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Reading Comprehension

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Updated for The Official Guide for GMAT® Review, 13th Ed.

FIFTH EDITION



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MANHATTAN GMAT

Reading Comprehension

GMAT Strategy Guide

This in-depth guide takes the mystery out of complex reading passages by providing a toolkit of sketching techniques that aim to build comprehension, speed, and accuracy. Learn to identify the underlying structure of reading passages, and develop methods to tackle the toughest comprehension questions.



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MANHATTAN
GMAT

April 24th, 2012

Dear Student,

Thank you for picking up a copy of *Reading Comprehension*. I hope this book provides just the guidance you need to get the most out of your GMAT studies.

As with most accomplishments, there were many people involved in the creation of the book you are holding. First and foremost is Zeke Vanderhoek, the founder of Manhattan GMAT. Zeke was a lone tutor in New York when he started the company in 2000. Now, 12 years later, the company has instructors and offices nationwide and contributes to the studies and successes of thousands of students each year.

Our Manhattan GMAT Strategy Guides are based on the continuing experiences of our instructors and students. Dave Mahler deserves special recognition for his contributions over the past number of years. Dan McNaney and Cathy Huang provided their design expertise to make the books as user-friendly as possible, and Noah Teitelbaum and Liz Krisher made sure all the moving pieces came together at just the right time. And there's Chris Ryan. Beyond providing additions and edits for this book, Chris continues to be the driving force behind all of our curriculum efforts. His leadership is invaluable. Finally, thank you to all of the Manhattan GMAT students who have provided input and feedback over the years. This book wouldn't be half of what it is without your voice.

At Manhattan GMAT, we continually aspire to provide the best instructors and resources possible. We hope that you will find our commitment manifest in this book. If you have any questions or comments, please email me at dgonzalez@manhattanprep.com. I'll look forward to reading your comments, and I'll be sure to pass them along to our curriculum team.

Thanks again, and best of luck preparing for the GMAT!

Sincerely,

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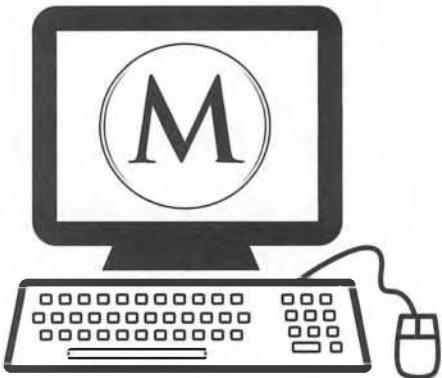
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Chapter 1 *of* **Reading Comprehension**

Introduction to Principles

In This Chapter...

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Principle #2: Look for the Simple Story

Principle #3: Link to What You Already Know

Principle #4: Unpack the Beginning

Principle #5: Link to What You Have Just Read

Principle #6: Pay Attention to Signals

Principle #7: Pick up the Pace

Summary of the 7 Principles of Active, Efficient Reading

Practice on Non-GMAT Material

Chapter 1:

Introduction to Principles

You are probably already familiar with Reading Comprehension from other standardized tests. You are given a passage to read, and you are asked questions about the substance and structure of the passage.

On the GMAT, you can expect to see four Reading Comprehension passages. Each passage will typically be accompanied by three to four questions, for a total of 12 to 14 Reading Comprehension questions. You should be aware of several logistical features of GMAT Reading Comprehension passages.

GMAT Reading Comprehension passages come in two basic forms: LONG and SHORT. Long passages, which generally consist of over 300 words in three to five paragraphs, take up more than 50 lines on the computer screen (or over 35 lines in *The Official Guide for GMAT Review, 13th Edition* and *The Official Guide for GMAT Verbal Review, 2nd Edition*). Examples of long passages on the GMAT appear on pages 364, 368, and 374 of *The Official Guide for GMAT Review, 13th Edition*.

Short passages, which generally consist of 200–250 words in two or three paragraphs, take up fewer than 50 lines on the computer screen in length (or under 35 lines in *The Official Guide for GMAT Review, 13th Edition* and *The Official Guide for GMAT Verbal Review, 2nd Edition*). Examples of short passages on the GMAT appear on pages 366, 370, and 372 of *The Official Guide for GMAT Review, 13th Edition*.

In the past few years, short passages have been more common on the GMAT than long passages. Of the four passages that you see on the GMAT, three of them are likely to be short and one of them long. However, you might get two short and two long. Moreover, there is no set order in the appearance of short and long passages. Finally, the paragraphs themselves have been getting longer. You might see a long passage with only two paragraphs, or a short passage made up of only one paragraph.

Questions appear one at a time. The questions are presented one at a time on the right side of the computer screen. The complete reading passage remains on the left side of the screen while you answer questions on that passage. You will only be able to see the first question before reading the passage.

The number of questions per passage is NOT stated. The GMAT does not indicate how many questions are associated with a particular passage (e.g., the GMAT does not say that “Questions 6–9 refer to the following passage”). However, the length of the passage and the number of questions are strongly correlated. Generally, each short passage has three questions associated with it, and each long passage has four questions associated with it.

Line numbers are not listed. Though the *Official Guide (13th Ed.)* and older GMAT tests list line numbers down the side of the paragraphs, the GMAT itself does not now number the lines in each passage. When necessary, the GMAT will use yellow highlighting in the passage to indicate the location of a particular term, phrase, or section.

Challenges of Reading Comprehension

The GMAT makes Reading Comprehension difficult in several ways.

The content is demanding. Passages focus on specific and often unfamiliar topics in physical science (physics, astronomy, geology, chemistry), biological science (biology, ecology), social science, history, and business. No specialized knowledge beyond high school is assumed, but the passages are written for an educated post-college audience. In fact, at least some of the passages seem to be adapted from journals published in particular fields for educated laypeople. You might be neither knowledgeable nor enthusiastic about these fields. Moreover, even business topics—which are probably inherently interesting to you, since you are planning to go to business school—are made tough by complex writing.

You have to read on screen. You cannot print the passage out and mark it up. Instead, you have to scroll a window up and down to see all of a long passage. Furthermore, reading on a computer screen is difficult on the eyes.

You cannot preview all the questions. You cannot look over all the questions, glean ideas about what they are asking you, and then read the passage. Nor can you go back after answering a few more questions and change your response to the first question (now that you finally understand the passage). Rather, you have to grasp the content of the passage relatively well after your first read, having pre-viewed only the first question.

You have to read quickly. You should only take at most four minutes to read a passage and understand it ($2\frac{1}{2}$ to 3 minutes for a short passage, $3\frac{1}{2}$ to 4 minutes for a long passage). You may find Reading Comprehension frustrating for precisely this reason. If you had enough time, you could master almost any passage and answer almost any question correctly. But you do not have that luxury.

You have to stay with it. Reading Comprehension is the one question type that regularly asks three to four questions around one block of content. With every other GMAT question type, if you get completely stuck on the content of a particular question, you can always take a guess and move on to another question about something completely different without incurring too drastic a penalty. But you cannot afford to give up entirely on a Reading Comprehension passage, which can represent almost

a tenth of the Verbal questions you face. So you must tough it out and wring a decent level of understanding out of every passage, no matter what.

Two Extremes and a Balanced Approach

One response to the challenges of Reading Comprehension is to become a **Hunter**. Hunters avoid the first read-through altogether, reasoning that most questions require some kind of detailed look-up anyway—so why not just skip the initial reading and go right to the questions? As their name implies, Hunters simply go “hunting” for the answer in a passage they have never read.

This strategy seems to save time up front, but you have to spend a lot more time per question. More importantly, the approach leads to many wrong answers. Without a good general understanding of the passage, Hunters can fall prey to trap answers.

At the other extreme, some GMAT test-takers become **Scholars**. Scholars do a very careful first read-through, paying attention to details. “After all,” Scholars worry, “I could be asked about any aspect of the passage—and if I skim over anything, how can I be sure that that one clause was not important, even critical, to my overall understanding?”

One obvious problem with this method is that it takes far too much time. More importantly, if you read too slowly and pay too much attention to all the details, you can easily lose sight of the big picture: the gist and structure of the whole passage. And the big picture is what you absolutely need to take away from the first read.

The middle ground between Hunters and Scholars is occupied by **Big Picture Readers**, who take a balanced approach. Before trying to answer the questions, they read the passage with an eye toward structure. At the beginning of the passage, Big Picture Readers go slowly, ensuring a solid grasp of the basics. But they go quickly at the end, keeping minor details at arm’s length. They read ACTIVELY but EFFICIENTLY.

The goal of Big Picture Reading is to avoid finishing a passage and feeling that you just wasted your time—either because you got lost in the weeds, or because you skimmed over the passage at too removed a level to grasp any content.

How do you become a Big Picture Reader on the GMAT? Here are **Seven Principles of Active, Efficient Reading** to guide you.

Principle #1: Engage with the Passage

The first principle has to do with your *emotional attitude* toward the passage. The maxim *Engage with the Passage* is not as warm and fuzzy as it seems. It is based on a simple truth about your brain: you simply cannot learn something that you actively loathe or viscerally reject. So getting over your dread

of the passage is not just a feel-good exercise. It is a prerequisite. You do not have to fall madly in love with medieval Flemish poetry or the chemistry of zinc, but you do have to stop keeping the topic at an emotional arm's length.

One quick and effective method is to **pretend that you really like this stuff**. Say to yourself, “This is great! I get to spend the next eight minutes thinking about *sea urchins!*” Who knows—you might actually like them, learn something along the way, and do well on the questions (the most important thing).

Another way to help yourself get into the passage psychologically is to **identify good guys and bad guys**. If the sea urchins are threatened by environmental damage, get a little angry on their behalf. If you engage your emotions, you will both enjoy the passage more and recall it better than otherwise.

If you cannot stomach these steps, **simply acknowledge that you do not find the passage thrilling**. Allow yourself a moment of disappointment. Then hunker down and get back into it. Whatever you do, do not let yourself be pushed around by the passage. Love it or hate it, you have to own it.

The next six principles have to do with your *cognitive processes*: what you do with your brain as you do a Big Picture Read. To illustrate these processes, we will construct an analogy. Imagine, if you will, that your brain is a *company's headquarters*.

More precisely, a *part* of your brain is like a company's headquarters: your **working memory**, where you store active thoughts. Your attention lives here. When you are thinking about sea urchins, your ideas about sea urchins live in your working memory. Only a few items fit at a time. Your working memory is the most valuable real estate in your brain.

Your job is to be the recruiter for the headquarters in your brain. A recruiter has two tasks: (1) to let *in* all the talented, important people AND (2) to keep out all the people who will not contribute.

As you read the passage, you have to act like a selective recruiter. You have to let the important parts into your working memory, but you also have to skim over the unimportant parts, so that you do not distract yourself with every last detail.

The next six principles explain how to be a good recruiter for your brain.

Principle #2: Look for the Simple Story

Every GMAT passage has a **simple story—the gist or core meaning of the passage**. You must find this simple story on the first read-through.

How do you identify this simple story? Here are three different methods. Also, for now, do not worry about whether, or how, you write down the simple story as you read a passage. Just focus on finding that story.

1. Text It To Me. As you read, ask yourself this question: how would you retell all this stuff to an intelligent but bored teenager in just a couple of sentences? Can you give him or her just 5–10 words to describe a paragraph? You will find yourself cutting out the trivia.

Simplifying does not contradict the principle of being engaged with the content of the passage. You should be extremely interested in the passage, so you know what is important.

2. Make a Table of Contents. Alternatively, you can create a short table of contents. Use five words or fewer for the headline of each paragraph. As written, these headlines may not sound exactly like a story, but they outline the same narrative.

3. Look for Content and Judgment. The parts of a simple story can generally be classified as Content or Judgment, as follows:

Content: the scientific or historical subject matter of the passage.

- (a) Causes (effects, evidence, logical results)
- (b) Processes (steps, means, ends)
- (c) Categories (examples, generalities)

Judgment: what the author and any other people believe about the Content.

- (a) Theories and Hypotheses
- (b) Evaluations and Opinions
- (c) Comparisons and Contrasts
- (d) Advantages and Disadvantages

Reminder: Don't Forget the Twist. Even as you look for the simple story, realize that on the GMAT, there will often be some important *qualification* or *contrast*—a key twist or two in the road. After all, such twists help the GMAT ask difficult questions. Be ready to incorporate a key twist or even two in your simple story.

For example, a passage might be about the worldwide decline in the population of frogs. In describing various theories, the passage might emphasize a distinction between the pessimistic theories shared by most scientists and the optimistic theory of one Scientist X, who believes that the decline is taking place within a natural oscillation.

The simple story might go like this:

The number of frogs in the world is falling fast. There are a few possible explanations, including pollution, climate change, and loss of habitat. Most scientists think this decline is a serious problem caused by human activity, but Scientist X thinks it's part of a natural cycle and the frogs will come back soon on their own.

Here, the contrast is between what most scientists believe about the frog decline and what Scientist X believes.

Principle #3: Link to What You Already Know

When you read words on a page, they typically activate pre-existing knowledge in your head. This is a crucial part of comprehending what you are reading. Every word that you know in the English language is naturally tied to a web of memories and ideas. In fact, if a word does NOT activate ideas when you read it, it might as well be *zzyrglbzrch!*

Normally, your brain wakes up these ideas and memories as a natural part of reading. However, under stress, your eyes can pass over words and even recognize them, but no ideas come to life in your brain. You are too distracted and overwhelmed, and the words on the page remain just words.

In this case, try **concretizing**. That is, actively *imagine what the words are referring to*. Re-explain the original text to yourself. Visualize what it represents. Indulge in simplifications, even stereotypes. Make up examples and use any other mental handles that you can.

Of course, there is a danger in actively concretizing part of a GMAT passage—you might introduce outside ideas. However, that danger is small in comparison to the worse problem of *not understanding at all* what you are reading, especially at the start of a passage.

Consider the following sentence, which could be the opening of a passage:

Most exobiologists—scientists who search for life on other planets or moons—agree that carbon probably provides the backbone of any extraterrestrial biological molecules, just as it does of terrestrial ones, since carbon is unique among the elements in its ability to form long, stable chains of atoms.

Ideally, you can read this sentence and grasp it without any problems. But recognize that under pressure, you might need some help understanding the sentence.

In your mind, you might concretize this sentence in the following manner:

<u>Words</u>	<u>Concretized Ideas</u>
...exobiologists—scientists...	smart folks in white coats
...who search for life on other planets or moons...	who peer through telescopes looking for little green men
...carbon probably provides the backbone of extraterrestrial biological molecules...	<u>carbon</u> : charcoal, key element in living things <u>backbone</u> : like a spine to a little molecule

...its ability to form long, stable chains of atoms.

carbon can make long, stable chains
like bones in a backbone
or links in a physical chain

1

You should NOT write this concretization down (except as an exercise during your preparation). The process should happen quickly in your head. Moreover, as you read further into the passage, the need to concretize should diminish. In fact, if you do too much concretizing along the way, you might introduce too many outside ideas and lose track of what is actually written in the passage. However, concretizing can help you make sense of a difficult passage, so you should practice this technique.

Principle #4: Unpack the Beginning

You must understand the first few sentences of every passage, because they supply critical context for the entire text. If you do not grasp these sentences at first, you have two choices. Either you can take more time with them right away, or you can read a little further and gather more context. In the latter case, you MUST go back and re-acquire those initial sentences later.

All too often, GMAT students satisfy themselves with an “impressionistic” sense of the beginning of a passage. However, **forming an impression is not comprehending the passage**. Given the importance of the initial sentences, you should make sure you grasp 100% of the beginning of any passage (even if you only grasp 40% of the end). That is far better than comprehending 70% of the text throughout.

Complicating matters, the GMAT often opens passages with long, opaque sentences. How do you make sure you understand them, either now or later? The process of concretizing can help. You can also use the **unpacking** technique. Academic language is often dense with long noun phrases formed out of simple sentences. **To unpack an academic-style sentence, turn it into a few simple sentences** that express essentially the same meaning.

In general, you should NOT write this unpacking out (except as an exercise) or apply it throughout the passage. Like concretizing, unpacking is a powerful tool to smash open resistant language, especially at the start of the passage. Use this technique judiciously.

The steps to unpacking a complex sentence are as follows:

1. **Grab a concrete noun first.** Pick something that you can touch and that causes other things to happen. Do not necessarily pick something at the start of the sentence.
2. **Turn actions back into verbs.** In academic language, verbs are often made into noun or adjective phrases. Re-create the verbs. Also, feel free to start with *There is* or *There was*.
3. **Put only ONE simple thought in a sentence.** One subject, one verb.

4. Link each subsequent sentence to the previous one, using *this* or *these*. For instance, *This resulted in...* This process mimics speech, which is usually easy to understand.

5. Simplify or “quote off” details. If a jargon word is used in an important way, put quotes around it. Think to yourself “...whatever that means...” and keep going. If the term is necessary, you will figure it out from context later.

Consider this example opening of a passage:

In a diachronic investigation of possible behavioral changes resulting from accidental exposure in early childhood to environmental lead dust, two sample groups were tracked over decades.

1. Grab a concrete noun first, especially a cause. A good candidate is *lead dust*. The first sentence could simply be this: *There was lead dust in various environments.*

2. Turn other parts of speech, such as action nouns and adjectives, back into verbs. For instance, *exposure* becomes *were exposed*. *Behavioral* becomes *behaved*.

3. Put only one thought in a sentence, such as *There was lead dust in various environments.*

4. Link each sentence to the previous with *this/these*. So the second sentence could read, *Young children in these environments were exposed to *this* dust by accident.*

5. Simplify or “quote off” details or jargon. For instance, the term “*diachronic*” needs a pair of quotes, so that you do not focus on it. You might even think of it just as “*d*-something.”

The final list of a few simple sentences could come out this way:

- (1) There was lead dust in various environments.
- (2) Young children in these environments were exposed to this dust by accident.
- (3) This exposure may have changed how the children behaved.
- (4) This whole matter was investigated.
- (5) In this “diachronic” investigation, two sample groups were tracked over time.

This unpacked list is easier to dive into and understand than the original sentence—even though the list contains nearly twice as many words! Also note that the subject and verb of the original sentence do not appear until the end of the list. This phenomenon is very common. Often, it is easiest to understand the outer “frame” of the sentence *last*.

Again, it is often not practical to employ such an elaborate process in real time on the GMAT. However, knowing how to break down a complex sentence into its component ideas can help you read more efficiently in general. In addition, you can use this technique if you are stuck on one of the early sentences, although it will require some effort.

Incidentally, the ten-dollar word *diachronic* means “happening over time” in certain technical settings. If you needed to know that word, you would be able to infer its meaning from context. For instance, the passage might contrast this decades-long *diachronic* investigation with a *synchronic* study of a cross-section of people all examined at one time. For the GMAT, you need to have an educated adult’s working vocabulary, but you will not need advanced knowledge of any specialized jargon.

Principle #5: Link to What You Have Just Read

As you read further, you must continue to ask yourself about the **meaning** and **purpose** of what you are reading. What does this sentence mean, *in relation to everything else I have read?* Why is this sentence here? What function does it serve in relation to the previous text?

In the unpacking technique, you saw the power of linking. Complicated ideas can be made digestible by breaking them into pieces and hooking them together. In writing, we do not always use *this* and *these*, but we often put references to *old* information at the beginning of sentences, even complex ones, to hook them to previous material. Likewise, we tend to save *new* information for the end of sentences.

What kinds of relationships can a sentence have to the previous text? In general, you should think about these possibilities:

- (1) Is the new sentence **expected or surprising?**
- (2) Does it **support or oppose** earlier material?
- (3) Does it **answer or ask** a question?

More specifically, the **Content/Judgment** framework that you encountered before can guide you. Do NOT use this framework as a checklist. Rather, simply be aware of the various possible relationships.

Content: the scientific or historical subject matter of the passage.

- (a) Causes (effects, evidence, logical results)
- (b) Processes (steps, means, ends)
- (c) Categories (examples, generalities)

Judgment: what the author and any other people believe about the Content.

- (a) Theories and Hypotheses
- (b) Evaluations and Opinions
- (c) Comparisons and Contrasts
- (d) Advantages and Disadvantages

Do not over-analyze as you read. You have been linking sentences together and making sense of them as a whole for many years—in fact, you are doing so now, as you read this chapter. We are just describing the process.

Principle #6: Pay Attention to Signals

To help link new material to previous text that you have read, you should be aware of various language signals.

First of all, **paragraph breaks** are important. They indicate something new. The sentences in the simple story often correspond to different paragraphs in the passage. If you take a “Table of Contents” approach to the simple story, your headlines correspond to the different paragraphs.

This does not mean that paragraphs cannot shift direction internally; they occasionally do. But paragraph breaks are not random. Each one marks a new beginning of some kind.

Second, **signal words** indicate relationships to previous text. Here are a number of such relationships, together with their common signals.

<u>Relationship</u>	<u>Signal</u>
Focus attention	As for; Regarding; In reference to
Add to previous point	Furthermore; Moreover; In addition; As well as; Also; Likewise; Too
Provide contrast	On one hand / On the other hand; While; Rather; Instead; In contrast; Alternatively
Provide conceding contrast (author unwillingly agrees)	Granted; It is true that; Certainly; Admittedly Despite; Although
Provide emphatic contrast (author asserts own position)	But; However; Even so; All the same; Still; That said Nevertheless; Nonetheless; Yet; Otherwise Despite [concession], [assertion]
Dismiss previous point	In any event; In any case
Point out similarity	Likewise; In the same way
Structure the discussion	First, Second, etc.; To begin with; Next; Finally; Again
Give example	For example; In particular; For instance
Generalize	In general; To a great extent; Broadly speaking
Sum up, perhaps with exception	In conclusion; In brief; Overall; Except for; Besides
Indicate logical result	Therefore; Thus; As a result; So; Accordingly; Hence
Indicate logical cause	Because; Since; As; Resulting from
Restate for clarity	In other words; That is; Namely; So to speak
Hedge or soften position	Apparently; At least; Can, Could, May, Might, Should; Possibly; Likely
Strengthen position	After all; Must, Have to; Always, Never, etc.

Introduce surprise

Actually; In fact; Indeed

Reveal author's attitude

Fortunately; Unfortunately; *other adverbs*; So-called

1

Principle #7: Pick Up the Pace

As you read the passage, go faster after the first paragraph. In your working memory, hold the growing jigsaw puzzle that is the big picture of the passage. As you read text later in the passage, ask whether what you are reading adds anything truly significant to that jigsaw puzzle. Toward the end, only dive into information that is clearly part of the big picture.

Do NOT get lost in details later on in the passage. Do NOT try to master every bit of content. You must read the whole passage—but keep later parts at arm's length.

Only pay close attention to the following elements later on in the passage:

- (1) **Beginnings of paragraphs.** The first or second sentence often functions as a topic sentence, indicating the content and/or purpose of the paragraph.
- (2) **Big surprises** or changes in direction.
- (3) **Big results**, answers, or payoffs.

Everything else is just detail. Do not skip the later text entirely. You must pass your eyes over it and extract *some* meaning, so that if you are asked a specific question, you remember that you saw something about that particular point, and you know (sort of) where to look. Moreover, those big surprises and results can be buried in the middle of paragraphs. You must actually read the later paragraphs and make some sense of them.

Nevertheless, do not try to grasp the whole passage deeply the first time through. Your attention and your working memory are the most valuable assets you have on the GMAT in general and on Reading Comprehension in particular. Allocate these assets carefully.

Summary: The 7 Principles of Active, Efficient Reading

To become a Big Picture Reader of GMAT Reading Comprehension passages, follow these principles.

- (1) Engage with the Passage
- (2) Look for the Simple Story
- (3) Link to What You Already Know
- (4) Unpack the Beginning
- (5) Link to What You Have Just Read
- (6) Pay Attention to Signals
- (7) Pick up the Pace

Will you consciously go through each of these principles every time you read? Of course not. You need to practice them so that they become a natural part of your reading.

Practice on Non-GMAT Material

Reading Comprehension may seem difficult to improve, especially in a short period of time. However, you can accelerate your progress by applying these principles to what you read *outside* of the GMAT, as part of your daily life. Actively engage with the material, especially if you are not initially attracted to it. Look for the simple story. Link what you read to what you already know and to what you have just read. Unpack and/or concretize language if necessary. Pay attention to signals. And pick up the pace as you read, in order to avoid getting lost in details.

These principles work on a wide range of expository writing—a company’s annual report, a book review in the newspaper, an article in your college alumni magazine. By applying these principles outside of a testing or test-prep environment, you will become much more comfortable with them.

Granted, some outside material is more GMAT-like than other material. You should read major journals and newspapers, such as *The Economist*, the *Wall Street Journal*, the *Atlantic Monthly*, and the *New York Times*, to become better informed about the world in general. However, these publications are somewhat *too* digestible. The paragraphs are too short, and neither the topics nor the writing itself is quite as boring as what you find on the GMAT.

In this regard, **university alumni magazines** are good sources of articles that resemble Reading Comprehension passages in style and substance. (No offense to our alma maters!) Also, if you are not naturally attracted to science topics, then you should consider reading a few articles in *Scientific American* or similar publications that popularize the latest advances in science and technology. In this way, you can gain familiarity with science writing aimed at an educated but non-specialized audience.

Problem Set

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In problems #1–4, **concretize** each sentence. Focus on specific terms that you can visualize. Associate these terms with your knowledge and memories, and create a mind’s-eye view of each sentence. Spend no more than 15–20 seconds per sentence. Then write down this concretization. (We do not suggest that you write down concretizations on the GMAT, but by writing them down now as part of this exercise, you can compare them to the sample answers and develop your ability to concretize.)

1. Computer models of potential terrestrial climate change over the next century must take into account certain assumptions about physical and chemical processes.
2. Company X has experienced a more rapid rate of growth than Company Y, because Company X has invested more resources in projects with a more rapid payout than has Company Y.
3. Given the complexity of the brain’s perceptual and cognitive processes, it is not surprising that damage to even a small set of neurons can interfere with the execution of seemingly simple tasks.
4. The rise of Athenian democracy in ancient times can be considered a reaction to class conflict, most importantly between a native aristocracy and the inhabitants of nearby towns incorporated politically into the growing city-state.

In problems #5–8, **unpack** each complex sentence. That is, find a few simple sentences that convey the same information as the original sentence. Do the unpacking in your head first, then write down the unpacked sentences. (Do not write down unpacked sentences during the GMAT, but by writing them down now as part of this exercise, you can compare them to the sample answers and develop your ability to unpack.)

5. The simplistic classification of living things as plant, animal, or “other” has been drastically revised by biologists in reaction to the discovery of microorganisms that do not fit previous taxonomic schemes.
6. Despite assurances to the contrary by governments around the world, the development of space as an arena of warfare is nearly certain, as military success often depends on not ceding the “high ground,” of which outer space might be considered the supreme example.
7. Since the success of modern digital surveillance does not obviate the need for intelligence gathered via old-fashioned human interaction, agencies charged with counter-terrorism responsibilities must devote significant effort to planting and/or cultivating “assets”—that is, spies—within terrorist organizations that threaten the country.
8. Students learning to fly fixed-wing aircraft are taught to use memory devices, such as the landing checklist GUMPS (“gas, undercarriage, mixture, propeller, switches”), that remain constant even when not every element of the device is relevant, as in the case of planes with non-retractable landing gear.

P

Read the following passage, and then complete the exercises on the next page.

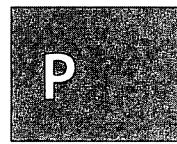
Passage: Pro-Drop Languages

In many so-called “pro-drop” or “pronoun-drop” languages, verbs inflect for number and person. In other words, by adding a prefix or suffix or by changing in some other way, the verb itself indicates whether the subject is singular or plural, as well as whether the subject is first person (*I* or *we*), second person (*you*), or third person (*he*, *she*, *it*, or *they*). For example, in Portuguese, which is at least partially a pro-drop language, the verb *falo* means “I speak”: the –o at the end of the word indicates first person, singular subject (as well as present tense). As a result, the subject pronoun *eu*, which means “I” in Portuguese, does not need to be used with *falo* except to emphasize who is doing the speaking.

It should be noted that not every language that drops its pronouns inflects its verbs. Neither Chinese nor Japanese verbs, for instance, change form at all to indicate number or person; however, personal pronouns are regularly omitted in both speech and writing, leaving the proper meaning to be inferred from contextual clues. Moreover, not every language that inflects its verbs drops subject pronouns in all non-emphatic contexts. Linguists argue about the pro-drop status of the Russian language, but there is no doubt that, although the Russian present-tense verb *govoryu* (“I speak”) unambiguously indicates a first person, singular subject, it is common for Russian speakers to express “I speak” as *ya govoryu*, in which *ya* means “I,” without indicating either emphasis or contrast.

Nevertheless, Russian speakers do frequently drop subject and object pronouns; one study of adult and child speech indicated a pro-drop rate of 40–80%. Moreover, personal pronouns must in fact be dropped in some Russian sentences in order to convey particular meanings. It seems safe to conjecture that languages whose verbs inflect unambiguously for person and number permit pronoun dropping, if only under certain circumstances, in order to accelerate communication without loss of meaning. After all, in these languages, both the subject pronoun and the verb inflection convey the same information, so there is no real need both to include the subject pronoun and to inflect the verb.

9. Unpack the first two sentences of the first paragraph. That is, break them down into a series of simple linked sentences.



10. How does the second sentence of the first paragraph relate to the first sentence? What words indicate this relationship? Use the Content/Judgment framework, if it is helpful:

- | | |
|-----------|---|
| Content: | (a) Causes (effects; evidence; logical result)
(b) Processes (steps; means; end)
(c) Categories (example; generality) |
| Judgment: | (d) Theories/Hypotheses
(e) Evaluations/Opinions
(f) Comparisons/Contrasts
(g) Advantages/Disadvantages
(h) General Judgments (support/oppose; expected/surprising; answer/ask questions) |

11. How do the third and fourth sentences of the first paragraph relate to what came before? Use the Content/Judgment framework.

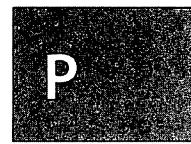
12. Analyze the second paragraph, using the Content/Judgment framework. What does this paragraph say, in brief? How does this paragraph relate to the first paragraph? Where are the big surprises and big results, if any?

13. Perform the same analysis on the third paragraph.

14. What is the simple story of this passage? Try one or more of these different styles:

- (a) Full Sentences
 - Summarize each paragraph in just a couple of sentences.
- (b) "Text It To Me"
 - Summarize each paragraph in 5–10 words or abbreviations.
 - Use symbols (such as = to equate two things).
 - Still try to express full thoughts.
- (c) Table of Contents
 - Give each paragraph a title or headline of no more than five words.
 - Do not try to express full thoughts.

Solutions



Concretizations

These concretizations are specific examples. Your own concretizations will likely be different. Again, on the GMAT, you will never write down full concretizations such as these. Rather, you need to practice the process so that you can carry it out quickly in your head.

1.

Words

Computer models of potential terrestrial climate change over the next century...

...must take into account certain assumptions about physical and chemical processes.

Concretized Ideas

Big computers in some laboratory running programs about potential terrestrial climate change (how the Earth's weather might change) over the next 100 years...

These programs must know, or assume, how physics and chemistry works: how water heats up and evaporates, for instance.

2.

Words

Company X has experienced a more rapid rate of growth than Company Y...

...because Company X has invested more resources in projects with a more rapid payout than has Company Y.

Concretized Ideas

Make up actual examples for Company X and Company Y. Make the examples extreme. Vandelay Industries has grown very quickly, while Dunder Mifflin has hardly grown at all.

Vandelay has put more money into "quick hits." Maybe Vandelay has just hired some top salespeople who immediately generate revenue. Dunder Mifflin puts its money into longer-term projects. Maybe Dunder Mifflin is building laboratories for R&D.

3.

Words

Given the complexity of the brain's perceptual and cognitive processes...

Concretized Ideas

The brain is complex. It does complex things, like a computer in your skull.

perceptual: how we see and hear
cognitive: how we think and reason
 Given all that...

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...it is not surprising that damage to even a small set of neurons...

...can interfere with the execution of seemingly simple tasks.

...it is not surprising that just a little brain damage (say, caused by a small stroke), frying some wires in the computer...

...can mess up how you do even “simple” things (say, speaking aloud or riding a bike). After all, your computer would probably stop working completely if you opened it up and ripped out “just a few” wires.

4.

Words

The rise of Athenian democracy in ancient times...

...can be considered a reaction to class conflict...

...most importantly between a native aristocracy and the inhabitants of nearby towns incorporated politically into the growing city-state.

Concretized Ideas

Athenian democracy in ancient times: Socrates, Plato, Pericles, etc. voting in a public square. Marble statues and pillars everywhere.

You can think of all that as the result of class conflict: different economic and social groups struggling with each other. The workers versus the nobles.

Native aristocracy: the rich & powerful people of Athens. They are struggling with the people from the provinces who are now under Athens' thumb. The map of “greater Athens” grows.

Unpacking

Like the concretizations, these unpacked sentences are simply examples of the process. Your versions will likely differ. Note that unpacking often involves some concretizing as well. Again, you should not write down unpacked sentences during the GMAT. This exercise is meant to develop your mental muscles, so you can take apart complex academic language.

5. Living things can be classified as plant, animal, or “other.”

This classification is simplistic.

In fact, it has been drastically revised by biologists.

Why? Because certain microorganisms (say, bacteria) have been discovered.

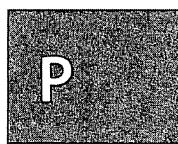
These microorganisms do not fit previous “taxonomic” schemes (that is, classifications).

6. Space could be developed as an arena of warfare.

In fact, that's nearly certain to happen.

(Even though governments say otherwise.)

That's because to win wars, you often have to hold the "high ground."
And outer space may be the best "high ground" around.



7. There is something called "modern digital surveillance" (say, spy bugs in cell phones).
This kind of surveillance has been successful.
But we still need people to gather "intelligence" by talking to other people.
So, the CIA etc. has to work hard to put "assets" (spies) inside Al Qaeda etc.

8. There are people who learn to fly "fixed-wing aircraft."
These students learn memory devices.
An example of a memory device is GUMPS, which is a landing checklist.
These memory devices stay the same no matter what.
In fact, they stay the same even when part of the memory device does not apply.
An example is planes with "non-retractable" landing gear.

Passage: "Pro-Drop Languages"

9. The first two sentences could be unpacked in the following way:
There are languages called "pronoun-drop" languages.
In many of these languages, verbs "inflect" for number and person.
That is, you change the verb itself somehow.
This change shows who is doing the action (I, you, or someone else).
The verb tells us whether that subject is singular or plural.
The verb also tells us whether that subject is first, second, or third person.

10. The second sentence restates and **explains** the first sentence. A clear clue is given by the first three words: *In other words*. The second sentence provides **specific examples** to help the reader understand a general assertion in the first sentence: *verbs inflect for number and person*. Also, the second sentence is **neutral in tone** and attitude.

11. The third and fourth sentences provide an **even more specific example** of the phenomenon described in the first two sentences (*verbs inflect for number and person*). A clear clue is given at the start of the third sentence: *For example*. In the third sentence, you read about how the Portuguese verb *falo* is inflected. In the fourth sentence, you are told that the pronoun *eu* does not need to be used with *falo*. Again, the third and fourth sentences are **neutral in tone** and attitude.

12. The second paragraph provides **qualification and contrast** to the first paragraph. The second paragraph also provides **specific examples** to support this contrast.

In brief, the second paragraph makes these points:

- NOT every pro-drop language has verb inflections.
Example of Chinese & Japanese: pro-drop but not inflected.
- NOT every inflected-verb language drops its pronouns, either!

P

Example of Russian: inflected but not pro-drop.

Logically, the categories of (A) “pro-drop” and (B) “inflected verbs” can be seen as overlapping circles on a Venn diagram. The assertion in the first paragraph is that these two circles overlap. In other words, *some A = B*. The second paragraph counters that these circles do not completely overlap, nor does one circle completely contain the other. That is, *NOT all A = B, and NOT all B = A*.

The “big surprises” and results are these two qualifications. You do not have to master the examples, although you should read them and make some sense of them. Moreover, at this stage, you might not grasp the nuances of the complicated Russian example. This is okay, as long as you understand the big picture of this paragraph.

13. In the first two sentences, the third paragraph provides a **contrast to the contrast** by continuing with the example of Russian, which turns out to be at least somewhat pro-drop.

Then the third paragraph proposes a **hypothesis** (inflected-verb languages are at least partially prodrop) that follows from the Russian example. Finally, the paragraph offers a **rationale** for that hypothesis.

In brief, the third paragraph makes these points:

- Actually, Russian IS sometimes pro-drop.
- Hypothesis: Inflected-verb languages are at least partially pro-drop.
- Why? The inflection and the subject pronoun are redundant.

The switchback at the beginning might be considered a “big surprise.” You need to grasp that the author is qualifying the example of the Russian language. Fortunately, you are given a clue in the very first word of the sentence, *Nevertheless*, which highlights a contrast to what came immediately prior. What follows *Nevertheless* is a position that the author wants to espouse.

The “big result” is the hypothesis in the third sentence. Note that this is the first time that the author goes beyond straight reporting and makes a claim: he or she states that *it is safe to conjecture* something.

14. The simple story of the passage can be expressed in at least three different styles.

Full Sentences

(1) Many “pronoun-drop” languages have verbs that “inflect,” or change.

- The inflected verb tells you something about the subject.
- So you can drop the subject pronoun.
- Portuguese is an example.

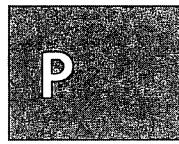
(2) NOT every pro-drop language has verb inflections.

- Chinese & Japanese are examples.

Likewise, NOT every inflected-verb language is pro-drop!

- Russian is an example.

- (3) BUT, Russian is actually sort of pro-drop.
SO I think inflected-verb languages are all sort of pro-drop.
 - Why? The inflected verb and the pronoun tell you the same thing.



Text It To Me

- (1) Pro-drop = inflect verbs. No subj.
- (2) Not all pro-drop = inflect. Not all inflect = pro-drop, either.
- (3) But actually, inflect = sort of pro-drop. Why repeat yrself.

Table of Contents

- (1) “Pronoun-Drop” Languages & Inflected Verbs
- (2) Exceptions Both Ways
- (3) Inflected Verbs = Pro-Drop Anyway

Chapter 2

of

Reading Comprehension

Components of Passages

In This Chapter. . .

The Point

Background, Support, and Implications

Foreshadowing

Chapter 2:

Components of Passages

Reading Comprehension passages cover a wide range of topics and are structured in many different ways. However, all passages have certain components. By understanding and looking for these components, you can more easily grasp the meaning and structure of the passage.

Any Reading Comprehension passage has four possible components:

- (1) The Point
- (2) Background
- (3) Support
- (4) Implications

These components will each be considered in turn.

The Point

The Point is **the most important message of the passage**. In other words, the author has written the passage in order to convey the Point, even if nothing else gets through to the reader. The Point explains why the passage is interesting, at least in the author's opinion.

Every passage contains a Point. Perhaps surprisingly, the Point is often made explicit in a single sentence. In the "Pro-Drop Languages" passage from last chapter, the Point is the hypothesis put forward in the third paragraph:

It seems safe to conjecture that languages whose verbs inflect unambiguously for person and number permit pronoun dropping, if only under certain circumstances, in order to accelerate communication without loss of meaning.

The author wants you to remember this Point. Of course, the author also wants you to understand how many pro-drop languages work in general, how some pro-drop languages do not inflect their verbs, and

so forth. But the most important message is this hypothesis, which is also the most important claim that the author puts forward.

How does the Point relate to the simple story of the passage, as discussed in Chapter 1? Very simply, **the Point is the crux of the simple story**. After all, the Point is the most important message that the author wants to convey. You can also relate the Point to the Content/Judgment framework. The Point contains the most important Judgment made by the author about the central Content of the passage.

Thus, a crucial task for you as reader is to **find the Point!** By the end of your first read-through, you should think about the simple story you have constructed. Use it to identify the Point.

Where is the Point in the passage? It can be almost anywhere. The way to find the Point is to ask “what is the most important message that the author is trying to convey in this passage? If he or she had to choose, what would be the one thing I should take away from reading this passage?”

The Point may be any kind of important message, but across sample passages, you can observe a few common varieties that sometimes overlap:

- (a) **Resolution:** resolves an issue or a problem
- (b) **Answer:** answers a question (similar to Resolution)
- (c) **New Idea:** describes a surprising new idea, theory, or research result
- (d) **Reason:** explains an observation

During the GMAT, you will *not* have to classify the Point as one of the preceding types. Rather, this list is meant to help you identify and understand the Point as you read a variety of passages.

Notice that **the Point is related to a passage's purpose**. The point is what the author wants to *convey*. The purpose of a passage is generally to convey that Point. However, the purpose can often be described more broadly or abstractly as well. For instance, the purpose of the “Pro-Drop Languages” passage is to describe how languages may be categorized as pro-drop and as verb-inflecting, and to discuss the complex relationship between these two types of languages.

Also note that the Point may not make a lot of sense on its own. For instance, in order to understand and be convinced that *languages whose verbs inflect unambiguously for person and number permit pronoun dropping*, you need to understand the rest of the “Pro-Drop Languages” passage.

Occasionally, the Point is spread across two sentences, or it may be less than explicit. However, most passages have a clear Point within a single sentence.

If you have already started to study Critical Reasoning, you might suspect that the Point of a Reading Comprehension passage is similar to the conclusion of a Critical Reasoning argument. You are right! **The Point of a passage is in fact analogous to the conclusion of an argument.**

Note that passages do not always make impassioned arguments or take strong positions, so the Point of a passage might be less of a “claim” than the conclusion of an argument. Sometimes the Point of a

passage is just the most interesting and general fact about the topic. The author may simply wish to inform the reader of this fact, rather than convince the reader of a debatable position.

Simply looking for the Point as you read will make you a more active reader. You will find that your comprehension of each passage will improve as a result.



Background, Support, and Implications

The other components all relate to the Point in some way.

1. **The Background is information you need to understand the Point.** The context and the basic facts about the topic are given in the Background. This component may be brief.
2. **The Support is evidence, assertions, and opinions FOR the Point.** The Support might include concessions to the other side of the argument. This component is always present and often constitutes a substantial portion of the passage.

The Background and the Support may be intertwined. It is never important to determine whether a particular sentence is Background or Support. A sentence can provide background information and support the Point at the same time.

3. **The Implications are results from the Point.** In other words, the author now assumes that you are convinced of the Point and so begins to enumerate the consequences. Implications are not always present, but when they are, they tend to be important. The GMAT likes to ask questions about the Implications.

Although you do not have to separate Background and Support in every case, you should understand what you are reading in terms of the four components:

- (1) Is this the main message? If so, this is the Point.
- (2) Is this just background information? If so, this is Background.
- (3) Is this supporting evidence for the main message? If so, this is Support.
- (4) Is this an implication of the main message? If so, this is an Implication.

Foreshadowing

In roughly 2/3 of the passages in *The Official Guide*, some part of the Background or the Support also functions as foreshadowing. **Foreshadowing sets up the Point.** It often does so by standing in contrast to the Point.

<u>Foreshadowing</u>		<u>Point</u>
Problem.....	leads to	Resolution
Question.....	leads to	Answer
Old Idea.....	leads to	New Idea
Observation.....	leads to	Reason or New Idea

An Old Idea might be a typical expectation or way of thinking (e.g., *Traditionally, lower returns on investments correlate with lower risk*). An Observation often expresses not only a fact but also an opinion about that fact (e.g., *The decision about where to store high-level nuclear waste for millennia has unfortunately not been resolved*). Note that in both of these examples, an adverb (*traditionally, unfortunately*) sets up a contrast that will be made explicit with the Point.

Note that just as you will never have to classify the Point on the GMAT, you will not have to classify the foreshadowing. This list is only meant to help you identify and understand the relationships between any foreshadowing and the Point.

Foreshadowing is not always present. Do not rely on foreshadowing to identify the Point. However, if foreshadowing is present, it can help you to find the Point more quickly and easily.

Problem Set

Answer the questions below by referring to the following passage.

Passage: Rock Flour

Although organic agriculture may seem to be the wave of the future, some experts believe that the next stage in agricultural development requires the widespread adoption of something very inorganic: fertilizer made from powdered rocks, also known as “rock flour.” The biochemical processes of life depend not only on elements commonly associated with living organisms, such as oxygen, hydrogen, and carbon (the fundamental element of organic chemistry), but also on many other elements in the periodic table. Specifically, plants need the so-called “big six” nutrients: nitrogen, phosphorus, potassium, calcium, sulfur, and magnesium. In modern industrial agriculture, these nutrients are commonly supplied by traditional chemical fertilizers. However, these fertilizers omit trace elements, such as iron, molybdenum, and manganese, that are components of essential plant enzymes and pigments. For instance, the green pigment chlorophyll, which turns sunlight into energy that plants can use, requires iron. As crops are harvested, the necessary trace elements are not replaced and become depleted in the soil. Eventually, crop yields diminish, despite the application or even over-application of traditional

fertilizers. Rock flour, produced in abundance by quarry and mining operations, may be able to replenish trace elements cheaply and increase crop yields dramatically.

Not all rock flour would be suitable for use as fertilizer. Certain chemical elements, such as lead and cadmium, are poisonous to humans; thus, applying rock flour containing significant amounts of such elements to farmland would be inappropriate, even if the crops themselves do not accumulate the poisons, because human contact could result directly or indirectly (e.g., via soil runoff into water supplies). However, most rock flour produced by quarries seems safe for use. After all, glaciers have been creating natural rock flour for thousands of years as they advance and retreat, grinding up the ground underneath. Glacial runoff carries this rock flour into rivers, and downstream, the resulting alluvial deposits are extremely fertile. If the use of man-made rock flour is incorporated into agricultural practices, it may be possible to make open plains as rich as alluvial soils. Such increases in agricultural productivity will be necessary to feed an ever-more-crowded world.

1. What is the Point of this passage? Justify your choice. Categorize the Point: (a) Resolution, (b) Answer, (c) New Idea, or (d) Reason. (The Point may fall into more than one category.)
2. Identify the other components of the passage, if present: Background, Support, and Implications. Again, justify your assignments.
3. Identify any foreshadowing, if present. If there is foreshadowing, categorize it: (a) Problem, (b) Question, (d) Old Idea, or (d) Observation. (Like the Point, foreshadowing may fall into more than one category.)
4. What is the simple story of this passage?



Solutions

1. The Point of this passage is contained in the first sentence of the first paragraph: *Some experts believe that the next stage in agricultural development requires the widespread adoption of something very inorganic: fertilizer made from powdered rocks, also known as “rock flour.”* This is the most important message that the author intends to convey.



Two other candidates for the Point say nearly the same thing, as they extol the potential benefits of rock flour. In fact, these other sentences are perhaps even more emphatic than the Point itself, but they are slightly narrower in scope.

(a) Last sentence, first paragraph: *Rock flour... may be able to replenish trace elements cheaply and increase crop yields dramatically.* This sentence explains how rock flour may be able to help us achieve the next stage in agricultural development. Thus, this sentence is Support for the Point.

(b) Second-to-last sentence, second paragraph: *If the use of man-made rock flour is incorporated into agricultural practices, it may be possible to make open plains as rich as alluvial soils.* This sentence practically restates the Point in concrete terms. However, those concrete terms (*open plains, alluvial soils*) are more specific than the Point. Thus, this sentence should also be classified as Support for the Point.

Categorization of the Point:

The Point is a New Idea: a new type of fertilizer that may seem surprising initially. Alternatively, the Point can be considered the Resolution to a Problem (the depletion of trace elements essential for plant growth). As was mentioned in the text, it is not important for you to determine whether the Point is a New Idea or a Resolution; it could be both. These categories are only there to help you recognize and understand the Point.

2. The other parts of the passage can be labeled thus.

Background: First paragraph

First clause, first sentence:	<i>Although organic agriculture... future,</i>
Second sentence:	<i>The biochemical processes... periodic table.</i>
Third sentence:	<i>Specifically,... magnesium.</i>
Fourth sentence:	<i>In modern... traditional chemical fertilizers.</i>

These sentences give information, but they do not delineate the problem that must be solved.

Support: First paragraph

Fifth sentence:	<i>However, these fertilizers omit... pigments.</i>
all the way through to	
<u>Second paragraph</u>	
Second to last sentence :	<i>If the use... alluvial soils.</i>

This Support begins from the *However*, which introduces the problem. The rest of that paragraph explains the problem that rock flour solves.

Note that the Support includes the qualifications and concessions in the first half of the second paragraph.

Implications: Second paragraph

Last sentence:

Such increases ... more crowded world.

This sentence tells you the result of the Point. That is, if you accept the Point, then with the *resulting increases in agricultural productivity*, we may able to *feed the world!*

3. The first clause of the first sentence (*Although organic agriculture may seem to be the wave of the future*) is foreshadowing. This foreshadowing sets up the Point by telling you what may seem to be the solution (implying that something else IS the solution). Note that this foreshadowing is immediately followed by the Point itself. This juxtaposition is not unusual.

The category of foreshadowing is Old Idea (the old “new idea” of *organic agriculture*, as the author implies). Thus, you can now see that the Point is really New Idea: an idea that may solve a problem, of course, but you do not learn about that problem in the foreshadowing.

4. As you saw in the last chapter, the simple story of the passage can be expressed in at least three different styles.

Full Sentences

(1) Some think the future of agriculture depends on rock flour (= powdered rock).

- Plants require certain elements.
- Normal fertilizers do not give you the trace elements such as iron.
- Rock flour might fill the gap.

(2) Some rock flour is bad, even poisonous.

BUT most would be fine.

Glaciers make natural rock flour which is good for the soil.

If we use rock flour, maybe we can feed the world.

Text It To Me

(1) Agricult. future = rock flour (= powder). Gives plants missing trace elems.

(2) Some flour = bad. But glaciers make it & it's good. Might feed the world.

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(2) Concerns; Reassuring Glaciers

Chapter 3

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Reading Comprehension

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