support services.</p>
	<p>Planning, services for financial and investment planning, banking, insurance, and business financial management.</p>
	<p>Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.</p>
	<p>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</p>

 <p><i>Hospitality & Tourism</i></p>	<p>Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.</p>
 <p><i>Human Services</i></p>	<p>Preparing individuals for employment in career pathways that relate to families and human needs.</p>
 <p><i>Information Technology</i></p>	<p>Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.</p>
 <p><i>Law, Public Safety, Corrections & Security</i></p>	<p>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</p>
 <p><i>Manufacturing</i></p>	<p>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</p>
 <p><i>Marketing</i></p>	<p>Planning, managing, and performing marketing activities to reach organizational objectives.</p>
 <p><i>Science, Technology, Engineering & Mathematics</i></p>	<p>Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</p>
 <p><i>Transportation, Distribution & Logistics</i></p>	<p>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</p>

Career Clusters Manufacturing Activity

1. List the six Manufacturing Career Pathways.

2. A career occupation I would like to research is:

3. Complete this informational chart.

Skills needed	
Salary	
Education required	
Outlook for hiring	
Other	
Other	

Activities/ Resources for Outcome #9

Contextualized Reading Module Outcome #9 Activity 15

Student locates information on Invoice form on page 43 of *Workplace Skills: Reading for Information* from McGraw-Hill publishers.

Contextualized Reading Module Outcome #9 Activity 16

Student goes to website:

<http://www.maepd.org/lib-preparingworkers.html#>

Michigan Adult Education PD Project
Preparing Today for Tomorrow's Workforce

to view *Michigan Adult Education Preparing Workers for 21st Century Employment*. Go to Preparing Workers Writing. Click on Worksheets (PDF). **Use PDF file: 21st Century Worksheets**

Student locates information on Order form in section 4.3 Filling Out Forms.

Student locates information on additional District 214 work forms: **use PDF file forms ActivityOutcome 9 Act. 16**

- Print Request
- Request for Maintenance / Custodial Services

Name: _____ Date: _____ 4.

Complete the sample sales form with the following information: 2 black t-shirts, size L, item number 788, at a cost of \$9.95 each and 4 pairs of black shorts, size L, item number 888, at a cost of \$15.99 each. Make sure the entire form is complete.

Order Form				
Date _____				
Ship To		Name _____		
		Street Address _____		
		City, State, Zip Code _____		
		Phone _____		
Quantity	Item #	Description	Unit Price	Line Total
Total				
Shipping and Handling				\$6.25
Total				
Make all checks payable to Sports Goods for All				
Thank you for your business!				
Sports Goods for All - 99 Sports Way - Dearborn, MI 48129 - 888-888-8888				

Check your work using this checklist:

- Are all of the spaces that need to be completed filled in correctly?
- Is the information accurate?
- Did you spell all of the words correctly?
- Did you capitalize correctly?
- Did you use correct punctuation?
- Is your writing clear so that others can easily read it?

Forest View Educational Center

Request For Maintenance / Custodial Services
Avoid Verbal Orders

Requested by _____ on Date of ____ / ____ / ____

Area and/or Room Number(s) _____

Description of Request (Attach drawing if Appropriate) _____

Facility Manager's Approval _____

Please return to Facility Manager or Manager's Secretary

For Maintenance Use

Completed by _____ on Date of ____ / ____ / ____

White - Completion copy (return to Facility Manager)

Canary - Maintenance File

Pink - Originator

PRINT REQUEST

(3 Days Required)

School _____ Department _____

Date _____ Date Needed _____

Name _____ Room _____

Materials _____

Number of Copies or Sets Needed _____

Number of Masters (Count both printed sides) _____

PAPER

COLOR _____ 3 HOLE _____ Non PUNCHED _____

(White, Green, Yellow, Blue, Buff, Purple, Orange, Pink, Goldenrod)

Copy one side only _____

Copy one side to two side _____

Copy is two sided already _____

Collate Only _____ Collate and Staple _____ (Indicate with Paperclips)

Bind _____ Cut _____

COVERS

Color _____ Plain Paper _____ Card Stock _____

(White, Green, Yellow, Blue, Buff, Orange, Cherry)

SPECIAL DIRECTIONS

Activities/ Resources for Outcome #10

Contextualized Reading Module Outcome #10 Activity 17

Student interprets trends in graphic sources by using *Workplace Skills: Locating Information* Levels 4, 5, and 6 from McGraw-Hill publishing.

Contextualized Reading Module Outcome #10 Activity 18

I. Read the article “A Beginner’s Guide to Lean Manufacturing” from the website:
http://www.businessknowledgesource.com/manufacturing/a_beginners_guide_to_lean_manufacturing_030790.html

II. Fill in the blanks with information from the article. Check your answers with a classmate.

1. Lean manufacturing is one of the best ways to meet customer _____ . It can also _____ your business.
2. When you _____ lean manufacturing, you think about providing your customer with a better product at a _____ price.
3. You do not keep a large _____ of stock on hand.
4. You focus on making employees more _____.
5. You fix the _____ that occur in your manufacturing processes.
6. An employee has a balanced _____.
7. Lean manufacturing will reduce waste _____ by 40% or more.
8. List four ways that lean manufacturing will improve a business.
 - a. _____
 - b. _____
 - c. _____
 - d. _____

III. Make a list of new vocabulary. Create a quadrant card for each new vocabulary word. Use the Sample Vocabulary Quadrant Card as an example or **Use Word File: vocab_quadrant_chart**

IV. Complete the Cause and Effect Chart graphic organizer. For the Cause, fill in the following: "If you implement lean manufacturing in a business, you will..." For the Effects, choose some information from the article to complete these sections. **Use Word File: Causeeffect organizer**

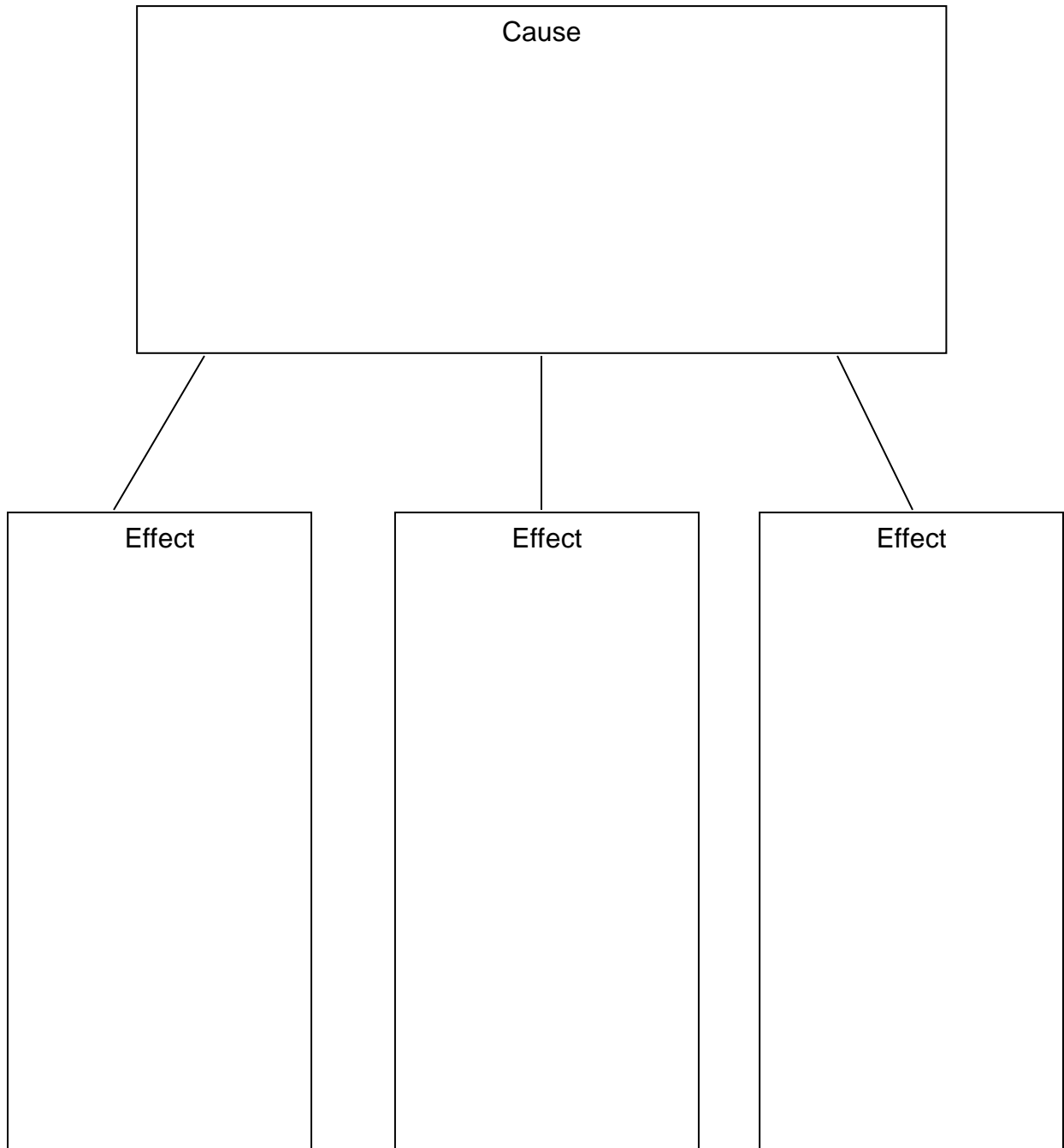
(Both the Sample Vocabulary Quadrant Card and the Cause and Effect Graphic Organizer appear on the next two pages.)

Sample Vocabulary Quadrant Card

<p><u>Vocabulary Word</u></p> <p>tie up</p>	<p><u>Meaning</u></p> <p>invest money in something in a way that prevents it from being used for some other purpose</p>
<p><u>Examples</u></p> <p>The money was tied up in stocks.</p> <p>They tied up all their money in their new business.</p>	<p><u>Opposites</u></p> <p>available for use</p>

Graphic Organization – Text Structure

Cause/Effect:



Contextualized Reading Module Outcome #10 Activity 19

Student goes to website:

The logo for 'Virtual Machine Shop' is written in a blue, cursive-style font on a light blue rectangular background.

<http://jjjtrain.com/>

Click on “Click here for a library of topics.”

Student views the Virtual Machine Shop: CAD/CAM Systems tutorial.

Student completes the comprehension activity Computer Lab – Virtual Machine Shop: CAD/CAM . **Use Word File: VMS-CADCAM. Use PDF files: Virtual machine 1 and Virtual machine 2.**

Computer Lab – Virtual Machine Shop: CAD/CAM

- Go to the Virtual Machine Shop website at: <http://jijtrain.com/>
- Click on 'Click here for a library of topics' at the top of the webpage.
- Under the CAD/CAM heading click on 'CAD/CAM Systems.'
- Use the information in this tutorial to answer the following questions.

.....

CAD/CAM Systems - 1 Background

1. CAD is like a drafting board in a computer. Rather than paper and pencil you use

2. What is automation?

CAD/CAM Systems - 2 Components

3. A typical PC-based CAD/CAM system begins with a PC. What is a PC?

4. Two examples of input devices are:

5. Two examples of output devices are:

CAD/CAM Systems - 3 Basic CAD

6. What are the two major goals of CAD?

CAD/CAM Systems - 4 Basic CAM

7. CAM utilizes computers in the _____ and _____ of the manufacturing process.

8. What are the two main applications for Computer-Aided Manufacturing?

CAD/CAM Systems -5 Using CAD/CAM Systems

9. Geometry is very important in CAD/CAM systems. Is this statement TRUE or FALSE? _____

CAD/CAM Systems -6 What is a Good CAD/CAM System?

10. What are three characteristics of a good CAD system?

Activities/ Resources for Outcome #11

Contextualized Reading Module Outcome #11 Activity 20

Student develops critical thinking skills by using Plan for Successful Solving as described in each lesson of the resources: *Workplace Skills: Reading for Information* and *Workplace Skills: Locating Information* from McGraw-Hill publishers.

Contextualized Reading Module Outcome #11 Activity 21

Student reads the following problem-solving scenarios using these sections

2.2 Use Technology: Dale

3.3 Use Systems: Jan and Simon

5.1 Know How to Learn: Fred

in the resource *Michigan Adult Education Preparing Workers for 21st Century Employment* from the website:

<http://www.maepd.org/lib-preparingworkers.html#>

Michigan Adult Education PD Project
Preparing Today for Tomorrow's Workforce

Scroll down to Preparing Workers Reading. Go to Teacher Guide. Click on Workbook PDF. Go to sections, 2.2, 3.3 and 5.1 for the scenarios.

Students form small groups to discuss the problem and solutions and complete the Problem Solving Chart on page 51 section 8.2.