# EVALUATING
# ACADEMIC READINESS
# FOR APPRENTICESHIP TRAINING

**Revised for**

# ACCESS TO APPRENTICESHIP

## COMMUNICATIONS SKILLS
## IDENTIFICATION OF MAIN IDEA

## AN ACADEMIC SKILLS MANUAL
## for
## The Construction Trades (Structures)

This trade group includes the following trades:
Drywall & Acoustical Applicator, General Carpenter,
Mason (Brick & Stone and Restoration), Reinforcing Rod Worker, Roofer,
Terrazzo, Tile & Marble Mechanic

***Workplace Support Services Branch***
***Ontario Ministry of Training, Colleges and Universities***

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In preparing these Academic Skills Manuals we have used passages, diagrams and questions similar to those an apprentice might find in a text, guide or trade manual.

**This trade related material is not intended to instruct you in your trade. It is used only to demonstrate how understanding an academic skill will help you find and use the information you need.**

# COMMUNICATIONS SKILLS
# IDENTIFICATION OF MAIN IDEA

***An academic skill required for the study of the Construction Trades: Structures***

*The **main idea** of anything is its central purpose or point.* The main idea of a construction project, is to erect and finish that project. Everyone who is part of the construction team is there to contribute to that main idea. Your job may be laying out footings, framing interior walls, installing drywall, windows or insulation, preparing foundation walls for paint, sheathing the roof, building the stone porches or laying marble in the shower. Your contribution will be an important detail in making that main idea complete.

As you study your trade, you will be asked to find out how to do many things, often through books and manuals. Identifying the main idea as you examine written material will help you sort through the information. Then you can find what you want, and focus on the exact part of the text that has the ideas or facts that you need. Just as concrete, rebar, bricks, mortar, and lumber are each necessary parts of the structure of any building, the ability to understand main ideas is an essential part of the your reading strategy tool box.

This manual will help you identify the main idea in technical material so that you can find information you need as quickly as possible. We will look at how technical material is organized and suggest ways to find the main idea in that material. We will look at the following:

- Titles, headings and descriptions as guides to the main idea.
- Focusing on the main idea.
- Topic sentences and paragraphs.
- Supports to the main idea.
- An approach to reading.

## *PART I*
## *TITLES, HEADINGS AND SHORT DESCRIPTIONS*

### *Organization of Technical Material*
Any technical material you read usually indicates the main idea in the following ways:

- Titles, headings and short descriptions indicate the main idea of each section.
- Information is grouped in a logical pattern by topic, chapter and paragraph.
- The introduction to the topic usually comes first in a section, so you get to the main idea and the purpose of the writing immediately.
- Individual chapters usually start with basic concepts and move to more detailed knowledge after the general introduction to the main idea.

### *Titles: Finding the Main Idea*

When you need to read technical material, look at the document title, or name. The title will give you a good general idea of what the material is about.

Compare this to finding equipment in a well labelled drawer. A label makes short work of getting ready to do the job before you even start. Reading labels will help you find information quickly.

> **Example:** When you open a drawer labeled *Tools*, you expect to find tools. The label tells you what's inside. Everything in the drawer should be a tool – maybe hammers or wrenches, maybe all kinds of tools. If the label says *chisels,* then everything inside should be a chisel. The label provides an idea of what's there – and what's not there – but it doesn't give you details.

### Titles, headings and sub-headings

Think of a textbook, manual, chapter, or paragraph as a drawer. A drawer can store equipment and supplies, while a textbook or manual stores information. This information is labelled with ***titles, headings*** and ***sub-headings*** so you know what's inside.

Here are some examples of headings you might find in your trade manual.

**Joists**
**Laying Out Joists**
**Installing Joists**

Each heading tells what kind of information follows in that section. The first heading, **Joists**, doesn't tell us the exact features of joists that will be covered but we know that the section will tell us something about them. Since it is the first section, it will probably give a general introduction to joists. It might tell you what they are, how they are used and where they are installed.

The second heading, **Laying Out Joists,** is more exact. You know what aspect of joists you will learn about: laying them out. This is the main idea.

The third heading, **Installing Joists**, tells you that you will learn something about installing joists.

Usually titles or headings illustrate how the material in the text moves from general topics to more specific ones. The main idea of each becomes more focused. Here is an example:

**Hand Tools**
**Measuring and Layout Tools**

The first heading gives you a huge topic. Compare it to the second heading and notice how the second is more specific. It defines and limits the topic to specific types of tools, giving you a more precise idea of what you'll find.

Titles and headings are placed at the top of the text with **Bold Print** or CAPITAL LETTERS so they're easy to see. Charts and diagrams also have titles, and, often, short descriptions at the bottom or top. Titles give visual cues that are easy to see and that direct you to the main idea.

*A **heading** is a form of title designed to break information into smaller divisions*. A ***sub-heading*** breaks into even smaller divisions; a *sub, sub-heading* is smaller still.

Often a new heading will signal when there's a change in the main idea; it will direct you to the next main idea. Always read the titles and headings. They won't help if you skip them.

You'll find a list of chapter titles and section headings in the ***Table of Contents*** at the beginning of each text or manual. Be sure to check the Table of Contents before you start searching for information.

> **Example:** You might see this Table of Contents in a manual or text. Look at how information is broken into more and more focused topics.

| | |
|---|---|
| **MODERN CARPENTRY** | Textbook title |
| **Preparation Steps** | Chapter title |
| Identification of Building Materials | Unit heading |
| General Safety | Unit heading |
| Clothing | Sub-heading |
| Power Tools | Sub-heading |
| Shock Protection | Sub, sub-heading |

Let's look more closely at how information is organized in this Table of Contents. The same ideas of organization will apply to all texts, manuals or diagrams. Consider these four points about titles and headings:

**One**
You get information about ***main ideas from the titles***.

- The textbook title, *Modern Carpentry,* tells you the kind of information you will find: up-to-date trade information about carpentry.
- The chapter title, *Preparation Steps,* lets you know what the chapter will cover.
- Under the chapter title, you see unit headings, sub-headings and sub, sub-headings.

Each tells you what aspect of carpentry you will learn about.

**Two**
Each heading is a new main idea, but ***each one stays on the main topic.***

- *Modern Carpentry* for the text title and
- *The Preparation Step*s for the chapter heading.

Remember, all the information you read will relate to the larger main idea, and all the information in a chapter will relate to the main idea of that chapter, section or unit.

**Three**
As you read titles, from the textbook title to the sub (and sub, sub) headings, you can see that ***topics are more narrowly defined***. (more limited or specific) as they go.

- The book title gives you a general, main idea ( modern carpentry).
- The chapter title gives you more specific topic (preparation steps).
- Unit headings give more limited topic /main ideas (how to identify building materials and general safety).
- Sub-headings divide the main idea of general safety into two smaller groupings: clothing and power tools.
- The sub, sub-heading focuses on an even smaller topic: shock protection.

Titles and headings tell you quite a bit about what will be in each chapter. It all ties together.

**Four**
When you read titles, you can see the ***order of the information***. You start at the beginning when learning a trade, and learn information step by step.

- The first chapter, the first textbook, the first manual are the foundation for the second chapter, textbook and so on.
- Titles list the order in which you will learn.

This order shows you where you are going, and the steps you will take to get there.

**In Brief:**

1. **Titles** indicate what you will read about.
   - Everything in this book is about the main idea – modern carpentry.
2. **Chapter headings** identify the parts that form the main idea and show the order in which those parts are presented.
   - Every chapter is about some part of modern carpentry – building materials, general safety and so on.
3. **Headings and sub headings** will identify information contained in the chapter.
   - All of the headings in the chapter on safety tell about the specifics of working safely.

***PART II***
***FOCUSING ON THE MAIN IDEA***

**Assessing a job**
When you have a job or task to do, you need to be clear about it: What is the job? How big is it? How long will it take? What problems can I see? These are main idea questions.

You need to do the same thing when you are assigned a passage to read. Ask main idea questions: What do I have to understand? What do I have find out? How long will this take? Then look at the main titles and headings to find where to start reading.

***The Visual Check***

A ***visual check*** is a preview of what you are going to read. Imagine you have been assigned a chapter to read in **Modern Carpentry**. Start by glancing through the book using the following steps. This visual preview can help you understand what you will be reading.

- The chapter, titles and headings show how the information is organized.
  - Now, look for the heading that refers to the reading you need to do.
- When you find the heading you want, go to that section of the book.
  - Notice how long the passage is and if it is divided into smaller sections.
- Note the diagrams and read information around them.
  - If the information is new and if it looks complicated, you might give yourself more time to spend on it.

***Seeing a Pattern***

Every document follows a pattern of organization. Information is typically developed from general, large topics to more specific ones as details are added to the main idea. It is broken into more and more detailed units to add to your understanding. When you recognize the pattern, you will know where to look for specific information in the document.

The information will likely be organized in one of the following patterns:

- general to specific,
- most important to less important,
- problem to solution, or,
- theory to application.

You will see other patterns too. You may learn why a procedure is important before you learn the steps, or you may learn the importance of each step as you go. Watch for the pattern, so you understand where you are going and how to get there. Then focus on what you want to find out.

**From main idea to details**

Titles and headings give you a general idea of what you'll find. They can't give details. A drawer labeled *Tools*, contains tools. The label does say what tools are there, how many are there, or what kind they are. You will have to open the drawer; look at the contents. Take the tools out, or dump them out. Now, you are getting the details.

**Keep focused on the main idea**

To get the details of a section of reading material, first do a visual check. After the visual check, read the material, paying attention to what it is telling you. If the material is complicated or new, you may need to split it into smaller portions. It helps to read a difficult part several times.

While you have to pay attention to both the main ideas and all the details that explain it, don’t get distracted from the main job by a detail.

**Example:** You are organizing your tools (main job) and find a drill you lost six months ago. You pick it up, show it to the worker beside you, and wonder how it got here. You have been distracted by a detail from the job you are suppose to be doing.

The same thing happens with reading – you can be sidetracked.

Read Passage 1 below to find the main idea. Use these three steps to guide you.

1. **Use the title as a guide** to the main idea and contents.
2. **Do a visual check** to look for headings, diagrams and length. Note anything that stands out such as large or bold print. This also gives you some clues as to the main idea.
3. **Read the passage**. Check the way that each sentence relates to the main idea.

❖ ***Because this is a working sheet, underline or make notes that will help you. Note that we are examining main idea, not material estimates.***

**Passage 1**
**Estimating Materials**

To estimate wall and ceiling framing materials, you first need to determine the ***total linear feet***. To do this, add the length of each wall and partition together. The plans will include the dimensions of the outside walls that you can add together. The plans may or may not include the dimensions of partitions. If they do not, you will have to scale the drawing (See guide for this). As you add, check off each wall and partition length to avoid losing track of where you are. For plates, multiply the total figure by three (one sole plate plus two top plates). Add about 10 percent for waste.

There are two ways of ordering: you can order the number of linear feet in random lengths or you can order in specific lengths. To order in specific lengths, convert the total linear feet into specific lengths. Three pieces of 2 x 4 one-foot lengths equals 2 board feet. Thus, the total lineal feet of the walls and the partitions can be quickly converted to board feet measure if required. For example:

| | |
|---|---|
| wall & partition length | = 240' |
| total plate material | = length x 3 + 10% |
| | = 240' x 3 + 10% |
| | = 792' linear feet |
| Or 57 pieces, 2" x 4" x 14' | |

Before answering the questions about main idea, we'll review the passage using the three steps.

**Step 1: Use titles and headings as keys to the main idea.**

- The title gives you a guide to the main idea - estimating materials.
- You don't yet know exactly what materials.

**Step 2: Do a visual check before you tackle the reading.**

- You see the passage is two paragraphs long.
- Some words are in *italics* and there is some math.
- You notice if there are pictures and diagrams.

**Step 3: Read the passage carefully.**

- You see that each sentence refers to or describes something about the main idea - estimating materials.
- Each sentence contains details that relate to the main idea.

**Answer questions one and two below. Answers are at the end of this skills manual.**

**Questions:**

1. Paragraph one should tell you more about the main idea than the heading does. Read it again.

    a. What materials are you going to estimate – in other words, what is the main idea of the paragraph?
    b. What do you need to do first?
    c. In point form, how should you go about doing this?

2. The second paragraph continues to develop details *still on the topic of the main idea*. Examine each sentence in paragraph two to learn more.

    a. What do these details tell you about the number of ways of ordering material for wall and ceiling framing?
    b. The example shows you how to find linear feet and then convert to board feet. How is this related to the main idea, which is estimated the amount of framing material?

Once you have found the main idea you look for the details that answer ***what, why, how, when*** type of questions. You might expect to find out ***what*** you will estimate; ***how*** to do this; ***what*** order to use and ***why***. You also expect to find out how all of this relates to you and your trade.

**What's it about?**
Each sentence in Passage 1 relates to the title and topic of estimating materials; you have confirmed that this is the main idea. You have kept your focus on the main idea. By going through the process of identifying the main idea of each paragraph, you could now tell another person what this passage is about. You can also separate the main idea from the details.

Apply this method to find the main idea in anything you read, whether it's for yourself or to explain a design, material or project to a client.

## *PART III*
## *TOPIC SENTENCES AND PARAGRAPHS*

In technical material, the topic sentence (usually the first sentence) tells you what the main idea is. The other sentences add to this idea. All of the sentences should have something to do with the main idea. Once you are sure about the main idea expressed in the topic sentence, **read the passage carefully**, then ask yourself what it's about. The *usual rule* can help you find the topic sentence, *and* the main idea.

***The Usual Rule***;

- Paragraphs and passages are organized with a key sentence called a topic sentence.
- The topic sentence is usually the first one in the paragraph.
- Topic sentences provide you with the main idea.

In Passage 1, **Estimating Materials**, the first sentence of each paragraph is the topic sentence.

Paragraph one: *To estimate wall and ceiling framing materials, you first need to determine the total lineal feet.*

Paragraph two: *There are two ways of ordering: you can order the number of linear feet in random lengths, or you can order in specific lengths.*

These topic sentences prepare us for information to come. They says, "This is what we are going to talk about." All the remaining sentences explain or add details to the main ideas.

Below are two opening sentences that show how topic sentences work. These will be the topic sentences in passages 2 and 3, which we will see later. We can expect that anything that follows in the passages should relate to the ideas in these topic sentences.

**Read the topic sentences carefully and answer the questions which follow, even though you haven't seen the rest of the paragraphs yet.**

**from Passage 2**
The most common air barrier is to "wrap" the inside of the house with polyethylene sheets.

**from Passage 3**
Polyethylene sheathing for use as an air barrier should meet a number of requirements.

**Questions**

1. What is the main idea?

   **from Passage 2**
   - **a)** types of polyethylene sheets
   - **b)** "wrapping" a house with polyethylene sheets
   - **c)** types of air barriers

   **from Passage 3**
   - **a)** polyethylene sheathing
   - **b)** how to create air barriers
   - **c)** the requirements of polyethylene sheathing

2. Based on these opening sentences, what kinds of details would you expect to follow?
3. Could you come up with a short title that would apply to both?

**Before you check the answers at the end of this skills manual, read the rest of Passages 2 and 3, below.** Do you need to change your answers for question 1 or 2? Do the first sentences work as the topic sentences? Why or why not?

**Passage 2**
The most common air barrier is to "wrap" the inside of the house with polyethylene sheets. To ensure airtightness, overlap the plastic and then caulk all breaks or seams with a non drying sealant. An acoustic sealant (or other non drying type) will not dry or crack when compressed between two sheets of polyethylene over a solid material. Over the long term, it ensures air tightness.

**Passage 3**
Polyethylene sheathing for use as an air barrier should meet a number of requirements. It must be
1. at least 6 mm thick
2. made from new material
3. pass uniformity and strength tests
4. UV stabilized if it will be exposed to sunlight for extended periods of time during construction

Does the *Usual Rule* apply? **Yes**: these work as topic sentences:

- They give the main idea and the other sentences build information from that idea.
- They combine, in a logical order, to develop information on polyethylene sheets, a type of air barrier.
- The usual rule applies.

***NOTE**: If you aren't sure about the main idea after reading the first sentence in a passage, go on to the second or third sentence. The main idea and direction of the passage should become clearer as you proceed. One idea or topic should emerge as the main idea*

***Topic Paragraphs***
Longer passages begin with a ***topic paragraph***. They act like topic sentences. They tell you what the whole passage or section is about. Watch for introductory paragraphs that prepare you for a large piece of information. They come first, are often short and give you main idea and purpose.

**In Brief:**
1. Titles and headings give you some information about the contents. They tell you what the textbook or passage is about (main idea).
2. The next step is visual; you can "see" what to expect, and where the information fits in with the rest of the material.
3. When you read each paragraph, identify the topic sentence, which gives the main idea of that paragraph.
    6. The other sentences should add information or details to the main idea.
4. Identify the topic paragraph when you read a chapter or a longer section.
    6. The other paragraphs should add information to the main idea.

## *PART IV*
## *SUPPORTS TO THE MAIN IDEA*

***Supports to the main idea*** are the details that provide specific information. Supports may do any of the following:

- define or explain the main idea,
- describe how it works,
- illustrate how it operates,
- show the steps, or,
- show the results.

### Identifying supports to the main idea

Look at Passage 4 below. Read to see if the main idea is placed first – and what it is. Do the supports follow with details about the main idea?

**Passage 4**
**Wall Sheathing**

Sheath the wall sections before framing the roof. Sheathing adds rigidity, strength and some insulating qualities to the wall.

Plywood, wafer board, fibreboard and rigid insulating panels can all be used for sheathing. Because they are available in large sheets, installation is quick. Plywood and wafer board usually provide enough lateral strength to eliminate diagonal bracing. Fibreboard sheathing is made primarily from wood fibres with weather-proofing ingredients added to it. It is manufactured in both 4 x 8 ft and 8 x 14 ft sheets. Regular fibreboard sheathing can also be purchased with tongue and groove or shiplap joints in 2 x 8 ft sizes.

We should find a topic sentence in the first paragraph. It should give the main idea and prepare us for supports to the main idea. The supports might define or expand the main idea. They will describe a method, illustrate with diagrams or photos, or provide examples. Let's look at paragraph one to see if it works this way:

### Paragraph one

Sentence one states: *Sheath the wall sections before framing the roof.* The main idea is ***when*** to apply wall sheathing.

Sentence two explains ***why*** walls should be sheathed before framing the roof: Sheathing adds rigidity, strength and some insulating qualities to the wall.

### Paragraph two

Paragraph two should continue the main idea (sheathing wall sections) with details The topic sentence of paragraph two lists different types of wall sheathing materials. This tells us that the main idea in paragraph one is followed by more detailed information in paragraph two. Each supporting detail adds information about the main idea.

We learn:

- which panels can be used,
- why installation will be quick,
- benefits of plywood and wafer board,
- benefit and sizes of fibreboard and,
- features of regular fibreboard.

This passage about wall sheathing shows a common pattern in technical writing.

1. The **title** communicates the topic in brief.
2. The **topic sentence or paragraph** communicates the main idea in expanded form.
3. The sentences that follow add details.

**Diagrams**

Many reading passages will direct you to look at diagrams, illustrations or photos. These figures will add details and support to the topic. If a passage tells you to "*See Figure* 1*."* you can expect a diagram, chart or table that relates to the main idea.

We'll use a simple diagram, Figure 1 below, to demonstrate how diagrams support the main idea. Look at the diagram to understand the main idea (wall sheathing). Read the text for main ideas and supports.

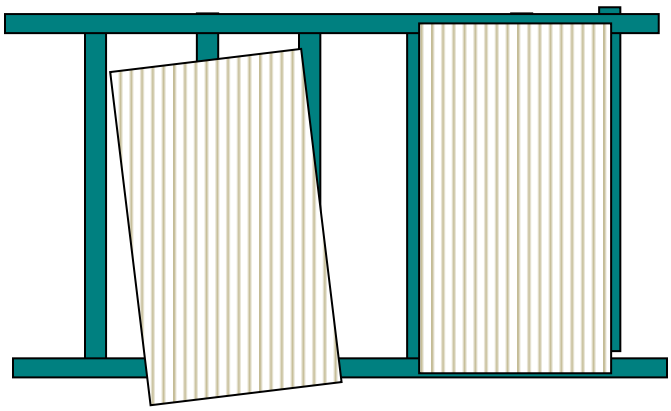

**Figure 1:** Oriented strand board sheathing (OBS) installed for wall sheathing. Edge nails should be spaced 6 inches apart and field nails 12 inches apart. This type of sheathing does not require strap bracing.

By studying the diagram of OBS wall sheathing installation, you see and understand more about this aspect of building. The description below the diagram gives you supports to the main idea.

***Steps to Supports***

Narrowing in on the supports to the main idea is like starting a job.

1. First, you need to ask main idea questions:
   a. What's the task (the job or the reading)?
   b. Why am I doing this?
   c. How much time will it take?
   d. What are the steps to be taken?

2. Next you need to look more closely at the details and ask specific questions:
   a. ***What*** manuals do I use?
   b. ***What*** duties will I have to do?
   c. ***What*** order will I use for the project and ***why***?

3. Proceed carefully.
   a. Stay focused on the purpose of the task.
   b. Make sure that each part helps to accomplish the main purpose.

**Getting the information you want**

Getting what you want, whether you are reading for information or doing a job involves seeing the big picture and then narrowing in on details. In this way you become knowledgeable, and you can make informed decisions. If you use this approach when you read for your trade, you will get the information you need to understand an aspect of your trade.

**In Brief: The Three Steps**

**Step 1:** See the big picture: Look at the title.
**Step 2:** Get a better focus: Use the visual check to preview the reading.
**Step 3:** Look more closely: Read for details.

Passage 5 below might be found in a section of your *Trade Science* textbook. Use it to apply the three steps.

**Passage 5**
**Physical States of Matter**

Matter exists in one of three physical forms or states: solid, liquid or gas. Substances change states without changing their chemical structure. In appropriate conditions, solids melt into liquids or vaporize, liquids freeze to solids or vaporize into gases, and gases condense into liquids.

When water changes its physical states the make-up of the molecules remains the same. Molecules of frozen water (ice) still contain two hydrogen atoms and one oxygen atom, chemically combined. Steam also contains these types of molecules. It is mostly a change in temperature that causes changes in the different physical states. Because of this, water can be made to return to a previous state by changing surrounding physical conditions.

**Step 1: See the big picture.** In a passage with the title, **Physical States of Matter**, you expect:

- Definitions and descriptions of the physical states.

**Step 2**: Get a better focus **by previewing** the passage.

- You see it has two paragraphs.
- One word, *ice*, is in parentheses ( ). Pay attention to signals such as parentheses that indicate explanation, definition or useful details.
- Find the topic sentence in paragraph one: *Matter exists in one of three physical forms or states: solid, liquid, or gas.*
- In paragraph two, the topic sentence refers to a specific aspect of physical changes of state: *When water changes its physical state, the make-up of the molecules remains the same.*
- Sometimes a diagram or table will be part of a passage. Make sure you always look at the text, charts, tables, and diagrams. Any details found in the diagrams will help you to follow the details in the reading. Also note if any information is highlighted.

**Step 3: Read carefully for details.**

- Check the supports (details) to see if they are guided by the title and the topic sentences.
- Look to understand the details which answer **what**, **how**, **how much** and **why** questions.

**Make information accessible**

When you need to understand a piece of technical writing, write down the main ideas and a list of the supporting details. We suggest making a list of supporting details for two reasons:

1. You need to identify and find the details before you can work with the information.
2. You need to break down information, especially if it is long, complex, and detailed.

***Identifying Types of Supports***

When you recognize the type of support being used, it should help you find what you want quickly. Supports to the main idea include but are not limited to the following:

1. **Examples:** Examples take you from what you know to new knowledge. They give you a clearer picture of what something is, what it includes or how it works. The passage usually signals an example:

   *For example*, a floor system includes:
   i. The details of sill construction.
   ii. Size and spacing of joists.

   *For example*, if steel banding on panel materials is cut, the fibres can expand when exposed to moisture.

   Watch for examples that do not have the word *example* as a signal:

   A composite panel closely resembles plywood except the middle ply is a core made of oriented wood fibres.

2. **Order of Ideas:** Order of ideas (sequence) describes the parts or steps in a process. It is a common type of organization of technical materials.

   Usually technical information is presented first in a general introduction and is followed by more specific details. The opening or introduction may outline the content, the application and the importance of the information.

   **Example:** Joists which support the floor frame rest on top of foundation walls. The width of the span may mean that additional support is needed. Girders resting on the foundation walls and on posts or columns provide the necessary support. To determine . . .

   Here is a step-by-step example with no introduction:

   **Example:** When nailing, start with one "soft" hit, that is, with fingers holding the nail. Then, let go and drive the nail in the rest of the way.

   Directions and instructions will start with the first step. Look for numbers, letters or lists of steps. Look for words such as *to begin with, first...second, then/next, before...after, in the same way, finally*. Remember, there is a reason for the order even if you don't know what it is.

3. **Definitions:** If the topic introduces a new concept or a technical word, you need an explanation of what it is before you know what it does. Technical terms are defined so you can understand the new word. Take note of special print or marks that are designed to get your attention.

   **Example:** Plywood will have an odd number of layers (*plies*). The outer plies are called ***faces*** or face and back. The next layers are called ***cross-bands*** and . . .

   **Example:** The span (the distance between the walls) is sometimes great.

   A definition tells you what technical terms means. Take note of special print or punctuation marks designed to get your attention. The definition or the word being defined may be in italics (*italics look like this,)* written in **bold**, or surrounded by quotations ("…"):

   **Example:** The term "*system*" means methods and materials of construction. It will include design, surface-covering materials and the methods for applying them.

   A definition may state what something is or what it does.

   **Example:** Girders, also called beams, rest on the foundation walls and on posts or columns and give additional support.

4. **Comparison and Contrast:** Comparison shows similarities and differences while contrast shows differences only. This is done to help explain, define and expand your knowledge of relationships. Comparison of products will show you their different qualities and applications. Look for words and phrases such as *in contrast, some ... others, whereas, yet, and on the other hand.*:

**Example:** The underlining in this example illustrates how this is done.
"A" is the most flexible of sandpapers and is used mainly for finishing jobs and with small grain size abrasives. "C" and "D" weights are stronger, less flexible, and used for both hand and power sanders. "E" is much stronger, very tear resistant and much less flexible than "C" and "D"and is used mainly for . .. etc.

Comparison of materials will show you their different qualities and applications.

**Example:** Unlike ice, a solid oak block cannot be melted into liquid by applying heat. Instead, the oak becomes carbon ash.

5. **Cause and Effect:** Cause and effect explains relationships: What caused warping? Can I take a shortcut here? Which footing is right for this design? An understanding of cause and effect gives you the tools to explain a procedure, product or principle to a customer.

**Example:** When lumber which is *green* is used, shrinkage of the wood will be excessive. This shrinkage will cause warping and plaster cracks and other problems.

An understanding of cause and effect gives you the tools to explain a procedure, product or principle to a customer.

## *PART V*
## *AN APPROACH TO READING*

### *Know What You Want*

What you want from a reading affects how you approach it. If you know exactly what you need, you might go over the contents quickly until you come to the information you want. Then you should carefully examine the details concerning that topic.

You may need instructions about using a drill press, an explanation of how stress affects sheet metal, or the details about new building codes. If you are reading for a specific reason, you look for information related to your aim and pay less attention to details that don't seem related. This is a logical and economical approach to reading for a purpose. Below are some suggestions for getting what you need from a reading, once you have located the relevant information:

- Make notes while you read, detailing the main points.
- Use your own words to repeat what you have read.
- Try stating the main idea.
- Give the passage a title.
- Can you tell someone else what the passage is about in a few words? If you can, you've identified the main idea.

To understand a passage, you need to know its main idea and its details. You should be able to say, "This tells me the difference between two structures" or, "This explains why I need to lubricate." If you can't, you need to reread the passage to find the main idea. Then look again at what supports do: They relate to the main idea but they also add details to your understanding.

**Troubleshooting the System**
**(Getting lost – and found again)**
You think you have a clear sense of the main idea. You know what it's about. But, as you get further into this technical material, you start feeling lost.

Check:

- *Maybe you weren't on the main trail at all*. If the sentences don't seem on topic, rethink the main idea.

- *Maybe the paragraph doesn't have a clear topic sentence*. You can still find the main idea by looking at what all the sentences are about. Try to identify one word or phrase that seems to be the theme of the paragraph and develop the main idea from this.

- Maybe *you're on the main trail but have strayed a little bit off it*. Again, this will send you back to the beginning. As you go back through the sentences, you may find a confusing part and realize, "Here's the spot that baffles me." You can identify the main idea, but a sentence or part of a chart contains details you don't understand.

If you get the main idea but need to clarify some of the details, the first step is to identify the problem. It may be new vocabulary or words used in unfamiliar ways, technical terminology, or a math formula.

**Begin to solve the problem:**

1. Can you look up the new words?
2. Can you find a technical definition?
3. Should you get extra help with the math?

Sometimes a writer assumes you know a concept or theory, and has left it out. This makes your job tough. You may need help from an instructor, a different textbook or another student. Remember, if you can find the problem, you can fix it.

**Read aloud**
If you are stumped by a passage, try reading it out loud. Sometimes you discover that you have been reading one word wrong the whole time. Reading aloud may help you solve the puzzle. Sometimes you can "hear" a problem better than you can "see" where the problem exists.

**Complex passages**
The main idea may jump out at you in short, familiar readings. In complex paragraphs with math formulas, technical terms and scientific information, you may find the main idea buried. Read the section in pieces; ask questions as you go, underline and make notes. You might need to read parts of the passage several times to understand how the details relate to the main idea.

**Application**
Your test of understanding is the ability to explain something to someone else. Imagine you have to explain an estimate to a client. Where do you start? Start with the main idea.

1.***The main idea***

- It may be explaining structural work that needs to be done or the different stages of the renovation.
- You can give an overview that put the whole job in perspective.

2. ***The supports may*** include a variety of information. The details in the explanation will depend on the size of the job and how much your customer wants and *needs* to know.

- Do they need all the details?
- Can you show them plans or sketches?
- Do they need to understand why a type of lumber is too expensive?

Just as a writer chooses details to support the main idea and purpose, so do you. You might explain this – or anything else – by starting at the beginning (main idea) and work through the details. You will use definitions, examples, comparison, and cause and effect details that relate to the situation. You will be practicing your skills and demonstrating your expertise.

***CONCLUSION***

As you read ask yourself, "What is this passage about?" If you can answer the question clearly, you understand the main idea.

Build your skills from the base up, just as you would for any trade project. As you move to more difficult concepts, the skill of separating the main idea from the details will still hold. The goal will remain the same: understanding the main job and all the details necessary to get you there.

Work to understand how the details relate to the main idea. This may take longer, but if as a result, you get the effects you want, the time will be well spent. When you understand the purpose of a passage, you find what you need, and, most importantly, find what you are supposed to learn.

***Summary***

1. **Understand how your trade / technical material is organized**. Do a visual check of the passage for length, for highlighted information and diagrams. Look for the patterns.

2. **Focus on the main idea before you start**. Identify the main idea through the title, the topic sentence, and find the supporting details that expand the main idea.

3. **Use the supporting details to help you sort out the main idea**. The supporting details answer questions such as how, what, why, where, when, and in what order.

4. **Understand the types of details found in technical writing**. The supporting details give you examples, the order (sequence) of steps or ideas, definitions, comparisons and contrasts, and causes and effects.

5. **Use an organized approach to reading**. Understand why you are reading so that you focus on the details you need. Make sure you also find what you are required to learn.

6. **Translate what you have read into your own words** as though you were explaining it to someone else. Work from the main idea through to the details.

7. **If you get lost, stop.** Find out where you got lost and try to identify the problem: Is it main idea, technical vocabulary, a math formula?

8. **Accept that picking out supports to the main idea and listing information takes longer than just reading.** The results – identifying, finding and understanding the information you read – are essential to your trade success.

## ANSWER PAGE

### *PART II* Passage 1, Estimating Materials,

Paragraph one should tell you more about the main idea (estimating materials) than the heading does. It is seven sentences long and we find out the following:

**1.** a. **What** materials will be estimated?: *wall and ceiling framing material.*
b. The **first steps** is to determine *total linear feet*.
c. **How to** determine total linear feet is described in sentences two to six: *add length of walls and ceiling., scale the drawing to get partition lengths, check off walls as you add, multiply the total by 3, add about 10% .for waste.*

A carpenter may encounter terms that are new (e.g. linear feet). In this case, the writer has highlighted the term for you because it is important. Stop and find the meaning of this term before going on to ordering, nailing or cutting. It is your responsibility to add this to your trade knowledge. You also might have to look up how to scale the drawing in a guide if this is new to you. The writer has indicated that you should do this.

Paragraph two develops details about estimating. We learn:

**2.** **a.** There are two ways of ordering materials – by linear feet for random lengths and by board feet for specific lengths.
**b.** The purpose of estimating material is so you can order the correct amount needed to do the job. You might need to order in either linear feet or board feet, so you need to know how to calculate both amounts when estimating material. The example is related to the main idea because it shows how to finish your estimate.

All the details here also relate to the larger topic of modern carpentry and to your trade knowledge.

### *PART III* Passage 2 and Passage 3 Topic Sentences,

**1.** What is the main idea?
**Passage 2b)** "wrapping" a house with polyethylene sheets

**Passage 3**; **c)** the requirements of polyethylene sheathing

**2.** What kinds of details would you expect to follow?
**Passage 2;** Expect facts (details) that answer **what, why, where** and **how** questions about how to wrap a house with polyethylene sheeting.

**Passage 3;** Expect details describing what the requirements of using of polyethylene sheathing as an air barrier are.