

# Statewide Manufacturing Curriculum:

## Contextualized Reading Module

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**\*Supplemental material can be located in flash drive file labeled: Man  
Context Reading Resource File**

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## **FOUNDATIONS FOR DESIGN**

- ✓ Instruction emphasizes learning by doing through projects and simulations; therefore, the instructor is a facilitator or learning coach.
- ✓ Each module emphasizes communication, teamwork, and critical thinking.
- ✓ Content is contextualized for manufacturing professions and their programs of study.
- ✓ Learning outcomes often require learners to meet and interact with academic and manufacturing professionals, engage in collaborative and individual projects involving authentic materials and resources, visit manufacturing and academic facilities, and complete documents and writing tasks for career paths with the guidance of learning facilitators.
- ✓ Specific units within modules may serve as precursors for additional units within the module. Many lessons and units may be repeated and expanded from one module to another.
- ✓ Self-advocacy and continual self-assessment and self-monitoring are inherent to each module while students must be introduced to, required to meet with, and encouraged to consult with program coordinator as well as academic and employment professionals.
- ✓ Site visits to manufacturing and learning facilities, guest speakers, and conferences with employment and academic professionals are integral to the relevance and value of the program for students.

## **ASSUMPTIONS:**

- ✓ Each agency or instructor who may use these modules or this program will adapt instructional strategies, content level of difficulty, learning activities and projects to meet the needs of the program's target population and adult learners of lower and higher academic levels.

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- ✓ Referenced resources, relevant internet links, learning activities (created, suggested, attached, or referenced) will be used, modified, or omitted based on student need and restraints of class time and resources.
- ✓ This curriculum will work in established internal partnerships within the academic community as well as external partnerships/relationships in the employment community.
- ✓ Units and lessons will be adapted to fit within varying contact hours of a program.

**Module Description:** The contextualized reading module is designed to help students develop the skills necessary to understand and apply text information in the field of manufacturing and/or in post-secondary education. Students will have an opportunity to learn and practice multiple reading strategies using a variety of authentic industry-specific text materials.

**i-Pathways Alignment with the Statewide Manufacturing Curriculum:** The lessons identified in this document have connections with both i-Pathways and the intended learning objectives identified in the Statewide Manufacturing Curriculum. The i-Pathways lessons can be used to build background knowledge, reinforce content, or provide learners with additional practice in a specific skill development.

## **Module Objectives:**

### **Students will:**

- Demonstrate knowledge of key manufacturing terms
- Utilize a variety of reading strategies to comprehend manufacturing text materials
- Demonstrate knowledge of industry-specific abbreviations and acronyms
- Understand cause and effect relationships in the manufacturing environment
- Demonstrate the ability to follow instructions to complete work tasks
- Demonstrate the ability to interpret information from graphs and charts
- Develop an understanding of current industry trends and practices
- Utilize critical thinking skills to solve workplace problems

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## Learning Outcomes

### Students will:

- Identify the main idea and details of authentic manufacturing text materials
- Recognize details that are implied or suggested in reading
- Use context clues and other strategies to understand key industry-specific terms within a document
- Define and explain industry-specific abbreviations and acronyms
- Identify cause and effect relationships
- Apply work instructions to complete a work task and to choose correct action when conditions change
- Use a variety of reading strategies to locate information
- Interpret information through graphic sources
- Complete information on industry-specific forms
- Identify trends through graphic sources and current industry practices
- Use critical thinking skills to problem-solve

## Methods of Instruction

- Skills practice
- Hands-on activities
- Group discussions
- Oral reports

## Methods for Evaluating Student Performance

- Teacher observations
- Teacher designed checklists
- Graphic organizers
- Self-assessments

## Module Overview

- A. Assessment of Prior Knowledge
- B. Identifying the Main Idea and Details
- C. Recognizing Implied or Suggested Ideas in Reading
- D. Using Strategies to Identify Key Industry-specific Terms
- E. Defining Common Industry-specific Language
- F. Examining the Order of Steps in a Work Process or Procedure

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- G. Using Various Strategies to Locate Information
- H. Interpreting Information from Graphic Sources
- I. Completing Information on Industry-specific Forms
- J. Identifying Trends through Graphic Sources and Current Industry Practices
- K. Using Critical Thinking Skills to Problem-solve

## Module Outline

1. Preview industry-specific documents to determine prior knowledge
  - a. Examine title and captions
  - b. Examine vocabulary and graphics
2. Identify main idea and details of authentic industry-specific text materials
  - a. Company policy statement
  - b. Employee Handbook
  - c. Employee memo
  - d. Safety and instruction manuals
  - e. Practice strategies for *Better Reading and Summarizing*  
[www.tv411.org/reading/](http://www.tv411.org/reading/)
3. Recognize details that are implied or suggested in reading
  - a. Handwritten communication: e.g., note
  - b. Electronic communication: e.g., memo, procedure, guideline, e-mail
  - c. Graphic communication
4. Identify key industry-specific terms within a document
  - a. Use context clues: e.g., Employee Performance Appraisal
  - b. Use restatement of term within a sentence
  - c. Use familiar words to determine meaning of unfamiliar words; e.g., Job Description and HR forms
  - d. Use word structure to determine meaning
  - e. Use synonyms and antonyms
  - f. Practice *Using Context Clues* [www.tv411.org/reading/](http://www.tv411.org/reading/)

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5. Define common industry-specific language
  - a. Abbreviations
    - i. Initialisms: e.g., PPE, MSDS, EPA
    - ii. Acronyms: e.g., NAFTA, OSHA, CAD/CAM
  - b. Jargon: e.g., eco-friendly, biodegradable, LEED-certified
  
6. Examine the order of steps in a work process or procedure
  - a. Recognize a bulleted or numbered list: e.g., safety checklist; fire extinguisher operation
  - b. Recognize sequence words: e.g., equipment operation manual
  - c. Identify cause and effect relationships: e.g., safe forklift operation
  - d. Apply work instructions to follow the steps of a work task and to choose correct action when conditions change
  
7. Use various reading strategies to locate information
  - a. Predict
  - b. Skim and scan
  - c. Classify
  - d. Use Table of Contents in Employee Handbook
  - e. Use Index and Glossary
  - f. Use product labels
  - g. Examine title and captions in *OSHA Safety Training Handbook* and MSDS
  - h. Practice *Scanning for Specifics* [www.tv411.org/reading/](http://www.tv411.org/reading/)
  
8. Locate information through graphic sources
  - a. Circle graph
  - b. Line graph
  - c. Bar graph
  - d. Chart and table
  - e. Diagram
  - f. Practice *Reading Charts and Graphs* [www.tv411.org/reading/](http://www.tv411.org/reading/)
  
9. Complete missing information on industry-specific forms
  - a. Work order forms
  - b. Invoices
  - c. Shipping forms

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- d. Tracking forms
  - e. Timesheets
  - f. Inventory lists
  - g. Purchase orders
10. Identify trends through graphic sources and current industry practices
- a. Economic forecasting and outsourcing
  - b. Cross-training
  - c. Going green and sustainable energy technology
  - d. Lean manufacturing
  - e. Machine technology: e.g., CNC, CAD/CAM
11. Use critical thinking skills to problem-solve
- a. Analyze a problem
  - b. Examine its causes
  - c. Identify possible solutions and consequences
  - d. Decide on an action or draw a conclusion