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ABSTRACT

Developed as part of the ABCs of Construction National Workplace Literacy Project, this instructional module is designed to help persons in electrical and instrumentation occupations develop strategies for finding the meanings of compound words used in technical writing and the workplace. Presented in the first section is a method for deducing the meaning of compound words by performing the following steps: reading the compound word and finding the two smaller words within it, finding the meaning of the first word, finding the meaning of the second word, and putting the two meanings together. The remainder of the module consists of six exercises in which students are asked to use the four-step procedure to determine the meaning of a total of nine words encountered in the workplace. Each of the nine words is introduced in a brief paragraph on a topic related to some electrical and instrumentation occupation. Each paragraph is followed by a series of questions that guide students through the four-step procedure. (MN)

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MODULES OF INSTRUCTION DEVELOPED IN GRANT CYCLE

1. Writing Frames for Construction Workers (10 exercises)

for low-level readers; consists of 10 "paragraphs" with open-ended sentences for workers to complete and recopy in their notebooks. Topics deal with work and training, such as "My Job," "Classroom Behavior," and "Listening to Myself."

2. Writing About Your Craft (10 topics)

for all students; list of 10 topics, such as "My Boss," "The Main Beef About My Job," and "How Work Orders Are Delivered." Used for integrating reading and writing in a job-specific context.

3. Building Workplace Vocabulary for E & I: Structural Analysis (80 pages)
Building Workplace Vocabulary for Millwrights: Structural Analysis(79 pages)
Building Workplace Vocabulary for Pipefitters: Structural Analysis(79 pages)

5th grade level; teaches word attack skills for technical terms, utilizing word parts and root words; includes hints for retaining meanings by building card file with visual representations of terminology.

4. Building Workplace Vocabulary for E & I: General, Specialized, & Technical Terms (58 pages)
Building Workplace Vocabulary for Millwrights: General, Specialized & Technical Terms (29 pages)
Building Workplace Vocabulary for Pipefitters: General, Specialized, & Technical Terms (32 pages)

5th grade level; teaches different kinds of vocabulary words encountered in work-related texts; drills for remembering new words; tips for building vocabulary; some dictionary use.

5. Building Workplace Vocabulary for E & I: Compound Words (28 pages)
Building Workplace Vocabulary for Pipefitters: Compound Words (18 pages)
Building Workplace Vocabulary for Millwrights: Compound Words (22 pages)

5th grade level; strategies for finding the meanings of compound words used in technical writing; works with words in context

6. Improving Listening Skills: Hazards Communication (18 pages)
Improving Listening Skills: Fire Extinguishers (22 pages)

a viewing, study guide that accompanies a commercial training video used in the required 8-hour OSHA safety course; learning new words, main ideas, and drawing conclusions are covered.

7. Measuring Decimals: Millwright (28 pages)

instruction and application problems

8. Improving Study Skills/Test Taking (60 pages)

6th grade level; good study skills are needed for success in the ABC Training program; explores strategies for organizing class notes and study time; analysis sheet for determining weaknesses in test preparation; how to schedule to arrange study time and work time

Computer Program

"Math for Pipefitters" is an interactive, multi-media program that covers fractions, decimals, angles, and right triangle geometry in a pipefitting context (88 screens)

E&I-COMPOUND WORDS

28 PAGES

<F1: Help>

Statistics for: B:\EICOMP.DOC

Readability Statistics

Flesch Reading Ease:	72	Flesch-Kincaid Grade Level:	6
Gunning's Fog Index:	9		

Paragraph Statistics

Number of paragraphs:	394	Average length:	0.4 sentences

Sentence Statistics

Number of sentences:	185	Short (< 12 words):	147
Average length:	10.8 words	Long (> 30 words):	6
End with '?':	38		
End with '!':	0		

Word Statistics

Number of words:	2106	Average length:	4.41 letters
		Syllables per word:	1.46

<Enter: Next Screen> <Esc: Done>

<F1: Help>

Document Summary for: B:\EICOMP.DOC

Readability Statistics	Interpretation
Grade level: 6 (Flesch-Kincaid)	Preferred level for most readers.
Reading ease score: 72 (Flesch)	This represents 6 to 10 years of schooling.
Avg. sentence length: 10.8 words	May indicate choppiness or lack of sentence variation. Try varying sentence length.
Avg. word length: 1.46 syllables	Most readers could understand the vocabulary used in this document, based on syllables per word.
Avg. paragraph length: 0.4 sentences	Avoid 1-sentence paragraphs in business or technical writing.

<Enter: First Screen> <Esc: Done>

BUILDING WORKPLACE VOCABULARY FOR E & I WORKERS: COMPOUND WORDS

OBJECTIVE: **To learn a system for finding the meanings of compound words.**

Words are somewhat like electrical components. Both require people for them to be of use. Indeed, they have no purpose until you put them to use. Words, like electrical parts you use in E & I, come in many sizes. They have just as many different purposes. Sometimes, however, one word or one component alone cannot do the work that needs to be done.

Think about the tuner on your radio or television. It is made of an inductor and a coil. Together, they form a capacitor. Together, the two create a new object. This object does different work than the original two.

Sometimes, two words work together to form a new word. This new word means something different from either of the two original words. For example, consider the word ***faceplate*** in the sentence below:

> The worker installed each *faceplate* before moving to the next switch.

Faceplate is an example to two words working as one. Words like this are called **COMPOUND WORDS**. Many compound words appear in your text because they are a part of your field. Thus, you need a way to figure out their meanings. The following steps provide a method for doing so.

STEP 1: Read the compound word. Find the two smaller words within it. Sometimes it helps to draw a line between the two.

STEP 2: Find the meaning of the first word. Sometimes you will know this. Other times you may need to use a dictionary or ask someone for help.

STEP 3: Find the meaning of the second word. Sometimes you will know this. Other times you may need to use a dictionary or ask someone for help.

STEP 4: Put the two meanings together. That is, say the first meaning and, without stopping, say the second meaning. This is the meaning of the compound word.

Consider again the sentence containing ***faceplate***. ***Face*** is the first of the two words. What does it mean? ***Face*** means ***front***. ***Plate*** is the second word. It means something that is smooth and flat. What, then, is a ***faceplate***? It is the smooth and flat piece that faces front. You probably knew what ***faceplate*** meant when you began reading this lesson. Is this definition like yours? How is it alike? How is it different? The meanings you get when you figure out compound words are not exact ones. Instead, they sometimes give only an idea of what the word means. Often, however, this is all you need to know.

EXERCISE 1

Richard needs to hang a transformer. He knows transformers carry high voltage. Hanging them requires special planning for safety. He finds the following information in his text:

> The transformer should be supported by the iron hangers furnished by the manufacturer and hung at the central point on the ***crossarm***, and not out on the arm away from the pole. At the bottom of the hanger, a section of an arm, not longer than the diameter of the pole, should be fastened to the pole with two lag bolts. The transformer can be hung on the bottom arm, if one is in place and supports lines, provided this arm is in the second gain or a lower one. The primary mains feeding the transformer should be on an upper arm.

1. What does ***crossarm*** mean to you?

2. Draw a line between the two words that make up the word ***crossarm.***

C R O S S A R M

3. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

4. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

5. Now write the two definitions side-by-side.

_____

_____

6. How is the meaning you wrote in #1 like the one you wrote in #5? How is it different?

_____

_____

7. How do the rules for hanging transformers help protect workers and others?

_____

_____

❖

EXERCISE 2

Bob works in a refinery. There, the control room runs the entire place. He has a friend who's an operator in this room. Bob's friend has told him of the transistors which are in the relays. Bob wants to know more about transistors. His text provides the following information:

> In place of the electron tube, the transistor has emerged as the ***cornerstone*** of modern electronics. Based on the theory of electron conduction in a solid crystalline material rather than in a vacuum or gaseous environment, the transistor not only can perform virtually all the functions formerly associated with the tube, it can do them faster, more cheaply, and more reliably. Moreover, it occupies an very small amount of space and, unlike the tube, requires no power-wasting filament that ties large equipment to the commercial power lines.

1. What does ***cornerstone*** mean to you?

_____

2. Draw a line between the two words that make up the word ***cornerstone***.

C O R N E R S T O N E

3. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

4. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

5. Now write the two definitions side-by-side.

6. How is the meaning you wrote in #1 like the one you wrote in #5? How is it different?

7. What modern-day technology could soon replace transistors?

8. What leads you to this conclusion?

❖

EXERCISE 3

Margo wonders why she needs to learn about switchers. She's been told they are too costly to install and operate. She's heard they are only for big jobs like boosting power down the line. She understands the need for learning about switching power supplies when she reads the following:

> Switching power supplies, or "switchers," are making rapid ***inroads*** into the power market. Compared with linear supplies, they have significant advantages in efficiency, size, and weight. They are, however, more complex and in the past have been considered principally for high-powered applications. With the coming of IC regulators and improvement and cost reductions of other solid state components, the cost-performance ***tradeoffs*** are no longer severe even for medium- and low-power requirements. As anticipated, therefore, switching power supplies are rapidly increasing their market share..

1. What does ***inroads*** mean to you?

2. Draw a line between the two words that make up the word ***inroads***.

I N R O A D S

3. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

4. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

5. Now write the two definitions side-by-side.

_____

_____

6. How is the meaning you wrote in #1 like the one you wrote in #5? How is it different?

_____

_____

7. What does ***tradeoffs*** mean to you?

_____

_____

8. Draw a line between the two words that make up the words that make up the word ***tradeoffs***.

T R A D E O F F S

9. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

10. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

11. Now write the two definitions side-by-side.

_____

12. How is the meaning you wrote in #9 like the one you wrote in #10? How is it different?

_____

_____

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EXERCISE 4

Gillian's boss told her to install lampholders on the outside doors of the plant. She knows they are weatherproof. She isn't sure, however, what type of conductors are safe for attaching the lampholders. A quick reading of her text gives her this information:

> ***Lampholders*** shall be of molded composition or other approved material of the ***weatherproof*** type, and if they are attached as pendants, they shall have the connections to the circuit wires staggered. If lampholders have terminals, or are of a type that punctures the insulation and makes contact with the conductors, they shall be attached only to conductors of the standard type.

1. What does ***lampholders*** mean to you?

2. Draw a line between the two words that make up the word ***lampholders***.

L A M P H O L D E R S

3. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

4. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

5. Now write the two definitions side-by-side.

_____

_____

6. How is the meaning you wrote in #1 like the one you wrote in #5? How is it different?

_____

_____

7. What does ***weatherproof*** mean to you?

_____

_____

8. Draw a line between the two words that make up the word ***weatherproof***.

W E A T H E R P R O O F

9. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

10. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

11. Now write the two definitions side-by-side.

_____

12. How is the meaning you wrote in #7 like the one you wrote in #11? How is it different?

_____

_____

13. What conclusion can you draw about standard-type conductors?

_____

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EXERCISE 5

Gillian now knows she needs to attach the lampholders to standard conductors. She knows the boss wants the lamps outside the refinery doors. All her problems are solved until she seed the door to the control room. There, all sorts of electrical lines enter the building. Her text explains where she needs to install the lampholders:

> Locations of lamps for ***outdoor*** lighting shall be below all live conductors, transformers, or other electrical equipment, unless clearances or other ***safeguards*** are provided for relamping operations or unless the installation is controlled by a disconnecting means which can be locked in the open position.

1. What does ***outdoor*** mean to you?

_____

_____

2. Draw a line between the two words that make up the word ***outdoor***.

O U T D O O R

3. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

4. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

5. Now write the two definitions side-by-side.

_____

_____

6. How is the meaning you wrote in #1 like the one you wrote in #5? How is it different?

_____

_____

7. What does ***safeguards*** mean to you?

_____

_____

8. Draw a line between the two words that make up the word ***safeguards***.

S A F E G U A R D S

9. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

10. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

11. Now write the two definitions side-by-side.

_____

12. How is the meaning you wrote in #7 like the one you wrote in #11? How is it different?

_____

_____

13. Why is the placement of lampholders near live wires a concern?

_____

_____

14. Why does placing them below these wires ease this concern?

_____

_____

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EXERCISE 6

Mike is wiring a control room. It seems to him that there's too much working space in front of the control panels. He asks Charlie, another electrician, if he agrees. Charlie tells Mike the Code says too little space is a problem. Too much space is not. Mike decides to check this out for himself. His text reads:

> The minimum clear working space in front of electric equipment such as ***switchboards***, control panels, switches, circuit breakers, motor controllers, relays, and similar equipment shall not be less than that set forth in the accompanying table unless specified in the Code.

1. What does ***switchboards*** mean to you?

_____

_____

2. Draw a line between the two words that make up the word ***switchboards***.

S W I T C H B O A R D S

3. Write the first small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

4. Write the second small word on the line below. Then define it by using what you know or with a dictionary.

_____

_____

5. Now write the two definitions side-by-side.

_____

_____

6. How is the meaning you wrote in #1 like the one you wrote in #5? How is it different?

_____

_____

❖ ❖