

Reading/Writing Lesson 1

Instructor:

Time: 60-90 Minutes

Understanding Manufacturing Terms

Lesson Goal: Students will be able to identify a variety of manufacturing terms and apply the terms to real world applications. Students will be able to read, write and define manufacturing terms used daily in manufacturing facilities.

Materials:

1. Book: *All I Need to Know About Manufacturing I Learned in Joe's Garage*
ISBN# 0-9630439-3-5
2. Handouts
3. Homework

Performance Objectives:

1. Acquire research skills to find definitions of terms.
2. Identify and understand basic manufacturing terms.
3. Gain skills to use the glossary in the book, book dictionary, and online dictionary.

Teaching Activities:

1. Review the glossary, dictionary, and find an online dictionary.
2. Read *Joe's Garage* one chapter at a time.
3. Explain and discuss the ideas in each chapter.
4. Discuss the terms from the chapter.
5. Give handouts.
6. Complete handouts as an in-class activity.
7. Check student progress for mastery.
8. Assign homework.

Student Activities:

1. Examine and use the glossary, dictionary and online dictionary.
2. Participate in class discussion.
3. Complete class activity.
4. Ask questions as needed.

Reflections on the Lesson:

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Chapter 1 Planning to Build Shelves

Find the definition of the following words:

1. Manufacturing:
2. Production:
3. Engineering:
4. Manufacturing Engineer:
5. Design:
6. Detailed Drawings:
7. Components:

Summarize the chapter in your own words.

Who is the main character in the book?

What is the group producing?

How is the crew progressing at this point of the book?

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Chapter 2 How to Build Shelves

Find the definition of the following words:

1. Inventory:
2. Production Line:
3. Batch size:
4. Cellular Manufacturing:
5. Work-in-process:
6. Waste:
7. Nagare:

Summarize what is happening in the chapter.

Can you come up with a better way to for Joe to order and set-up the lumber?

Why does Joe have different areas?

How is the crew progressing to this point of the book?

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Chapter 3 Getting Ready to Build Shelves

Find the definition of the following words:

1. Kaizen:
2. Information Systems:
3. Work Orders:
4. Error Rate:
5. Market Share:

Summarize what is happening in the chapter.

Why do you think Sandy and Ralph are being partnered?

Explain the saying on page 20.

How is the crew progressing to this point of the book?

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Chapter 4 Building Shelves

Find the definition of the following words:

1. Quality:
2. Quality Inspectors:
3. Poka-Yoke:
4. Manufacturing Process:
5. Just-in-Time:
6. Lean Manufacturing:

Summarize what is happening in the chapter.

Do you think Sandy is learning anything?

In your own words, explain the saying on page 42.

How is the crew progressing to this point of the book?

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Chapter 5 Inspecting Shelves

Find the definition of the following words:

1. Cooperation:
2. Countersunk:
3. Quality Assurance:
4. Compromise:
5. Total Quality Management:
6. Confrontational:

Summarize what is happening in the chapter.

Explain what Total Quality Management is and how it can be a benefit to a company.

Do you think having “Confrontational Inspectors” is a bad thing? Why or Why not?

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Chapter 6 First Assembly

Find the definition of the following words:

1. Jidoka:
2. Andon System:
3. Kanban:
4. Push Production System:
5. Pull Production System:
6. Process Improvement:

Summarize what is happening in the chapter.

What is the fix they found?

How is the crew progressing to this point of the book?

Explain the saying on page 58.

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Chapter 7 Assembly – Again

Find the definition of the following words:

1. Bottleneck:
2. Shims:
3. Bullet Level:
4. Conscripted:
5. Subsections:

Summarize what is happening in the chapter.

What did Sandy do to make the final assembly happen by 3 pm?

How is the crew progressing to this point of the book?

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Chapter 8 Going Home

What did Sandy learn?

Is the way the crew built the shelving units the correct way? Why or why not?

How might you have built them differently?

Explain the saying on page 67.

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Chapter 9 Epilogue

What eventually happened to Sandy?

What did you learn from Sandy and Ralph?

What does the author mean by the saying on page 68, and how can you apply it to your own situation?

Choose your favorite saying in the book, explain it, and apply it to your life.