

READING COMPREHENSION

Verbal 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.

Reading Comprehension GMAT Strategy Guide, Fourth Edition

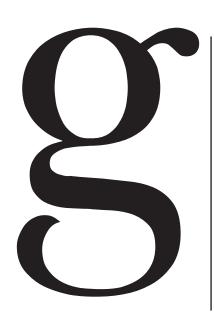
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May 1st, 2009

Dear Student,

Thank you for picking up one of the Manhattan GMAT Strategy Guides—we hope that this book makes it easier for you to read, understand, and solve Reading Comprehension passages and questions on the GMAT.

As with most accomplishments, there were many people involved in the various iterations of the book that you're 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, nine years later, MGMAT has Instructors and offices nationwide, and the Company contributes to the studies and successes of thousands of students each year.

Our 4th Edition Strategy Guides are based on the continuing experiences of our Instructors and our students. We owe much of these latest editions to the insight provided by our students. On the Company side, we are indebted to many of our Instructors, including but not limited to Josh Braslow, Dan Gonzalez, Mike Kim, Stacey Koprince, Ben Ku, Jadran Lee, David Mahler, Ron Purewal, Tate Shafer, Emily Sledge, and of course Chris Ryan, the Company's Lead Instructor and Director of Curriculum Development.

At Manhattan GMAT, we continually aspire to provide the best Instructors and resources possible. We hope that you'll find our dedication manifest in this book. If you have any comments or questions, please e-mail me at andrew.yang@manhattangmat.com. I'll be sure that your comments reach Chris and the rest of the team—and I'll read them too.

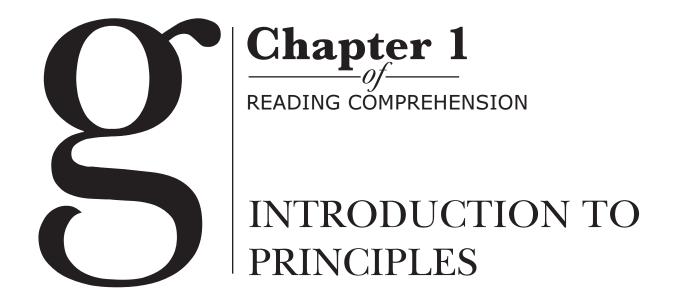
Best of luck in preparing for the GMAT!

Sincerely,

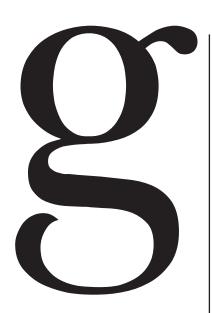
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1. INTRODUCTION TO PRINCIPLES	11	
In Action Questions	25	
Solutions	29	
2. COMPONENTS OF PASSAGES	33	
In Action Questions	39	
Solutions	41	
3. SHORT PASSAGES	43	
In Action Questions	51	
Solutions	53	
4. LONG PASSAGES	55	
In Action Questions	63	
Solutions	65	
5. THE SEVEN STRATEGIES	67	TABLE OF CONTENTS
6. QUESTION ANALYSIS	75	TABLE OF CONTENTS
7. PASSAGES & PROBLEM SETS	91	\mathbf{C}
In Action Passages & Questions	93	
Solutions	109	
Official Guide Problem Set	147	



In This Chapter . . .



- Logistics of Reading Comprehension
- Challenges of Reading Comprehension
- Two Extremes and a Balanced Approach
- Principle #1: Engage with the Passage
- Recruiting for Your Working Memory, Inc.
- 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

LOGISTICS OF READING COMPREHENSION

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.

Passages are either long or short. 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, 12th Edition* and *The Official Guide for GMAT Verbal Review*). Examples of long passages on the GMAT appear on pages 362, 366, and 382 of *The Official Guide for GMAT Review, 12th 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, 12th Edition* and *The Official Guide for GMAT Verbal Review*). Examples of short passages on the GMAT appear on pages 358, 360, and 364 of *The Official Guide for GMAT Review, 12th 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 (i.e., 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 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.

In order to determine your reading approach, first identify whether a passage is long or short.

INTRODUCTION TO PRINCIPLES

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 <u>then</u> 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 previewed only the first question.

You have to read quickly. You should only take at most four minutes to read a passage and understand it (2½ to 3 minutes for a short passage, 3½ 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.

Reading Comprehension passages do nor require specialized knowledge. Do not let jargon or complex sentences intimidate you.



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 <u>too</u> slowly and pay <u>too</u> 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 <u>emotional attitude</u> 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 <u>cognitive processes</u>: 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 <u>company's headquarters</u>.

Evaluate your approach to Reading Comprehension passages. Are you reading as efficiently and as effectively as you could?

Concentrate on the simple story within every

GMAT passage. Armed

with this simple story,

you can answer general questions—and you

know where to look for specific questions.

INTRODUCTION TO PRINCIPLES

Recruiting for Your Working Memory, Inc.

More precisely, a <u>part</u> 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 <u>in</u> all the talented, important people AND (2) to keep <u>out</u> 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:

<u>Content</u>: 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

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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 <u>qualification</u> or <u>contrast</u>—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.

simple story in a few different ways. Regardless of your specific approach, remember the KISS principle: Keep It Simple, Stupid!

You can think of the

INTRODUCTION TO PRINCIPLES

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

<u>Words</u>	Concretized Ideas
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 <u>long, stable</u> <u>chains</u> like bones in a backbone or links in a physical chain

As you concretize, you may think of ideas not explicitly mentioned in the passage. That is normal. Just remember that those ideas were not actually mentioned in the passage.

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 <u>last</u>.

Concretizing and unpacking are powerful tools, but they take practice. Try them out in your everyday life. You will find dense text easier to understand.

INTRODUCTION TO PRINCIPLES

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 advance knowledge of any specialized jargon.

As you go further into the passage, make sure you understand how what you are reading relates to what you have already read.

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, <u>in relation to everything else I have read</u>? Why is this sentence here? What function does it serve in relation to the previous text?

In the unpacking technique, we 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 <u>old</u> 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 we 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)

<u>Judgment</u>: 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 Granted; It is true that; Certainly; Admittedly

(author unwillingly agrees) Despite; Although

Provide emphatic contrast But; However; Even so; All the same; Still; That said

(author asserts own position) 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

Each paragraph generally represents a new chapter in the simple story, but paragraphs may include twists.

INTRODUCTION TO PRINCIPLES

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.

Not every part of the passage is of equal importance. Focus early and speed up later.



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.

As you prepare for the GMAT, consider ratcheting up the complexity of your reading material, in order to practice making sense of dense text.

Problem Set

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.

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.

2.

<u>Words</u>

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.

Words

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.

Concretized Ideas

Big computers in some laboratory running programs about <u>potential terrestrial climate change</u> (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.

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.

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...

...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.