

# How to Use This Book

This book gives content area teachers specific examples of text, tests, mini-lessons, strategies, and points of difficulty in the various subjects in secondary school. To help you locate information that is particularly applicable for the subject that you teach, we've provided visual cues:



This symbol signifies actual text of the kind that the student would be reading in your class.



This symbol signifies reading material that would be in a test in a given subject area.

In addition, as you read, you'll notice marginal tabs that help you find information that is directly relevant to domain-specific reading comprehension strategies.

I've divided the book into four parts:

Part One, "About Academic Reading" explains what you need to know about the role that reading plays in learning beyond the elementary level, the expectations that our students face, and their need to be prepared to meet our expectations for information processing. The information that they need to understand, analyze, synthesize, and apply comes from listening in class as well as reading, but reading and listening must go together if students are to process and eventually "own" information.

Part Two explains the different demands and features of subject area, also called "domain-specific" or "genre-specific" reading. It is important that you know how what you are asking your students to read requires skills that are significantly different from those in the students' other classes.

Part Three presents research-based strategies that improve reading comprehension. As you read these, you might find yourself thinking: "These are strategies that apply not only to reading, but to listening to a lecture." That is the point: Reading comprehension is information processing, but the information is delivered through the symbolic, abstract system of encoded visual cues on a page. I've divided the strategies into those that are effective *before* reading, those that are to be used *during* reading, and those that readers use *after* the reading is done to integrate new knowledge into existing networks of knowledge.

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# 1

## Learning and Reading

I've grounded the teaching suggestions in this book in certain pedagogical principles that are supported by research (Jensen, Caine and Caine, Fogarty) and that I can personally endorse based on more than three decades as an English teacher and literacy coach.

First, we learn:

- ◆ Information in layers, over time
- ◆ Information best when we organize it into patterns
- ◆ Information best when we gather it into clusters
- ◆ Through our senses
- ◆ Through socialization
- ◆ Through prompts, cues, and associations

Second, learning is:

- ◆ Natural. Reading is artificial. To learn through reading, our energies have to be focused on comprehension, not the artificial act of decoding, which has to be automatic.
- ◆ Habitual. We tend to gravitate toward certain modes of receiving, processing, and remembering information.
- ◆ Cumulative. The more we know, the more we are capable of learning. The more sophisticated learning becomes, the more it depends on prior knowledge.

All of the research about durable learning supports these tent-post learning principles. Here is a brief explanation of them and how they relate specifically to reading comprehension.

**We learn in layers, over time.** What this means is that we learn by connecting new knowledge into an existing structure of what we can call *old* knowledge. We do not learn a lot of information all at once. The mind is not like a computer, accepting a CD full of information. The mind learns in layers, in a manner not unlike the way paint is applied to wood: The wood soaks up the first coat, and *then* is ready to accept more coats. This is why we have the metaphor of the *learning curve*.

**We learn in patterns.** Educational researchers Renate Nummela Caine and Geoffrey Caine assert that learning in patterns is a key principle in how the brain makes sense of information. Conversely, the brain, resisting chaos and meaninglessness, actively imposes order by creating patterns: “(the brain) resists having meaninglessness imposed on it. Really effective education must give learners an opportunity to formulate their own patterns of understanding.” I see two kinds of instructional implications of the pattern-learning principle that relate to reading comprehension. The first is the use of graphic organizers to make sense of text, to turn it into a pattern. The second, used along with the first, is that text itself forms patterns: narrative, description, classification, cause and effect, comparison-contrast, definition, exemplification, and process analysis. As we read, we can improve comprehension by perceiving that the text is written primarily in one of these patterns. We can then use an appropriate graphic organizer to see how the pattern holds the meaning.

**We learn through our senses.** Information that has come in through the senses tends to be memorable. Information that has come in through more than one sense tends to be even more memorable. Instructional implications of the sensory learning principle as it relates to reading comprehension involve creating sensory input, encouraging the imagining of sensory input during reading, and limiting extraneous sensory input during reading. We can accomplish the first by reading aloud, providing visuals and encouraging the use of existing visuals in the text as a reading comprehension aid, using color-coding as a memory aid. We should remind readers to visualize vividly as they read and to draw pictures or graphic organizers that represent what was read. We should instill the meaning-making habit of asking questions during reading that evoke sensory input: *What did you see in the text? What did you hear? What textures did you feel?* And, don't overlook the importance of instilling the habit of reading without extraneous noise and distractions whenever possible.

**We learn through socialization.** How many times have you come to understand something by talking it through with someone else? Socialization is a powerful, authentic learning force, often overlooked as a reading comprehension aid because reading is thought of as a solitary process. Reading itself can be solitary, but making meaning out of reading need not be. The instructional implications of socializing reading comprehension are that we can set up reading partnerships where readers question each other to achieve comprehension. Readers can work on a post-reading activity that gives them the opportunity to mesh minds to fill in gaps in understanding. And working with a reading partner is motivational: Someone else is depending on you to read and help them understand.

**We learn through prompts, cues, and association.** Think about what happens when you *remind yourself* of something. What triggered the reminder? It happens all the time: A stimulus sets off a chain that leads you straight to something else. That is how the cuing system of the brain works. Because the brain has its own efficient