Effective 12 Academic Literacy Instruction in Grades 4–8

Teacher Knowledge
What Teachers Need to Know About Expository Writing and Reading

Classroom Assessment
Assessing Academic Literacy Instruction in Grades 4–8

Evidence-Based Teaching Practices
Evidence-Based Instruction Practices for Organizing to Teach Content and Reading

Response to Intervention (RTI)
Response to Intervention: Tier 2 Instructional Plans for Grades 4–8
Chapter Questions

- What does research tell us about the special challenges of informational texts?
- How can teachers determine the most important information to be learned in expository texts selected for a unit of study?
- Describe effective teaching strategies that may be used before, during, and after students read expository texts.
- What are some viable options for addressing the needs of readers who struggle with expository texts?
- How can teachers make content learning sticky, motivational, and memorable for students?
- What are text-to-speech (TTS) technologies and how can they assist English learners (ELs) in understanding expository texts?
- Can you name and describe some of the new ways of involving parents with their children’s homework assignments?

Key Terms

- Academic literacy
- Content area reading
- Concept load
- Expository text structures
- Content analysis
- Readability formula
- Before, during, and after reading (B-D-A)
- Fidelity of implementation
- Implementation continuums
- Previewing
- Concept map
- Click or clunk strategy
- Written academic learning summaries (WALS)
- Fix-Up Strategies
- Themed studies
- Webbing
- Segmented integration
- Group-assisted reading
- Dyad reading
- Scaffolded think aloud
- Interactive homework
- Homework hotlines
- Homework voicemail
- Parent lending library

Motivation and Engagement

- Motivating and Engaging Students in Grades 4–8 to Read

Technology and New Literacies

- Technology and New Literacies That Promote Literacy in Grades 4–8

Family and Community Connections

- Family and Community Connections that Support Children Learning to Read Content Texts
Fred Holmes* is teaching his eighth-graders about acids and bases in his science class. Not only does he want to teach these fundamental scientific concepts, he hopes to help his students apply what they are learning to better understand the acid rain phenomenon as specified in the school curriculum. Fred has a personal experience with acid rain: He learned from the state’s agricultural extension agent last spring that his cherished magnolia tree met an early and unexpected death due to acid rain. So Fred has declared war on this repugnant phenomenon and wants his students to join the fight. But first, he must make sure they have a solid grounding in facts about acids in the environment.

Mr. Holmes began planning for the acids and bases unit by first constructing a content analysis of the important facts, concepts, and generalizations to be learned. After picking apart the textbook chapter on this subject, as well as the supplemental readings he selected from other print and Internet sources, he constructed a simple graphic organizer showing the important information to be learned. From there he mapped out his entire unit over ten 50-minute class sessions using the lesson plan format adopted by the school district.

Holmes embedded key content literacy strategies in his acids and bases unit plan that would help all learners, including those reading 2 or more years below level, gain knowledge on high levels. In addition to a great deal of concept and vocabulary development, a fundamental strategy Holmes used throughout the unit was “three-level retelling” for better comprehension. First, students read and reread key information in groups of two or “buddy reading.” This helped them gain reading fluency with the science texts while also providing multiple exposures to important information. After several readings, Holmes had students participate in a structured oral retelling exercise to help them realize what they had learned and discover other information they needed to review.

The second phase of science retelling had students working in small groups to retell using a graphic organizer. This step moved students from oral retelling to retelling-using-words-and-phrases. Fitting the newly learned information into a graphic organizer also helped his students see relationships between new concepts about acids and bases.

In the third and final retelling stage, Fred Holmes taught his young protégés how to use a graphic organizer to construct written summaries about what they were learning. As part of his modeling, Holmes shared with his students this graphic that portrays his thinking on

*Note: This vignette is closely based on the work of Mr. Fred Holmes, a science teacher in Memphis (TN). He has also served as a teacher-mentor on the federally funded Striving Readers project.
how to move information from a graphic organizer to paragraph form and then on again to a completed science paper summarizing what has been learned.

To make his modeling more concrete for his learners, Mr. Holmes presented a draft of what he called “Structure for Written Retelling Paragraph Bridges” based on the work of Kathleen S. Cooter. A completed paragraph bridge is shown on the next page. Armed with these new insights, Holmes’s students were ready to begin trying their hands at moving information from their own graphic organizers into written summaries about acids and bases. When students completed this first study of acids and bases, they were prepared for the next stop on Mr. Holmes’s unit: acid rain!

Changing Realities: Academic Literacy Instruction in the Transition Years

As students move into grade 3 and beyond, they transition from learning to read to reading to learn. Beyond the primary grades, and continuing on for the rest of their lives, the majority of reading our students will encounter will be informational and procedural texts (Ogle, 2011). As one teacher recently remarked to us,

I have come to understand that, in a very real way, children do not truly begin learning to read until the upper elementary years and beyond. Before that time, they are mostly learning to decode. Now they learn how to use those skills to understand their world. (Earlene Mills-House, Dallas Independent School District)

Academic literacy, sometimes referred to as content area reading instruction, has to do with students applying their literacy skills in reading informational texts in order to acquire new knowledge in the subject areas of mathematics, science, social studies, and English language arts (Reutzel & Cooter, 2011). In other words, our goal is for children to become scientifically literate, mathematically literate, and so forth.

Masterful academic literacy teachers are able to establish effective and flexible classroom routines involving small- and large-group instruction, learning centers, and independent learning activities. From our own experiences, we can assure you that academic literacy instruction is as interesting as it is rewarding.
Children in grades 4 through 8 range widely in their reading ability when it comes to informational or expository texts. At one end of the continuum you will discover students still struggling to conquer basic reading and writing skills, and at the other extreme are fluent readers champing at the bit for new challenges in books and online sources. A nonscientific but seemingly accurate way of figuring the range of reading ability in regular (i.e., non–special education) classrooms is plus or minus the grade level. So for a fifth-grade classroom figure plus or minus 5 years to compute the typical range of reading levels (K/1 through tenth-grade reading ability or higher). In our work with inner-city and other high-poverty schools, we have seen as many as 80 percent of students reading 2 or more years below grade level. Let’s take a closer, more scientific look at reading levels in our schools.

In the latest national studies of reading and writing achievement (National Center for Education Statistics, 2010; Salahu-Din, Persky, & Miller, 2008), we see that...
test scores have essentially remained flat over the past decade at both fourth- and eighth-grade levels. These are the grade levels, of course, in which students need to have good academic literacy skills for reading and understanding informational texts. More importantly, only about one-third of students are able to read, and write about, informational texts at or above grade level.

There is little doubt that inadequate reading development contributes mightily to the high dropout rates in large urban school districts. Consequently, there is a great deal of pressure on intermediate and middle school teachers to show significant gains on high-stakes state tests. Research evidence reveals that this kind of pressure on teachers, by the way, fails to result in improved achievement (Nichols, Glass, & Berliner, 2006). Nevertheless, if we are not careful in this environment, we can lose our balance and focus our energies on test-taking strategies instead of helping students develop academic literacies.

**Challenges of the Textbook Genre**

Reading in grades 4 through 8 is a different ballgame for students than in the primary grades. Here the student is asked to read and understand nonfiction or expository texts in science, mathematics, and the social studies almost exclusively. We agree with others (e.g., Brent, 1994; Kornblith & Lasser, 2005) that textbooks are so different from any other type of book—including the nonfiction found in libraries and bookstores—that they should be classified as a distinct genre. Textbook reading can be an especially formidable hurdle for the struggling reader.

In this chapter, we look at ways we teachers help students succeed in reading and understanding subject area materials commonly found in the upper grades. We examine the unique ways in which textbooks and other information texts are written, and academic literacy strategies that help students succeed.

**Teacher Knowledge**

**What Teachers Need to Know About Expository Writing and Reading**

**The Nature of Informational Texts**

There are at least four different kinds of informational text commonly found in academic readings and textbooks: *argumentation, description, exposition,* and *narration*. The majority of these readings are expository in nature. Expository texts are written to convey information about a topic (Gregg & Sekeres, 2006). In academic instruction (i.e., mathematics, science, social studies, English/language arts) there needs to be good bit of emphasis on teaching academic vocabulary, comprehension strategies, improving reading fluency, and ways students can apply their writing skills to summarize what has been learned (Cooter & Cooter, in press).

**Specialized Vocabulary and Concepts.** A formidable task for every teacher is helping students learn previously unknown vocabulary. Vocabulary knowledge is built on previous background experiences (Heilman, Blair, & Rupley, 2001); linking the
known to the new. Vocabulary in expository texts can be technical, specialized, and many times alien from students’ experiences. Consider the kind of background building a teacher must construct for a science concept like universe or a math concept like variable. Teachers, therefore, must structure or scaffold instruction in order to somehow link what is already known to new vocabulary and concepts found in textbooks and other informational texts (Gregg & Sekeres, 2006). This can be especially challenging for teachers of English learners (ELs) and children with limited experience. We will look closer into that situation later in the chapter.

**Students Need “Concrete” Learning Experiences.** The most effective way to teach students new vocabulary and concepts is through concrete or “hands-on” experiences (Fisher, Brozo, Frey, & Ivey, 2011). For example, if one wanted to teach students from rural Wyoming about life in New York City, the most effective way would be to take them there for a visit. Similarly, the very best way one could teach students about space travel would be to put them through astronaut training and then fire them into space on a mission. Obviously, neither of these experiences is feasible, so we must seek the best concrete experiences within our reach as teachers.

Going back many years, educators (e.g., Dale, 1969; Estes & Vaughan, 1978) have suggested hierarchies for choosing classroom activities ranging from concrete to abstract experiences. Such hierarchies help teachers select learning activities of a more concrete nature and review past practices for curriculum redesign purposes. We have developed a composite version of these hierarchies, which we present in Figure 12.1. Notice that as one ascends to the top of the classroom experiences pyramid, activities become more concrete and thus easier for students to assimilate.

**Increased Concept Load.** Concept load (also called concept density) has to do with the number of new ideas and the amount of technical vocabulary introduced by an author in a passage (Singer & Donlan, 1989). Expository readings found in textbooks and in online instructional materials are often much more difficult to understand than narrative or story readings because of greater concept load (Harris & Sipay, 1990). In story reading, elements such as setting, plot, and characters are laced with information quite familiar to most readers. Expository text writers, however, usually present new and abstract information unfamiliar to the reader, which requires the building of new schemas or memory structures in the brain. Authors who introduce several new concepts in a single sentence or paragraph, called high concept load, create a situation that is extremely difficult for many readers.

Consider the following passage about the history of Mesopotamia and one of their early heroes. Words that carry rather deep meaning and require a good bit of vocabulary, background, and concept knowledge are underlined to emphasize concept load.

**GILGAMESH**

In early Sumerian history, priests were also the kings of the city-states. Gilgamesh was one of the most heroic priest-kings of this time. He was the priest-king of Uruk which was located on the Euphrates River approximately fifty miles northwest of Ur. The oldest written story in the world delineates Gilgamesh’s legendary deeds. In the story, Gilgamesh is characterized as being both human and divine. Gilgamesh and his companion, Enkidu, journeys the world performing heroic acts.

High concept load reading materials often create a major obstacle for readers lacking sufficient background experiences. One way to supplement conceptually dense textbooks is to select several smaller books that concentrate on just a few
What Teachers Need to Know About Expository Writing and Reading

topics at a time and then cover them in some depth using concrete experiences. An excellent example is the *Reading Expeditions* series of books on topics in science and social studies by National Geographic. There are also written on four different reading levels to accommodate struggling readers.

**Unique Writing Patterns.** Narrative texts comprise such elements as setting, theme, characterization, and plot. Expository texts, however, are quite different: their structure tends to be much more compact, detailed, and explanatory (Heilman et al., 2001). Five common writing patterns, or **expository text structures**, have been described by Cook and Mayer (1988): generalization, enumeration, sequence,
classification, and comparison/contrast. Meyer and Freedle (1984) add a sixth: cause and effect. A description of each of these structures is provided in Figure 12.2 based on the work of Cook and Mayer (1988, p. 449) and Meyer and Freedle (1984).

**Figure 12.2**
Writing Patterns Found in Expository Text

<table>
<thead>
<tr>
<th>Generalization</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passage always has a main idea. Most of the other sentences in the passage try to provide evidence for the main idea by either clarifying or extending. Some sentences explain the main idea by using examples or illustrations; these tend to clarify the main idea. Other sentences explain the main idea in more detail; these extend the main idea.</td>
<td></td>
</tr>
</tbody>
</table>

**Example**
Irritability is defined as an organism’s capacity to respond to conditions outside itself, or an organism’s response to a stimulus from the environment. The stimulus may be light, temperature, water, sound, the presence of a chemical substance, or a threat to life. The organism’s response is the way it reacts to stimulus. For example, a plant may have a growth response. This happens when a root pushes toward water or a stem grows unevenly and bends toward light.

<table>
<thead>
<tr>
<th>Enumeration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facts listed one after another: There are two general kinds of enumeration passages: specified, which lists facts by numbering them, and unspecified, which lists facts in paragraph form, with each fact stated in one or more sentences.</td>
<td></td>
</tr>
</tbody>
</table>

**Example**
There are four general properties of solids: (1) Tenacity is a measure of a solid’s resistance to being pulled apart. (2) Hardness is a measure of a substance’s ability to scratch another substance. (3) Malleability refers to a solid’s ability to be hammered or rolled into thin sheets. (4) Ductility is the ability to be drawn out in the form of wires.

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describes a continuous and connected series of events or the steps in a process. Examples of sequences include changes as the result of growth, a biological process, steps in an experiment, or the evolution of some event.</td>
<td></td>
</tr>
</tbody>
</table>

**Example**
Hearing occurs in five separate stages. First, sound waves are captured by the external portion of the ear. The outer ear’s function is to focus or concentrate these sound waves. During the second stage, the sound waves travel down the auditory canal (a tube embedded in the bones of the skull) and strike the tympanic membrane or eardrum. The third stage occurs when the vibrations of the eardrum begin a series of similar vibrations in several small bones. These vibrations are transmitted to the inner ear, called the cochlea, during the fourth stage. At this point, the vibrations are turned into neural impulses that are sent to the brain. The fifth and final stage of the hearing process is the brain’s interpretation of the sound patterns.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups or segregates material into classes or categories. Develops a classification system to be used in the future to classify items.</td>
<td></td>
</tr>
</tbody>
</table>

**Example**
Experimental variables can be grouped into one of two categories: manipulated and controlled. A manipulated variable that can be acted on directly. The flow of steam into a room is an example of a manipulated variable, as it can be controlled directly. In contrast, a controlled variable cannot be acted on directly. The temperature of a room is an example of a controlled variable because it must be achieved through manipulating another variable. In this case, it must be achieved through manipulating the flow of steam.

<table>
<thead>
<tr>
<th>Comparison/Contrast</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary objective is to examine the relationship between two or more things. Comparison can analyze both similarities and differences, whereas contrast focuses only on differences.</td>
<td></td>
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</tbody>
</table>

**Example**
There are two different hypotheses for the origin of the earth. The nebular hypothesis maintains that our planet began in an aggregation of interstellar gas and dust. This theory is gaining more and more acceptance. In contrast, the comet-produced hypothesis states that the earth began as a piece of the sun that was ripped out by a comet. The first hypothesis assumes the earth began as small elements that combined into larger ones. The latter hypothesis asserts the earth was essentially already formed when it began taking on its present-day characteristics.

<table>
<thead>
<tr>
<th>Cause/Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The relationship between two things when one thing makes something else happen. Elements are usually grouped according to a time sequence, resulting in a cause–effect relationship.</td>
<td></td>
</tr>
</tbody>
</table>

**Example**
The North Pole has 24 hours of daylight on the first day of the summer because the sun never drops below the horizon on that day.
When preparing to teach units in the content areas, teachers need to establish which expository text structures are used and organize for instruction accordingly (Hall, 2004). According to Montelongo and colleagues (Montelongo, Jiménez, Hernández, & Hosking, 2006):

Research has shown that reading comprehension and the recall of information are dependent on a student’s ability to recognize organizational text structures (Cook & Mayer, 1988). The recognition of an organizational pattern enables the student to form a mental representation of the information and to see the logical relationships advanced by the author. Good readers use textbook structure to abstract main ideas and to help them remember propositions from their readings. (p. 29)

Suggestions for teaching textbook structure to students are included later in this chapter. Let’s take a look now at what good readers do as they encounter expository texts.

**What Good Readers of Expository Texts Do**

In 2007 the National Institute for Literacy issued a summary of research entitled *What Content-Area Teachers Should Know About Adolescent Literacy*. In this report the authors talk about what good readers do as they read expository texts. In Table 12.1 we summarize their findings in the areas of decoding text, morphology (the study of word structure), reading fluency, vocabulary, text comprehension, writing, and motivation. Our task as teachers is to help all of our students attain these behaviors and abilities.

**Table 12.1**

**What Good Readers of Expository Texts Do**

<table>
<thead>
<tr>
<th>Literacy Area</th>
<th>What Good Readers of Expository and Academic Texts Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decoding</td>
<td>• Have a good understanding of sounds in spoken words (phonemic awareness) and how these sounds are manipulated to form words. These connections are made at the syllable level.</td>
</tr>
<tr>
<td></td>
<td>• Use strong phonics skills to quickly identify and pronounce unknown words.</td>
</tr>
<tr>
<td>Morphology</td>
<td>• Use their knowledge of words parts (root words, affixes) to recognize complex words.</td>
</tr>
<tr>
<td>Fluency</td>
<td>• Recognize words automatically and are better able to understand text when reading aloud or silently.</td>
</tr>
<tr>
<td></td>
<td>• Fluent readers are more confident about the content and meaning of what they have read.</td>
</tr>
<tr>
<td></td>
<td>• Tend to complete work faster and with higher quality than less fluent readers.</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>• Have a wide-ranging knowledge of oral and print vocabulary.</td>
</tr>
<tr>
<td></td>
<td>• Can use their robust vocabulary knowledge as a tool to decipher the meanings of unknown words.</td>
</tr>
<tr>
<td>Text Comprehension</td>
<td>• Are purposeful, strategic, and critical readers.</td>
</tr>
<tr>
<td></td>
<td>• Are able to understand the content presented in various types of print and digital text with minimal or no assistance.</td>
</tr>
<tr>
<td>Writing</td>
<td>• Can write across various genres and academic disciplines.</td>
</tr>
<tr>
<td></td>
<td>• Employ different strategies according to the demands of a writing assignment.</td>
</tr>
<tr>
<td></td>
<td>• Use self-regulation strategies to help them plan, organize, and revise their work independently. These strategies include goal-setting, self-instruction, and self-monitoring.</td>
</tr>
<tr>
<td>Motivation</td>
<td>• Perceive that they have control over their reading and writing tasks even when assignments are highly structured.</td>
</tr>
<tr>
<td></td>
<td>• Direct their reading and writing performance toward goals they want to achieve.</td>
</tr>
<tr>
<td></td>
<td>• Are always engaged readers and writers. They are motivated, and once engaged in a reading or writing task, take pleasure in it and are motivated to continue (persistence). Accomplishing tasks increases motivation for future tasks.</td>
</tr>
</tbody>
</table>
Classroom Assessment

Assessing Academic Literacy Instruction in Grades 4–8

In thinking about assessment relative to academic literacy instruction teachers need to both analyze the unique reading demands of the texts you plan to assign and also discover the particular reading and writing abilities of your students. By analyzing text demands you will have a better idea about any instructional adaptations you may need to make in order for all students to learn new information. Analyzing each student’s reading abilities and needs further assists you in planning effective instruction. In this section we examine strategies for accomplishing both of these assessment goals.

Analyzing Texts: Performing a Content Analysis

One of the best ways to begin planning for content area instruction using expository texts is to perform a content analysis. This is an essential process for establishing instructional objectives and structuring learning activities for your students (Martorella, 2008). The purpose of a content analysis is to identify the important facts, concepts, and generalizations presented in a given unit of study. By carefully analyzing information to be presented and determining which skills are to be learned by students, the teacher arrives at important decisions about what to teach (not all information is essential knowledge), how to teach it, how to provide guided and independent practice, and how to assess students’ knowledge and skills. Content analysis, then, can be the springboard for creating a strong unit of study.

Facts are individual bits of information that are known to be true. In a science unit dealing with our solar system, some of the facts presented might have to do with atmosphere, satellites, and Saturn. In a history unit pertaining to the life and accomplishments of Dr. Martin Luther King, Jr., the teacher might focus on facts related to the March on Washington, sit-ins, the sanitation workers’ strike in Memphis, and Civil Rights legislation.

Concepts are categories into which we group all facts or phenomena known through our experiences (Martorella, 2000). In the previous example of a unit about the solar system, satellites and Saturn could be grouped into the single concept objects orbiting the sun. Concepts are usually stated in a simple word, phrase, or sentence expressive of the characteristics shared by facts or phenomena.

A generalization is a principle or conclusion that applies to the entire class or sample being examined (Harris & Hodges, 1995). In the classroom, generalization is often teacher-generated, written in the language of students, and usually expressed in complete sentences. Generalizations organize and summarize a large amount of information, sometimes an entire unit, as in the following examples:

There are many reasons why Harry Truman, perhaps an unlikely president, chose public life.

Our solar system is made up of many satellites.

Once facts, concepts, and generalizations have been identified by the teacher as the focus of study, he or she organizes them into some form of graphic representation—a traditional outline, a semantic web, a structured overview, or some other graphic organizer. Arranging information in this way allows the teacher to make decisions about instructional content and delivery.
Teachers sometimes discover that the textbook adopted by their district or school contains information that is not relevant to the major concepts around which they plan to structure their lesson. They may find that some material may actually confuse students’ understanding and skill development. In this event, the teacher needs to determine whether the information in question helps students build important background knowledge. Remember: Not all skills and knowledge are of equal importance for adult citizens to know (e.g., Is it really critical that students memorize the names of all the wives of Henry VIII?). If some information described in the textbook or your curriculum guide is obscure or serves no real purpose, it should not be included in your lesson plans.

Figures 12.3 and 12.4 feature examples of partially finished content analysis graphic representations by two middle school teachers. Notice that they are essentially schema maps.

**Analyzing Texts: Readability Considerations**

Another concern of teachers preparing content material for instruction is text difficulty or readability. Text difficulty is most often measured using a readability formula. The purpose of a readability formula is to determine the grade-level equivalent—or

**Figure 12.3**
Partial Content Analysis for a Unit on Matter

- **mass**: the measure of the amount of matter
- **microscope**: device used to observe small things
- **direct evidence**: information collected while observing matter
- **indirect evidence**: set of clues scientists use to make logical guesses
- **hypothesis**: a logical guess based on evidence

- **atom**: tiny particles that make up matter; the basic unit of matter
- **nucleus**: center part of an atom
- **protons**: tiny packed particles that make up the nucleus
- **neutrons**: tiny packed particles that make up the nucleus
- **electrons**: tiny particles that travel around the nucleus

- **element**: matter that is made up of only one kind of atom
- **92 natural**: number of elements that occur in nature
- **17 man-made**: number of elements that humans have created
- **symbol**: short way to write the name of an element
- **compound**: substance formed when more than one element combine
- **molecule**: simplest particle of many compounds
- **formula**: group of symbols and numbers that stand for a compound

**Scientific methods lead us to better understand matter.**
**Atoms are the building blocks of matter.**
**Matter is what makes up all things around us. We can study and learn about its characteristics.**
approximate difficulty level—of narrative or expository reading materials to be used to teach children. Sentence length and complexity of vocabulary are two elements often measured in readability formulas.

A number of readability formulas are available for classroom use. The Fry (1977) readability formula (Figure 12.5), one of the more popular formulas available, bases its estimates on sentence and word length. Another formula that many regard as more user friendly (Baldwin & Kaufman, 1979) is the Raygor (1977) readability graph (Figure 12.6). Instead of having to count the number of syllables contained in a 100-word passage, teachers merely count the number of words having six or more letters. Readability software programs are also available.

**Discovering the Academic Literacy Abilities and Needs of Your Students**

Knowing the range of academic literacy abilities of your students is vital to planning effective instruction. There are four types of classroom assessment used in academic literacy instruction:

1. **Screening assessments** (intended to take a quick snapshot of your class to discover students’ general academic knowledge)
2. **Progress monitoring** (checking for understanding and learning while a unit of study is under way)
3. **Outcome assessments** (end-of-unit measures to find out if your students learned what you intended them to learn)

4. **Diagnostic assessments** (used for measuring Response to Intervention instruction for students needing extra help).

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In this section we explore your options for three of these types of assessment: screening, progress-monitoring, and outcome assessments together because the strategies we suggest may be used for any of these purposes separately or in combination.

We learned earlier in this chapter how to construct a content analysis in order to determine the facts, concepts, and generalizations you choose to teach in an academic unit of study (e.g., social studies, science, etc.). The content analysis you construct for each new unit of study is a valuable tool in constructing your own screening, progress-monitoring, and outcome assessments customized to your unit of study, so be sure and have that at your fingertips for this is your starting point in creating screening assessments.

Screening, progress-monitoring, and outcome assessments in academic literacy are typically administered to the whole class at once. They are constructed to measure students’ knowledge and ability in three key areas: vocabulary knowledge, comprehension abilities (once a passage has been read), and fluency (in this case, reading speed and accuracy). Use the following instructions for creating these assessments.

**Figure 12.6**
The Raygor Readability Formula

1. Count out three 100-word passages at the beginning, middle, and end of a selection or book. Count proper nouns but not numerals.
2. Count sentences in each passage, estimating to the nearest tenth.
3. Count words with six or more letters.
4. Average the sentence length and word length over three samples, and plot the average on the graph.

Academic Vocabulary Assessments. Which academic words should you use for your student assessments? Academic vocabulary and concepts can be identified from your content analysis in the facts and concepts section. You may also use key words found in bold type in the readings to be assigned. Earlier in the text we offered two key strategies, word maps and vocabulary definitions, that are especially useful tools in academic literacy assessment. Following are two additional assessments recommended by Stahl and Bravo (2010) stemming from their review of evidence-based research.

The Vocabulary Knowledge Scale (VKS). VKS is a self-report assessment that has been shown to be effective with English learners as well as native speakers of English. It may be administered as a screening assessment, progress-monitoring tool, and/or as an outcome assessment. The VKS combines students’ self-reported knowledge with a constructed response so as to have students demonstrate their knowledge of each academic word or concept. Students begin by identifying their level of knowledge about each teacher-selected word. The VKS format and scoring guide fall into these five categories:

1. I don’t remember having seen this word before. (1 point)
2. I have seen this word before, but I don’t think I know what it means. (2 points)
3. I have seen this word before, and I think it means __________. (Synonym or translation; 3 points)
4. I know this word. It means _______. (Synonym or translation; 4 points)
5. I can use this word in a sentence: __________. (If you do this section, please also do category 4; 5 points).

Stahl and Bravo (2010) offer guidelines for scoring:

Any incorrect response in category 3 yields a score of 2 points for the total item even if the student attempted category 4 and category 5 unsuccessfully. If the sentence in category 5 demonstrates the correct meaning but the word is not used appropriately in the sentence context, a score of 3 is given. A score of 4 is given if the wrong grammatical form of the target word is used in the correct context. A score of 5 reflects semantically and grammatically correct use of the target word. (p. 571)

The VKS has been used successfully, by the way, to assess academic vocabulary knowledge in elementary classrooms at the earliest levels (though the assessment may need to be given orally for emergent readers). The VKS principles can be administered using a larger number of words in one session. An example is offered in Figure 12.7 using selected terms from a unit of study on the Holocaust.

Vocabulary Recognition Task. The vocabulary recognition task (VRTX) is a teacher-constructed yes–no task used to estimate vocabulary recognition in a content area (Stahl, 2008). The VRT has teachers select a group of words that students will be held accountable for in a content unit. As with the VKS, it combines self-report with student demonstrations of their background knowledge. In Figure 12.8 we see a sample VRT by Stahl and Bravo (2010) based on vocabulary associated with a unit on insects. In this progress-monitoring example students circled the words that they were able to read and that were related to the topic.
As a posttest or outcome assessment, students complete the VRT and categorize the selected words under provided headings on a concept web (see Figure 12.9). In this example, a student scored a “hit” (H) when the word was circled correctly (noted with a check mark) or a “false alarm” (FA) if an unrelated word was incorrectly circled. The proportion of words truly known, \( P(K) \), was determined with the following formula:

\[
P(K) = \frac{P(H) - P(FA)}{1 - P(FA)}
\]

In this example, webs received two scores: (1) total number of words correctly sorted by category, and (2) percentage of words correctly selected that were correctly sorted by category. Researchers Anderson and Freebody (1983) determined that a yes–no task is a reliable and valid measure of vocabulary assessment and is a better measure of student knowledge than a multiple-choice task, particularly for younger students.

**Comprehension Assessments.** In addition to comprehension assessment strategies we showcased earlier in the text, we add three more easy-to-implement assessments found to be effective academic literacy education.
Assessing Academic Literacy Instruction in Grades 4–8

Academic Knowledge Quick-Screening (AKQS). Used at one of the research sites in the federal Striving Readers research project (Cooter & Cooter, in press), the AKQS is a five-item question-and-answer test used as a screening assessment of students’ knowledge about an upcoming unit of study. The five items are constructed from an adaptation of Marzano’s (2007) question stems, which seem largely built on the

Figure 12.8
Vocabulary Recognition Task: Progress-Monitoring Assessment

VRT—Insects (Pretest and Posttest)

We have been* learning about insects. Below you see a list of words. Put a circle around the words you are able to read and are sure have something to do with insects. Do not guess, because wrong answers will lower your score.

| thorax ✓ | worm ✓ | ant ✓ |
| ponds ✓ | feeders ✓ | bees ✓ |
| abdomen ✓ | legs ✓ | hatch ✓ |
| ears | antenna ✓ | cockroach ✓ |
| mosquito | larva ✓ | spider ✓ |
| swamps ✓ | snail | lungs |
| teeth ✓ | beetle ✓ | wing ✓ |
| colony ✓ | backyard ✓ | molt ✓ |

Correctly chosen targets or hits (H) 14
Incorrectly chosen foils or false alarms (FA) 1
Known (K) word scores may be calculated using one of the following three options.

Classroom score calculation option A
(H − FA = K)
14 − 1 = 13

Classroom score calculation option B
(Percentage of Correct Choices = K)
14 + 6 = 20 20/25 = 80%

Proportion (P) Known Calculating Option C
(P [H] − P[FA] / 1 − P[FA] = P [K])
14/18 − 1/7 = .778 − .143 = .635
1 − .143 = .857 = .741

*For pretest, change the wording to will be.

Figure 12.9
VRT Concept Web (Posttest/Outcome Assessment)

Types of Insects
beetle
bugs
ant
cockroach
spider

Places Insects Live
ponds
swamps
backyard

Insects’ Body Parts
thorax
abdomen
feetlers
legs
antenna

Other Insects Words
hatch

Words Correct 14/18
Percentage of correctly categorized hits 100%

seminal work of Bloom (1956). These are generic questions at each of Marzano’s comprehension levels with blanks to be filled in by the teacher using key concepts derived from a content analysis of the unit of study. At least four of your questions should use “higher-order thinking” questions (i.e., applying, analyzing, generating, integrating, evaluating). In Figure 12.10 we share the academic knowledge quick-screening template.

**Vocabulary Assessment Magazine (VAM).** Though this strategy has “vocabulary” in its title, it is really a mixture of both vocabulary and content knowledge. The VAM was

**Figure 12.10**
Academic Knowledge Quick-Screening (Planning Template)

*Directions for the teacher:* To construct an AKQS for a new unit of study, create five questions on key topics you want all students to learn using the question stems below. At least four of your questions should use “higher-order thinking” question stems (i.e., applying, analyzing, generating, integrating, evaluating).

**Knowing Level**
- Who did ___?
- When was ___?
- What is ___?
- Identify the ___ in the ___.
- Describe
- Which ___ best defines ___?
- Which ___ is characteristic of ___?
- Which ___ is an example of ___?

**Organizing Level**
- Categorize ___ according to ___.
- Classify ___ according to ___.
- How is ___ alike or different from ___?
- What is most (or least) important about ___?
- In your own words, tell ___.

**Applying Level**
- Give some instance which ____?
- How is ___ related to ____?
- How is ___ an example of ___?
- How would you use this information?
- What do you need to solve this problem?
- What are possible solutions to ____?

**Analyzing Level**
- What are the attributes of ___?
- What evidence can you list for ____?
- What are the components, parts or features of ___?
- What patterns or relationships do you see in ___?
- Outline, web, or diagram ___?

**Generating Level**
- What are the main ideas ___?
- What can be concluded about ___?

**Integrating Level**
- Devise a plan ___.
- Summarize ___.
- How many ways can you think of to ___?
- Conclude what the result would be if ___.
- What generalizations can you make?
- If you could pull this all together in 3–4 sentences, what you would say?

**Evaluating Level**
- What do you think about ___? Why?
- Which ___ is most significant and why?
- What are your sources? How do you know they are credible?
- Did you detect any biases?
- Judge what would be the best way to ___
- What criteria did you use?
- What is your point of view about this?
- Are there other points of view about this?
- How effective was ___?

Note: Based on Marzano’s Question Stems
Evidence-Based Instruction Practices for Organizing to Teach Content and Reading

The very nature of academic literacy instruction is that it is one part reading instruction (i.e., how to read informational texts effectively), and one part content learning. That is why in the last section we talked about how to assess your students’ reading comprehension strategy use, and reading comprehension of science texts (Stahl & Bravo, 2010).

There are two parts to the VAM: brief reading passages coupled with open-ended literacy questions pertaining to the passage and subject knowledge items. The open-ended questions linked to the expository passage you plan to use for instruction ask students to apply comprehension strategies (e.g., making predictions, posing questions, making inferences, summarizing) and text feature (use of illustrations) knowledge (Stahl & Bravo, 2010). The second part of the assessment is made up largely of knowledge items about the subject under study. In the example seen in Figure 12.11, students studying a unit on plants were asked to draw and label two different types of roots and write a sentence describing their drawings. Drawing and labeling are literacy practices important in scientific studies; hence the use of this mode of assessment in the VAM is to measure students’ science knowledge in this example.

Oral Retellings of Expository Texts. McGee (1982) found good readers in the elementary grades are aware of expository text structures. One of the most effective ways to find out if a child understands expository text is to use oral retellings (Duke & Bennett-Armistead, 2003; Moss, 2004). An oral retelling is a verbal recounting of a text that has been read either silently or orally. Asking children to retell an expository text involves describing the contents of the text including the main or superordinate ideas, the minor or subordinate details, and the underlying organization of the ideas in the text (compare/contrast, cause-effect, description, enumeration, etc). Oral expository text retellings assess content comprehension and text structure knowledge in holistic, sequenced, and organized ways. In Chapter 7 we provided details on how teachers may use oral retellings with expository texts.

Fluency Assessments. In Chapter 5 we offered two strategies that are excellent in academic literacy assessment: the one-minute reading sample and the multidimensional fluency scale. The one-minute reading sample is quick and easy to administer and interpret; this should be your primary tool for screening and ongoing assessments. The latter provides greater depth of analysis for assessing students you feel may be struggling.

Evidence-Based Teaching Practices

Figure 12.11
Vocabulary Assessment Magazine (VMA)

Draw and label two different types of roots. Write a sentence under your drawing to describe the two types of roots.

This magazine is called Life in the Forest. What do you think the magazine will be about?

Life in the Forest

abilities as well as conduct assessments on the texts to be used, whether in print or digital forms. As we organize instructional units using informational texts, we need to keep these twin dimensions in mind. Otherwise, we risk leaving students behind.

In the last section, we discussed how teachers perform a content analysis. This is how we discover the text demands are of the material we plan to use (i.e., readability level, concept load, and so forth). Now we are ready to learn about ways to organize units of instruction that promote literacy in the subject area to be studied. In this section, we will learn (1) an organizational framework for planning your units, (2) advanced innovations on the organizational framework that have shown to be effective, and finally (3) some suggestions about how you might work effectively with an instructional coach who may be available in your school. We begin first with a few “nonnegotiables” in academic literacy instruction based on our own research and that of others who came before us.

Nonnegotiables of Academic Literacy Instruction

Based on many years of research and classroom practice, there seem to be certain guiding principles or nonnegotiables of academic literacy instruction (Cooter & Cooter, in press; Corpus & Giddings, 2010). We think you will see the spirit of these nonnegotiables embedded throughout this section.

- **Less is more.** Students are better able to absorb new skills strategies for understanding informal texts if they are few in number. It is best to carefully select a relative few evidence-based skills and strategies to teach your students and then practice them until they become automatic—a part of them. As a Dallas literacy coach, Adelise Harris, once remarked, “We can’t just sprinkle students with strategies, we must marinate them until they are soaked to the bone and own the strategy!”

- **Use high-quality texts.** If we want to keep our students engaged and on task, we must choose expository texts that are interesting and speak to this generation (Blasingame, 2007). All too often the adopted textbooks are boring and high on concept load. With the advent of the Internet and other quality resources, we must supplement our program liberally with rich and enticing texts.

- **Offer students choice.** A problem we often see in content instruction is the one-size-fits-all mode of instruction (i.e., exclusively whole-group instruction). Human beings are motivated by choice, even when there are only two or three options. Choices in texts to be read, group activities, and required products (i.e., research papers, poster sessions, online presentations, readers’ theatre scripts, etc.) cause students to be motivated and engaged.

- **Offer students voice.** We learn through talking about new ideas. Throughout this book we have highlighted the idea of joint productive activities (JPA) as small-group cooperative learning activities (see CREDE online for a summary of dialogic learning activities on the website noted at the end of the chapter). Whether you use JPAs or not, create opportunities for your students to come together for highly structured discussions about new ideas.

- **Students are apprentices.** It is our jobs as teachers to find out what students know (and need to learn next)—what Vygotsky (1986) calls their zone of proximal development and then lead them to greater levels of knowledge and ability. This assumes certain roles for teachers (as coaches) and students (as apprentices). Earlier in the book we have represented this philosophy in words and graphics. The apprenticeship model (Corpus & Giddings, 2010) is summarized in Figure 12.12.
Marry well, divorce less. Once you decide on a way of organizing academic literacy instruction in your classroom (hopefully, you will start with the framework that follows), stay with it for more than a year so that you will become proficient. Much too often we assemble great strategies and materials but then throw it aside if we do not get the results we hoped for the first time; that is, we get a “divorce” from the program we assembled before we know it well ourselves in favor of something new and untried (Cooter, 2004). Implementing what you design well takes time, practice, and experience. Remember, you are a learner, too!

The B-D-A Organizational Framework

Over the past two decades we have been honored to serve with a number of school districts as chief designers and lead researchers on federally funded literacy projects. From this work we have learned firsthand what seems to work best in academic literacy with some of the most economically disadvantaged students and the teachers who serve them.

**Before, during, and after reading**, or B-D-A, is a construct for organizing instruction that has a proven track record. In short, teachers plan for what students do *before* they read a new informational text, what they are doing *during* their reading of a text, and what they do *after* they read informal texts to crystallize their learning. B-D-A maximizes student learning potential. Of course, this model has implications at each stage for teachers as well (i.e., what should we be doing B-D-A students read texts).

In this section we now share with you evidence-based practices shown to be effective in our research in the federally funded Memphis Striving Readers Project from 2006 to 2011 (Cooter & Cooter, in press) with schools serving some of the most severely limited children living in poverty predicaments. Information about all eight
of the Striving Readers research projects can be found online at the website included at the end of this chapter.

Strategies for vocabulary learning, reading comprehension, and reading fluency are presented using the before, during, and after reading framework. Because some of the strategies we present were already described in earlier chapters, we only mention these and add some additional tips for their use. For new strategies not previously mentioned, we provide full descriptions.

**Before Reading Strategies: Vocabulary Learning.** In Chapter 6 on vocabulary we learned about academic word walls, or AW² (Cooter, 2009). This is a mainstay tool for academic vocabulary development and should be used from the first day or so of a new content unit. But let’s introduce a nuance to AW² by considering one of our nonnegotiable beliefs: *marry well, divorce less*. This is the idea that we get better at using a teaching tool like AW² by gaining experience with it over time until we have mastered the strategy ourselves.

Practicing a teaching strategy properly and consistently is known as *fidelity of implementation*. Instructional coaches and teachers often use tools like rubrics or implementation continuums to help teachers self-assess how well they are applying new teaching strategies in their classroom. **Implementation continuums** (Cooter, Mathews, Thompson, & Cooter, 2004) are clear and concise structures that help teachers across a school or school district develop a common understanding of evidence-based teaching practices. They may take the form of rubrics that present agreed-on benchmark teaching practices and materials. Teachers apply implementation continuums to monitor their teaching practices and work toward consistency according to a standard. Principals also use implementation continuums to gauge the extent to which a selected practice is employed in daily instruction throughout a school. Implementation continuums typically move from descriptions of traditional practices to stages of execution more in line with the evidence-based practice.

In Table 12.2 we present a teacher self-evaluation continuum for AW² (Reutzel & Cooter, 2011) developed as part of the Memphis Striving Readers project to help teachers figure out how well they are implementing the strategy. We urge you to use this tool as you first begin using AW² to plan your lessons and then revisit it from time to time for a personal status check on your fidelity of implementation.

**Before Reading Strategies: Comprehension.** Student-apprentices in academic literacy often find textbooks and other expository texts to be intimidating at times. We have found that they benefit from and enjoy a structure they can follow to preview what they are about to learn before actually reading the text. **Previewing** helps students to survey a new text before reading and begin making associations with their prior learning. **THIEVES** (Manz, 2002) is an acronym for the steps students can take in previewing new expository texts in a systematic way for science, social studies, and English language arts texts.

The idea is to encourage students to become THIEVES—that is, “steal” important information from the new text before they read it. THIEVES identifies elements of the text (textbook chapter, supplemental book, online website, etc.) that should be reviewed in advance of actual reading. This helps students access prior knowledge and set purposes for reading. Figure 12.13 displays a template of the survey elements identified by THIEVES that you can copy and use with your students along with key questions for each step.
Before Reading Strategies: Fluency. In Chapter 5 we offered a plethora of fluency activities you will be able to use in your classes. Students, as we mentioned in our nonnegotiables earlier, enjoy choice. So using a variety of those strategies will help you keep things spicy.

One before-reading fluency routine was developed by David Paige (in press) while serving as a middle school teacher. In Paige’s whole-class choral reading routine
**Figure 12.13**

THIEVES: A Previewing Text Strategy

<table>
<thead>
<tr>
<th>T–Title</th>
<th>Getting Ready to Read</th>
<th>What additional questions do I have?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What do I already know about this topic?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What does it have to do with the preceding chapter?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does it express a point of view?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What do I think we will be reading about?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H–Headings</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What does this heading let me know I will be reading about?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the topic of the paragraph beneath it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How can I turn this heading into a question that is likely to be answered in the actual content?</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>I–Introduction</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there an opening, perhaps italicized?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the first paragraph introduce the chapter?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What does the introduction let me know I will be reading about?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do I know anything about this already?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E–Every first sentence in a paragraph</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What else did I learn about the topic?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What predictions can I make about what I am about to learn?</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>V–Visuals and vocabulary</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there photographs, drawings, maps, charts, graphs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What can I learn from them?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How do the captions help me better understand the meaning?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a list of key vocabulary terms and definitions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there important words in boldface type throughout the chapter?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do I know what they mean? Can I tell the meaning from the sentences in which they are embedded?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E–End-of-chapter questions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What do the questions ask?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What information do they earmark as important?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What information do I learn from the question?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Let me keep in mind the questions I am to answer so that I may annotate my text where pertinent information is located.</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>S–Summary</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What new information is there?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What summary can I make from the preview?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


students practice reading a summary of an upcoming textbook chapter a week or more ahead of instruction to “prep” students. This whole-class (or small-group) choral activity acquaints them with new vocabulary found in the textbook chapter and the author’s style while improving their rapid identification of new words. Texts
may be taken directly from the textbook, for instance, the summary at the end of the upcoming textbook chapter or other text, but may need to be slightly modified. Figure 12.14 is Paige’s before-reading fluency routine in a simple weekly plan. After the first day it usually only takes about 5 to 10 minutes of class time, but yields great results.

**Figure 12.14**
Before-Reading Fluency Routine

<table>
<thead>
<tr>
<th><strong>Monday</strong></th>
<th><strong>Tuesday and Wednesday</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before Reading</strong></td>
<td><strong>Step 6: Rereadings</strong></td>
</tr>
<tr>
<td><em>Step 1: Introducing New Words</em></td>
<td>Students read the text once each day as in Step 3. As students become familiar with the text, it is important to transfer responsibility for reading to them. To do this, the teacher simply reduces vocal volume (as with the neurological impress method) each reading. Explain to students that they must listen to each other in order to “stay together” during the reading.</td>
</tr>
<tr>
<td>Before modeling the text, select specific words that the students may not be familiar with or may have difficulty pronouncing. Pay particular attention to unfamiliar content words and concepts. Your content analysis will help you decide on these words.</td>
<td><strong>Thursday and Friday:</strong></td>
</tr>
<tr>
<td>Next, the teacher models the selected words (read aloud for the class) while students are looking at the word. Students repeat the target word after the teacher pronounces it.</td>
<td><strong>Step 7: “Let’s change it up!”</strong></td>
</tr>
<tr>
<td><strong>Step 2: Modeling the Text</strong></td>
<td>On the final two days of fluency practice the teacher or, better yet, the students choose another choral reading activity to use with the text. This could include echo reading, antiphonal reading, or unison reading.</td>
</tr>
<tr>
<td>While students are following along silently with their text, the teacher models reading the text aloud. Use appropriate expressive reading and reading rate, and pay attention to commas, periods, and phrases.</td>
<td><strong>Tips for Implementation</strong></td>
</tr>
<tr>
<td><strong>During Reading (Still Monday)</strong></td>
<td>David Paige (in press) offers the following recommendations to enhance the process.</td>
</tr>
<tr>
<td><em>Step 3: First Reading</em></td>
<td><strong>Audio recording.</strong> Record the class on Monday while they are doing the first reading using a tape or digital recorder. Play the recording back for the students at the end of the second reading. Record the class on Friday and compare (play) the two readings for the class.</td>
</tr>
<tr>
<td>Students now read the text aloud in unison. To begin the class reading together, the teacher uses a “3–2–1” countdown. Teacher must read aloud in a loud voice while “traveling” the room during the reading making a mental note of difficult words and phrases to review after reading.</td>
<td><strong>Motivation.</strong> Student motivation is key. This should be presented as a fun way to help everyone in class become a better reader. Challenge the class to reach for a perfect performance on Friday. Readings on Monday through Thursday can be thought of as “rehearsal readings.”</td>
</tr>
<tr>
<td><strong>After Reading (Still Monday)</strong></td>
<td><strong>Class monitoring.</strong> The teacher must ‘walk the room’ during readings to keep students on task. Encourage students who may not be reading to join in! Whatever you do, however, embarrass no one.</td>
</tr>
<tr>
<td><em>Step 4: Review Problem Words and Phrases</em></td>
<td></td>
</tr>
<tr>
<td>The teacher models words and phrases that were difficult for the class and asks the class for questions regarding any text that was confusing or difficult.</td>
<td></td>
</tr>
<tr>
<td><strong>Step 5: Do a Second Reading (Monday only)</strong></td>
<td></td>
</tr>
<tr>
<td>The final activity for your first day is to do a final reading of the text with your class.</td>
<td></td>
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</tbody>
</table>

A number of different strategies can be used to promote vocabulary learning.

**Semantic Feature Analysis.** SFA (Anders & Bos, 1986) is a strategy that features a grid to help students understand how vocabulary and concepts are related to one another. Students using SFA are helped to see connections from known vocabulary to the new and master important concepts. This strategy helps students think critically about words and concepts possessing similar relationships and characteristics. SFA is quite flexible and may be used before, during, and after students read their unit materials. Following are the recommended steps for implementing semantic feature analysis in the example shown in Figure 12.15 (Cooter & Cooter, in press):

1. A class of vocabulary words is selected by the teacher (e.g., automobiles).
2. Examples of the word class are provided by students and listed (one in each box) in the left-hand row of the SFA grid (e.g., Suburban, Prius, Escort, Escalade, etc.).
3. Features of the word class are provided by students and listed across the top (one in each box after skipping the first box) of each column (e.g., two-doors, high gas mileage, gas guzzler, SUV, compact, etc.).
4. Using either a + or a – students determine which class examples possess which features.

Modeling the strategy throughout teachers should employ instructional conversations to clarify and extend student knowledge.

**Concept Maps.** A concept map is a graphic organizer showing the relationships between concepts. A concept map usually consists of circles (i.e., cells) or other shapes that contains a concept or vocabulary term, with connecting lines that explain the relationship between the cells. Arrows describe the direction of the relationship and can be read like a sentence by the concept map’s author. Remember, when students work together to create concept maps they engage in a good bit of dialogue, and this deepens learning and helps increase students’ vocabulary learning (Cooter & Cooter, in press).

There are four kinds of concept maps that are distinguished by their different formats for representing information: spider, hierarchy, flowchart, and systems concept maps. As the following descriptions show, each can work well with subject area studies.

1. The spider concept map is organized by placing the central theme or unifying factor in the center of the map, with outwardly radiating subthemes surrounding the central theme.
2. The hierarchy concept map presents information in a descending order of importance, with the most important information placed on the top.
3. The flowchart concept map organizes information in a linear or nondimensional format.

4. The systems concept map organizes information in a format that is similar to a flowchart, with the addition of inputs and outputs.

An example of each type of concept map is presented in Figure 12.16. To introduce concept maps to your students, you might use the following plan adapted from directions created by the Department of Chemistry and Biochemistry at the University of Delaware. This is another example of dialogic teaching involving a good bit of student interaction.

- **Brainstorming phase.** From memory, identify words or phrases that you think are in any way associated with the topic of study. Make a list of these items and print them neatly on small sticky notes, one per note. This is a brainstorming process, so write down everything that anyone in your group thinks of at this point. Your objective here is to generate the largest possible list you can. Before your group completes this step, you may have a lot of ideas.

- **Organizing phase.** Spread out your sticky notes on a flat surface so everyone can see them. Create groups and subgroups of related words and phrases. Try to group items to emphasize hierarchies or how things are related. Feel free to rearrange items and introduce new items. Note that some concepts will fall into multiple groupings. This will become important later.

- **Layout phase.** On a large sheet of paper, try to come up with an arrangement (layout) that best represents your collective understanding of the interrelationships and connections among groupings. Feel free to rearrange things at any time during this phase. Use a consistent hierarchy in which the most important concepts are in the center or at the top. Within sub-groupings, place closely related items near to each other. Do not expect your layout to be like that of other groups.

- **Linking phase.** Use a version of one of the concept map formats (i.e., spider, hierarchical, flowchart, systems) with lines and/or arrows that best represent relationships between connected items.

- **Finalizing and sharing your concept map.** After your group has agreed on an arrangement of items that shows your understanding, convert the concept map into a permanent form that others can view and discuss. Be creative in your use of colors, shapes, border thickness, and so on to communicate your group’s understanding. Give your concept map a title. If you want to construct your final concept map on a computer, try using PowerPoint. In reviewing your concept map, consider the following attributes:

  - **Accuracy and thoroughness.** Are the concepts and relationships correct? Are important concepts missing?
  - **Organization.** Is the concept map laid out in such a way that higher-order relationships are apparent and easy to follow? Does your concept map have a title?
  - **Appearance.** Is the assignment done with care, showing attention to details such as spelling and penmanship? Is it neat and orderly or is it chaotic and messy?
During Reading Strategies: Comprehension. When your students are actively engaged in reading expository texts while in the during phase, we want to assist them in several ways. First, we want to help them know what to do when comprehension is breaking down. We call these fix-up strategies. Second, we want to monitor their developing comprehension. One potent way to accomplish this second goal is to help them learn to write academic summaries. Finally, students benefit from learning note-taking strategies. Let’s take a closer look at these three areas.

Fix-Up Strategies. Teaching students to actively monitor their own comprehension has been shown to significantly improve reading comprehension (Boulware-Gooden, Carreker, & Joshi, 2007). The act of monitoring one’s unfolding comprehension of text and taking steps to “fix” comprehension when it is not occurring is referred to as metacognition or, sometimes, as metacomprehension (Reutzel & Cooter, 2011). There are several basic fix-up strategies good readers employ when reading comprehension in expository texts begins to break down.

- Read on for clarification.
- Reread the sentence.
- Go back and reread the paragraph.
- Seek information from the glossary or reference materials available online.
- Ask someone near you who may be able to help, such as a classmate.

Click or Clunk Strategy. Another idea you can introduce to your students is the click or clunk strategy (Carr, 1985), which was briefly introduced in Chapter 7. The click or clunk strategy was designed to help students recognize when and where their comprehension breaks down during reading. When coupling the click or clunk strategy with instruction on the comprehension “fix-up” strategies noted above, students can come to know what to do to detect and correct comprehension breakdowns.

This strategy urges readers to reflect at the end of each sentence, paragraph, or section of reading by stopping and asking themselves whether the meaning or message “clicks” for them—or goes “clunk.” If it clunks, what is wrong? What can be done to make sense of it? Once a breakdown has been detected, it is important to know which strategies to select in repairing broken comprehension, as well as when to use these strategies. A classroom “fix-up” poster displaying the key strategies is most helpful to students.

To demonstrate the use of a “fix-up” poster, model for students using a think-aloud process to help them develop a sense for when to select certain repair strategies for failing comprehension. Read part of a text aloud and, as you proceed, reveal to students your thinking, the hypotheses you have formed for the text, and anything that strikes you as difficult or unclear. By doing so, you demonstrate for students the processes that successful readers use to comprehend a text. Next, remind them of the click or clunk strategy. Gradually release the responsibility for modeling metacognitive strategies to the children during follow-up lessons on metacognitive monitoring. Display the repair strategies in a prominent place in your classroom. Be sure to draw your students’ attention to these strategies throughout the year.

Written Academic Learning Summaries (WALS). In Chapter 7 we learned about three levels of retelling as a way of gauging how well students are learning from exposi-
Evidence-Based Instruction Practices for Organizing to Teach Content and Reading

tory texts: oral retelling, retelling using graphic organizers, and written retellings. Written retellings are by far the most sophisticated retellings learners can do to demonstrate their understanding of expository texts. In recent research with students living in high-poverty circumstances (Cooter & Cooter, 2008; Cooter & Cooter, in press), a structure was found to be effective for teaching these students how to write summaries called written academic learning summaries (WALS).

Written academic learning summaries (WALS) is an evidence-based activity that helps students write about what they are learning in core subject area texts (mathematics, science, social studies, English/language arts). Benefits to students include deeper and more permanent learning of important information, enhanced reading comprehension in informational texts, increased vocabulary learning, and better preparation of students for higher-level coursework in middle and high school. WALS specifically helps students bridge from new vocabulary they have acquired to a graphic organizer that features a structure for written retellings (Cooter, 2002), which helps students connect concepts and see relationships, and finally to create a written summary of three to five paragraphs. Figure 12.17 shows the process used in the WALS strategy.

For implementing WALS, students, in addition to your usual academic texts, will need to have writing materials and easy access to your academic word wall or equivalent where new academic terms are displayed and used in interactive activities.

Robert and Kathleen Cooter (2008) developed an explicit step-by-step framework to implement WALS for the first time, as shown in Table 12.3. The structure for written summaries (Cooter, 2002) and an example of a completed summary for teacher modeling are shown in Figures 12.18 and 12.19, respectively.

Note-Taking Strategies. There are many different systems for teaching students how to take notes as they listen (Cooter & Flynt, 1996; Lapp, Flood, & Farnan, 2004). However, common threads of most note-taking systems include recommendations about how notes should initially be recorded during a unit of instruction, the need for subsequent reorganization and expansion of the notes, and a strong recommendation for frequent review.

Before discussing each of the components of effective note taking, we would first like to suggest a couple of general guidelines derived from the work of Cooter and Flynt (1996).

1. Students should be asked to obtain a single notebook specifically for learning note-taking skills. Dedicating a notebook for this purpose will help them keep the notes organized and will make it easier for you to collect and examine the notes.
2. If notetaking is important to you, then some type of credit should be given to students who do a good job of recording and organizing their notes.
3. Adapt the amount and style of lecturing to your students’ ability level. If you have an advanced class, more sophisticated lectures might be warranted. On the other hand, if your class has little experience with note taking and effective listening techniques, you might want to begin slowly and use a lot of visuals or perhaps a listening outline to assist students in determining and writing important information.
Traditional note-taking systems such as the Cornell system (Pauk, 2000) and Palmatier’s note-taking system for learning (1973) share several features that we recommend for use in training students on how to listen and take notes on lecture information.

1. **Students should divide their notebook paper into two columns.** The left column should be about 2 or 3 inches wide, or one-third of the paper width. The remaining two-thirds of the page is used for recording the notes.

2. **Students should write information in a modified outline form on the right side of the page.** Students should indent subtopics and minor ideas using letters and numbers and should be encouraged to use abbreviations to minimize time spent in writing down information. Heavily emphasized points should be marked with asterisks or stars.
3. **Students should organize and expand their notes as soon as possible.** Early in the school year, considerate teachers provide in-class time for this task. At this time the students literally rewrite their notes on similarly lined paper. The purpose is for the students to write all abbreviations, expand phrases, and make sure that the information is sequentially organized. This is obviously a form of practice.

4. **Students should fill in the left margin for aid in study and review.** As they reread their notes, students identify topics, key terms, and questions that might assist them in remembering the lecture information recorded on the right side of the paper.

5. **Students use their notes for study and review.** Students can now cover up the right-hand side of the paper and use the memory triggers they have recorded on the left-hand side for review. As they move down the left-hand side of the page,
Comprehension Windows Strategy. CWS (Bass & Woo, 2008, p. 571) was designed as an informational text strategy using an easy-to-create instructional prop to enhance students' comprehension during reading and writing. CWS helps students build content knowledge, organize facts, structure critical thinking, and use proper documentation and citations. This strategy is appropriate for small collaborative groups or individual work. To implement CWS, you will need the usual materials used in academic content studies and you will need to construct a CWS “prop.” A prototype
created by Bass and Woo (2008) is shown in Figure 12.20. You will also need file folders, scissors, pens, and sticky notes for headings.

Bass and Woo (2008, p. 573) offer the following guidelines for using the comprehension windows strategy (CWS):

1. Fold line (folds like a tent; use file folder type of material)

2. TOPIC

3. X X X X X X X X X X X X X X X X X X X X X X F O L D X X X X X X X X X X X X X X X X X X

4. Cut up to Xs

(Place sticky notes with new information under appropriate CWS flap—students can organize each heading later.)
Teacher Preparation

- Begin with a letter-size (recycled) file folder (school secretary, parents, and local businesses are good sources)
- Cut along fold to create two equal halves (each folder will make two CWS props)
- Fold each piece in half lengthwise creating a tent
- Provide ample information sticky notes for every student

Procedure

- Label each CWS flap with the appropriate headings using sticky notes (e.g., Important People, Events Before, What Happened?)
- Label back section as References
- As students gather information, they write a complete reference citation for each source on the back section of the tent, numbering the references (alphabetical order can be done later)
- On each sticky note, students record one idea and its corresponding reference number
- Sticky notes are positioned under the appropriate CWS flaps to help students sort and categorize information.

Once information has been gathered, students are ready to engage in writing process activities (prewriting, drafting, revising, editing, publishing). This can be done individually or in small groups. Students begin by organizing information using the information sticky notes from each CWS flap one flap at a time. Information sticky notes can be placed and organized on a flat surface as a preliminary stage leading to a final product. Some possible final products include poster sessions, PowerPoint presentations, reenactments, or author’s chair (to share compositions).

During Reading Strategies: Fluency. Choral reading helps students learn to effortlessly read technical texts, strengthens vocabulary knowledge, and improves comprehension. In Chapter 5 on fluency, we provided information on ways of implementing three types of choral reading: unison, echo, and antiphonal. In this chapter we also offered Paige’s procedure for introducing choral reading as part of your content instruction. Now we take the final step to help you implement choral reading well, with good fidelity of implementation. In Table 12.4 we offer an implementation continuum (Cooter & Cooter, in press) used by literacy coaches and teacher to perfect the application of choral reading.

After Reading Strategies: Vocabulary. Once students have completed their initial expository readings in a unit of study, we want to be sure that new knowledge crystallizes in their long-term memories. The mainstay of vocabulary learning that provides multiple exposures and thought is the academic word wall discussed in Chapter 6. Use of academic word walls continues to play an important part in your after reading regime. Now we add another strategy to your teaching tool kit.

The Frayer Model (Frayer, Frederick, & Klausmeir, 1969) is a classic strategy that helps students understand new vocabulary and concepts in relation to what is already known. This model is especially useful for nonfiction terms or academic vocabulary because it presents essential and nonessential information related to the term, as well as examples and nonexamples. Frayer is a splendid after reading strategy because it causes students to think about new vocabulary and analyze how it relates to their prior knowledge and experiences.
Table 12.4
Implementation Continuum for Whole-Class/Group Choral Reading

<table>
<thead>
<tr>
<th>Exemplary A</th>
<th>Above Average B</th>
<th>Acceptable C</th>
<th>Early Implementation D</th>
<th>Traditional Instruction E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher conducts a preassessment to gain some understanding of the range of students’ reading abilities with on-level textbook readings (e.g., timed reading, cloze passages, maze passages). Data is used to decide whether supplemental readings may be needed for some students (i.e., differentiating instruction). Puts the text selection in context and explains the purpose of choral reading. New academic and other challenging words from the text are pronounced. Models the reading and attends to punctuation, uses appropriate prosody (voice intonation), volume, and reading speed. Students are given an opportunity for further vocabulary decoding or pronunciation. Teacher uses a “countdown” queuing system (e.g., 3–2-1) so that students begin together. Teacher travels about the room during the reading to attend to reading other difficulties, and makes mental notes for re-teaching or clarifying. Teacher reviews difficult words and phrases after one of the readings. Teacher has 5-minute choral reading practice each day using the same text selection. The passage selected is at least 1–3 weeks ahead of the teacher’s curriculum.</td>
<td>Teacher conducts a preassessment to gain some understanding of the range of students’ reading abilities with on-level textbook readings. Models the reading and attends to punctuation, uses appropriate prosody (voice intonation), volume, and reading speed. Teacher uses a “countdown” queuing system (e.g., 3–2-1) so that students begin together. Teacher travels about the room during the reading to attend to reading other difficulties, and makes mental notes for re-teaching or clarifying. Teacher reviews difficult words and phrases after one of the readings. Teacher has 5-minute choral reading practice each day using the same text selection. The passage selected is at least 1–3 weeks ahead of the teacher’s curriculum.</td>
<td>Teacher introduces and explains the purpose of choral reading. New or unfamiliar academic words from the text are pronounced. Models the choral reading strategy with a reasonably loud voice. Teacher uses a “countdown” queuing system (e.g., 3-2-1) so that students begin together. Teacher travels about the room during the reading. Teacher uses the same passage from the textbook for each CR session during the week. Teacher has 5-minute choral reading practice for at least 4 days during the week using the current unit of study. The passage selected is at least 1–3 weeks ahead of the teacher’s curriculum.</td>
<td>Teacher introduces one of the choral reading activities (unison, echo or antiphonal). Teacher and students practice reading a passage from their textbook together. Teacher has 5-minute choral reading practice one to three times per week using the current unit of study.</td>
<td>Uses “round robin” or “popcorn reading” for oral reading practice. When students read aloud, they do so without previewing the text or having it modeled. Teacher remains in one place during oral reading practice.</td>
</tr>
</tbody>
</table>
To implement this strategy you will need a blank Frayer Model form on a computer, image projector, or overhead projector for demonstration purposes. Students will need paper and pencils for note taking. The teacher presents or helps students determine essential and nonessential information about a concept, find examples and nonexamples of the concept, and recognize coordinate and subordinate relationships to the concept. This classification procedure can be done as a group, in dyads, or individually. Shown in Figure 12.21 is an example of a completed Frayer Model.

**Figure 12.21**
Frayer Model


After Reading Strategies: Comprehension. Earlier we investigated written academic learning summaries (WALS) as a method for helping students display their new knowledge. In after reading stages we continue to work with students using WALS to expand their written summaries and cement learning.

Now let’s add a gaming aspect to comprehension development with something called “six degrees of separation.”

The goal of the Six Degrees of Separation game (Cooter & Cooter, in press) is for students to create a web in which they connect one term to another term in six or fewer steps. The two terms to be connected are decided by the teacher. The notion of six degrees of separation (also referred to as the “human web”) refers to the idea that, if a person is one step away from each person they know and two steps away from each person who is known by one of the people they know, then everyone is at most six steps away from any other person on Earth. Michael Gurevich conducted seminal work in his empirical study of the structure of social networks in his 1961 Massachusetts Institute of Technology doctor of philosophy dissertation titled *Ithiel de Sola Pool*.

The following is an actual activity used in Memphis, Tennessee, in a research project in which the Six Degrees of Separation game (Cooter & Cooter, in press) was first developed. This example is from a middle school social studies class in which the teacher is explaining the game (see Figures 12.22 through 12.25).

We are learning about how cultures in the United States have differences, but are also connected. I would like for each of you in your teams to first draw a concept map that begins with Memphis, Tennessee, at its center, and then somehow find a connection...
to Missoula, Montana. I have included at each table the steps you can use to construct your concept map. At each of your tables I have also given you copies a book titled *Missoula, Montana: Communities and Their Locations* to help you learn more about this American city.

When your team finishes your concept map and everyone agrees it is ready, you will then post your concept map on the wall for our “Gallery Walk.”

To win this game, we must all agree as a class that your team had the fewest complex connections (for example culture, industry, geography) which get them from A to B, not simple ones (nonexamples are street names, people names, simple geography like “trees”).

Each person in our class has a yellow sticky note and will place it on the six degrees map they vote for as the winner—you cannot vote for your own.

Let me show you an example of a completed six degrees map with complex connections and an example of a poor one. See if you can see why the first one is a good example and why the second one is a poor example. I would like to know your thinking, so jot down your thoughts on a piece of paper for our discussion. Remember, the task was to connect Texas and shark.

**Figure 12.22**

*Six Degrees of Separation Game: Early Brainstorming Phase—Connecting the Terms “Texas” and “Sharks”*

**Figure 12.23**

*Organization Phase—A Simple “Spider” Concept Map (6 steps or less path from “Texas” to Sharks’ noted in red)*
After Reading Strategies: Fluency. Two very popular fluency strategies we discussed earlier in Chapter 5 were readers’ theatre and radio reading. Because a teacher’s time is at a premium and constructing script examples for your students of radio plays and readers theatre can be quite time-consuming, we offer some great online websites for content area instruction at the end of this chapter.

Reading Across the Curriculum: Thematic Units

The teaching of reading and writing using a comprehensive perspective has been the focus of this book. Although reading and writing have sometimes been presented as separate entities for the sake of clarity, effective reading teachers typically do not apply these literacy skills separately. Rather, they are integrated across the curriculum so that boundaries between reading and writing virtually cease to exist. In full curriculum integration, reading and writing become integral parts of subject area investigations and vice versa by way of interdisciplinary themed studies. A theme such as “Changes” or “Exploration” can become an exciting classroom experience involving social studies, the sciences, mathematics, literature, art, music, and other important areas of the curriculum.

The advantages of curriculum integration are numerous. Reading and writing skills are acquired and refined within a rich context of real-world significance, which in turn inspires students to want to know more. Skills are no longer taught in isolation as rote drill but are learned as tools for communicating ideas. Integration of the curriculum results in a blend of instruction in literacy communication skills and content as well as the planting of seeds for future searches for new knowledge.

- **Selecting a theme.** Themes that meet the criteria previously described should be chosen.

- **Identifying resources.** The teacher should identify and collect resources before beginning the unit. Examples include nonfiction books, other pertinent print media (e.g., documents, travel brochures, and government publications), hands-on materials that pertain to the topic, nonprint media ( videotapes, films, radio recordings), relevant basal stories or literacy selections, and computer-related material. Resources also include community members and the opportunities afforded by field trips.

- **Brainstorming.** Themed studies involve brainstorming on the part of both teacher and students. Teachers brainstorm as part of the planning process to anticipate ways that curriculums can be integrated into the unit and to assist in the selection of materials. Paradis (1984) offers a brainstorming web (Figure 12.26) to assist teachers in this process. Students are also encouraged to brainstorm as a way of becoming involved initially with the topic. Brainstorming helps students focus their thinking, articulate their interests and background knowledge, and develop an appreciation for the ideas of their peers. It also encourages collaboration—a highly prized skill in both school and the workplace.

- **Demonstrating learning.** Students complete projects and tasks that demonstrate their newly acquired knowledge. Projects like those cited for themed units generally apply here. In addition, students may complete other products such as displays, speeches, demonstration fairs, and guided tours.

Teachers building themed studies search for ways to incorporate reading and other basic literacy skills into content subjects because they know that these processes help students deepen their knowledge of the wider world. The dynamic created in these cross-curricular units is quite powerful and spawns many positive outcomes in the classroom, including heightened interest in the subject matter and a sense of empowerment (Cox & Zarillo, 1993; Wepner & Feeley, 1993).

After many years of helping school districts around the United States build thematic units, we have discovered several practices that speed the process of curricular integration. The most efficient way to begin is by first constructing a themed literature unit using the process described in this chapter; this achieves full integration of the language arts within the context of great literature. Themed literature units also contain all the essential elements of a comprehensive reading program, such as daily reading and writing, the teaching of nonnegotiable skills, literature response, cooperative groups, opportunities to practice fluency, and student self-evaluation. Once teachers build themed literature units as the curriculum core it becomes a relatively
simple matter to infuse the content areas. Finally, we have learned that once teach-
ers go through the process of building thematic units, they better understand all the
essential elements and can re-create the process in the future in their own way—
keeping some elements and deleting others—to create a balanced learning system
that meets the needs of their students.

Planning thematic units involves five major phases that can be applied equally
well in grades 5 through 8. These phases are theme selection, setting goals and object-
ives, webbing, choosing major activities and materials, and unit scaffolding.

Theme Selection. In many ways, the success of thematic units depends on the concept
chosen to be the theme. It must be broad enough to accomplish linkage between the
various content subjects, address local and state requirements listed in curriculum
guides (Pappas, Kiefer, & Levstik, 1990), include quality nonfiction and fiction, and
still be interesting to youngsters. Topics like “Our State’s History” or “Nutrition”
can be far too confining for the kinds of engaging learning experiences we hope to
craft. There are a large number of possible topics, which might give teachers a good
starting point; these include “Legends,” “Survival,” “Heroes,” “Changes,” “Seas-
sons,” and “Journeys.” If the theme selected is broad enough, teachers will discover
creative and enticing ways to weave various content subjects into the unit. To demon-
strate more clearly ways thematic units can be constructed, we build on the themed
literature unit called “Journeys.”

Setting Goals and Objectives. Once the theme has been selected, teachers should con-
sult the district curriculum guide and other available resources to determine possible
goals and objectives. Some teachers prefer to do this step first because themes oc-
casionally grow logically out of the required curriculum. Whether done as a first or
second step, establishing goals and objectives must come early so that appropriate
learning activities and materials can be chosen.

Webbing. The next step in planning thematic units is webbing, which is essentially
the process of creating a schematic or schema map of the linkage between each aspect
of the unit. By creating a web of the major aspects of the proposed unit, the teacher
can gain a global view—the big picture. Webs can also be revised and adapted later
to use as an advance organizer for students at the beginning of the thematic unit. In
Figure 12.27, we see an initial (not fully developed) thematic unit web for the “Jour-
neys” theme. The theme now spans three additional content areas: social studies,
science, and mathematics. Major activities have also been suggested, which is the
next topic we explore.

We have found that planning daily activities is greatly facilitated by webbing
each content component separately. Teachers should include in the web such in-
formation as key reference books, computer software, important questions to be
answered, special activities, and demonstrations they may wish to perform. In Figure
12.28, we share a web used in the science portion of the “Journeys” theme.

Choosing Major Activities and Materials. One of the joys of thematic units is that they
infuse the curriculum with great ideas, activities, and materials that energize learners.
What a great alternative this is for teachers ready for modest yet powerful change!
Activities chosen for thematic units provide students with opportunities to apply
literacy skills in a wider-world context. Sometimes students complete these activi-
ties independently, other times as part of a problem-solving team. Occasions for personal exploration and reflection are also seen as valuable aspects of thematic unit activities.

Many and diverse materials are required to create an engaging and relevant thematic unit. Both fiction and nonfiction materials are needed to plan rich and interesting activities. The core materials are books, lots of books of every kind. Pappas and colleagues (1990) got it just right when they said, “as with chocolate, you never have enough books!” Other essential tools are reference materials, fiction books that awaken imaginations, and nonfiction books to read aloud. Teachers will also need to locate what are known by historians as “primary source materials”—original sources of information.

Unit Scaffolding. The final stage of planning is unit scaffolding. At this point, the teacher determines just how long the unit should run and makes final decisions about which activities to include. Typically, thematic units last 1 to 2 weeks in grades 4 through 6 (Wiseman, 1992) and up to 4 or 5 weeks in the middle school. The teacher should resist the temptation to run units for months at a time; this usually becomes too much of a good thing and turns high student interest into boredom.
Core Subject Matter Themes. Within each core subject matter, teachers need to create themes that will resonate with their students—help them understand the real world applications of each core subject.

Social Studies. In the social studies component, the problem/challenge activity is for students working in groups of four to assume the role of travel agents charged with the responsibility of developing a “tour guide” for clients traveling to Greece. Required parts of the tourist guide involve information about ancient Greece, Greek cuisine, and the founding of the Olympics in ancient Greece. Students in each group present what they have learned to the class, or other classes, in the form of an enlarged travel brochure.

Science. The problem/challenge activity for science has student groups assume the role of astronauts aboard a space shuttle. Their mission is to travel to a planet of their choosing and establish a colony. This activity involves scientific research into such concepts as what humans need to sustain life, surface conditions on the selected planet, useful natural resources on the planet (if any), and information about the building of life-supporting human environments (biospheres). To present their findings, students in each group will draft a report in the form of a book using the writing process and construct a model of the biosphere they propose to build on the planet surface.
**Mathematics.** The problem/challenge activity in mathematics is for students to assume the role of sea voyagers who must navigate their ship to Greece from the United States. Students can complete this project independently or with a partner. Skills involved include basics in map reading, geometry as related to navigation, translation of miles per hour to knots, and journal writing. The product is a ship’s log, which details daily destinations, map coordinates, travel times, and (if desired) some brief information about what students see at each port.

**Theme Integration.** One of the decisions teachers must make is whether the unit is to be fully integrated and presented as a seamless curriculum. Some teachers in grades 4 through 6 in nondepartmentalized situations may operate a unit for a few days or a week. For example, in a “Journeys” unit, the teacher may focus almost exclusively on the social studies problem/challenge. When the social studies portion is concluded, the class may move on to the science problem/challenge, focusing on that aspect for entire days at a time. The mathematics problem/challenge may come next. The value of seamless integration is that students use critical thinking and problem-solving skills in much the same way as adults in the working world. They also use literacy skills throughout the day. A third advantage is that students move from one problem/challenge to another every few days, thus maintaining a higher level of interest. Unfortunately, seamless integration cannot be achieved very easily in departmentalized middle schools—self-contained classrooms are generally necessary.

Another option for organizing thematic units that can be used in departmentalized situations is **segmented integration**, which the core subject area teacher develops each content area portion concurrently. A sample daily schedule depicting how this integration might occur in a departmentalized middle school setting is shown in Figure 12.29. Segmented integration permits teachers in fully departmentalized schools to develop thematic units collaboratively as faculty teams. Sometimes all teachers in a departmentalized team will choose to take part in the thematic unit; on other occasions, one or two teachers may work independently on a unit to satisfy district or state mandates.

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**Figure 12.29**
Segmented Integration for Journeys Theme

<table>
<thead>
<tr>
<th>Time</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30–9:30</td>
<td><strong>Language Arts:</strong> Themed Literature Unit on Journeys</td>
</tr>
<tr>
<td>9:30–10:45</td>
<td><strong>Social Studies:</strong> Greece/Tour Guide</td>
</tr>
<tr>
<td>10:55–11:30</td>
<td><strong>Computer Lab</strong></td>
</tr>
<tr>
<td>11:30–12:30</td>
<td><strong>Science:</strong> Solar System/Biosphere Model</td>
</tr>
<tr>
<td>12:30–1:00</td>
<td><strong>Lunch</strong></td>
</tr>
<tr>
<td>1:00–2:15</td>
<td><strong>Specials:</strong> Library, P.E.</td>
</tr>
<tr>
<td>2:30–3:25</td>
<td><strong>Mathematics:</strong> Sea Navigation</td>
</tr>
</tbody>
</table>

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**Response to Intervention (RTI)**

**Response to Intervention: Tier 2 Instructional Plans for Grades 4–8**

Problems for struggling readers can become acute during the upper elementary and middle school years. If not addressed, these problems often worsen and compound, resulting in student frustration, discouragement, and declining achievement. Students not reading on or near grade level by the end of grade 3 typically do not close the performance gap. Indeed, the gap can widen and contribute to the dropout crisis in grades 9 and 10. Thus, it is critical that struggling readers benefit from a proactive
Response to Intervention (RTI) Tier 2 instructional plan in grades 4 to 8 aimed at improving both fundamental reading abilities and academic literacy.

In this section we review some widely used commercial programs useful in helping struggling readers in grades 4 through 8 close the achievement gap. Next, we suggest some basic strategies that may be used for all learners to help them succeed in content reading materials. Finally, we share recent thinking on ways to help English learners (EL) succeed in understanding informational texts.

**Commercial Programs for Low-Performing Readers**

We believe the long-term solution to reading problems lies in improving teacher expertise and providing sufficient learning materials, appropriate and safe classroom environments, and proper support from family and community members. In the end, it really does take a village to properly raise a child.

Nevertheless, there are several commercial reading programs available that may be helpful as supplemental tools in helping struggling readers accelerate their general reading development. We include in our descriptions below the latest research evidence as to the effectiveness of each program according to the What Works Clearinghouse (http://ies.ed.gov/ncee/wwc), an agency of the U.S. Department of Education, and other research-based resources.

**Reading is FAME.** This four-course reading program (Omaha, NE: Boys Town) for adolescents reading 2 or more years below grade-level expectancy was developed at the world famous Father Flanagan’s Boys Town in Omaha, Nebraska. Students enrolled in FAME courses are grouped according to their reading needs and receive small-group instruction for 40 to 50 minutes daily. Professional training and support from the Boys Town Reading Center is required for teachers who will deliver the program to students. Each of the four courses is offered using direct instruction, word activities, computer activities, and pre- and posttesting along with other assessments and evaluations. Though used in many urban school districts with multiple testimonials available, we were unable to locate any empirical research evidence as to the effectiveness of this program. For more information, see their website, which is noted at the end of this chapter.

**Read 180.** This computer-assisted program (New York: Scholastic) is designed for students in grades 3 through 12 whose reading is below proficiency. It involves a daily 90-minute session that couples computer-based activities and small-group instruction. From our own experiences in the Dallas and Memphis school districts, we know firsthand that Read 180 can be quite expensive and difficult to implement with good fidelity. A review of research issued by the What Works Clearinghouse (WWC) in July of 2010 stated:

No studies of READ 180® that fall within the scope of the Students with Learning Disabilities review protocol meet What Works Clearinghouse (WWC) evidence standards. The lack of studies meeting WWC evidence standards means that, at this time, the WWC is unable to draw any conclusions based on research about the effectiveness or ineffectiveness of READ 180® on students with learning disabilities. (p. 1)

From 1996 through 2011 extensive evidence-based research as part of the federally funded Striving Readers project has been investigating the efficacy of Read 180. We anticipate results from these studies will provide definitive evidence as to this program’s costs and benefits to learners.
**Reading Mastery.** Designed to provide systematic instruction in reading to K–6 students, Reading Mastery (SRA/McGraw-Hill) is often used as an intervention program for struggling readers, as a supplement to a school’s core reading program, or as a stand-alone reading program. It is available in three versions: Reading Mastery Classic (for use in grades pre-K–3), Reading Mastery Plus (for grades K–6), and Reading Mastery Signature Edition (for use in grades K–5). During the implementation of Reading Mastery, students are grouped with other students having similar needs based on program placement tests.

A report of evidence-based research issued by What Works Clearinghouse in August of 2010 stated:

One study of *Reading Mastery* . . . meets What Works Clearinghouse (WWC) evidence standards, and one study meets WWC evidence standards with reservations. The studies included 361 students in grades 4 and 5, who attended schools in the Midwestern and northwestern United States. Based on two studies, the WWC considers the extent of evidence for *Reading Mastery* on adolescent learners to be small for the reading fluency and comprehension domains. No studies that meet WWC evidence standards with or without reservations examined the effectiveness of *Reading Mastery* on adolescent learners in the alphabetic or general literacy achievement domains. (p. 1)

In sum, there is little research evidence as to the effectiveness of Reading Mastery. Of the research that exists, WWC concludes that this program has “potentially positive” effects on improving reading fluency and “no discernable effects” on improving comprehension.

**Accelerated Reader.** Described as a guided reading intervention, Accelerated Reader (Renaissance Learning) uses reading practice and computerized quizzes to supplement K–12 reading instruction. According to a report issued in August 2010, What Works Clearinghouse reviewed 318 studies on *Accelerated Reader™*. One study, a randomized controlled trial, meets WWC evidence standards, and a second study, a quasi-experimental design, meets WWC evidence standards with reservations. The two studies include 2,877 students from grades 4–8 in Oregon and Texas. Based on these studies, the WWC found the *Accelerated Reader™* to have no discernible effects on reading fluency or comprehension for adolescent learners. (p. 1)

**Comprehension “Strategy Families”**

One issue for struggling readers is how they use (or fail to use) comprehension strategies as they read informational texts. As we noted in Chapter 7, research indicates that teaching children how to use combinations of comprehension strategies as they read, or multiple comprehension strategies (McKeown, Beck & Blake, 2009), yields particularly strong results for improving children’s reading achievement. Dana (1989) has grouped several effective reading comprehension strategies for struggling readers that can be used with relative ease and in minimal time. Also, these strategies have similar or complementary functions in aiding comprehension. The first strategy family explained below, SIP (summarize, image, predict), helps students focus on content. The second strategy, EEEZ (take it easy, explain, explore, expand), is a set of elaborative strategies that can be used as a postreading experience to “help anchor the content in memory” (Dana, 1989, p. 32). The acronyms for these strategies remind students of important steps they are to follow.
SIP. The SIP set of strategies is reportedly consistent with Anderson’s (1970) findings that students benefit from learning activities that require attention to content and active engagement in processing.

S reminds students to *summarize* the content of each page or naturally divided section of the text. This summarization of text invites students to reflect on and interact with content.

I represents the notion of *imaging*. This is a reminder that students should form an internal visual display of the content while reading, which provides a second imprint of the text’s content.

P reminds students to *predict* while reading. As each page or naturally divided section is read, students should pause to predict what they might learn next. While reading the section predicted, students verify, revise, or modify predictions according to what they learned. This process of predicting and verifying can carry students through entire selections and help hold their interest.

EEEZ. The EEEZ strategy gets students to elaborate mentally on new content to facilitate long-term retention. In her introduction to this strategy, Dana (1989) explains:

After reading, it is recommended that students review what they have read in light of the purpose that was set for the reading assignment. Students are told that after reading they should “take it easy” (EEEZ) and make an attempt to explain (E) the content in a manner commensurate with the purpose set for reading. They might have to answer questions, generate questions, define a concept, or provide a summary. (p. 33)

Two additional strategies are represented by the EEEZ acronym:

E: *Explore* the same content material as it has been described by other authors of different texts. These comparisons often help clarify important ideas.

E: *Expand* the subject matter by reading other texts that go beyond the content covered by the original text.

After expanding, students should respond to the original purpose for reading the assignment and embellish their responses with additional content discovered during the EEEZ process.

Improving Fluency

All students, and especially struggling readers, should spend significant amounts of time—20 to 30 minutes per day—in the act of reading if they are to grow and progress. Krashen’s (1992) research demonstrates that 20 minutes of daily sustained reading in materials of high interest and appropriate difficulty can help students grow by as much as 6 months per year in overall reading fluency. Daily sustained reading builds vocabulary knowledge and sharpens students’ reading skills. Group-assisted reading can help build reading fluency with middle schoolers.

Group-Assisted Reading. As a method to help struggling readers improve reading fluency and comprehension, *group-assisted reading* (Eldredge, 1990; McLaughlin, 2010) can be quite effective. In practice, group-assisted reading involves a pair or group of students reading text material in unison, emphasizing correct phrasing, intonation, and pitch. Teachers read each book many times with students until students...
can read it fluently with expression. In a variation of group-assisted reading called dyad reading, the teacher’s role is assumed by a peer “lead reader.” Both group-assisted and dyad reading groups have been shown to be more effective with at-risk readers than more traditional methods (Eldredge, 1990; Eldredge & Quinn, 1988).

Writing Workshops. It is crucial that a writing workshop be established as part of the comprehensive reading program. Although not empirically tested, we believe a writing dyad system (student’s writing together in pairs) would be helpful to students having learning problems. Reading and writing are reciprocal processes: When students gain abilities in one, the other grows stronger as well. For example, as students are taught word–spelling strategies as part of writing development their phonics and decoding skills are strengthened. When using author studies as part of teaching writing styles, student interest in books and reading likewise increases. Thus, writing is a mainstay in any literacy program for students having reading difficulties.

Helping English Learners Do Well with Expository Texts

English language learners can be particularly challenged by expository texts. This section describes research-proven methods for helping ELs interact with informational text.

Modifying Linguistic Variables. Limited knowledge of a second language can prevent learners from making full use of semantic, syntactic, and other clues in content reading materials. Kang (1994) suggests the following tactics to help ELs with content demands:

- Reduce the vocabulary load.
- Preteach key vocabulary concepts before students read an assigned passage.
- Use prereading questions; highlight text, notes, or questions in the margins; and create graphic organizers to help students attend to important information.
- Use postreading discussion groups to expose ELs to more complex language input.

Modifying Knowledge Variables. A second variable affecting an EL’s ability to learn from reading content area texts is background knowledge. In some cases, a text may presuppose culture-specific background knowledge that is not part of these students’ experiences. Likewise, some ELs may focus their reading too heavily on the print (decoding), thus failing to activate their prior knowledge to assist in understanding content area text. In either of these scenarios, Kang (1994) and Corpus and Giddings (2010) suggest strategies for before, during, and after reading that can help ELs succeed in reading content area texts.

**Before Reading**

- Use semantic mapping.
- Conduct structured overviews.
- Discuss contradictions, opposing examples, exceptions, categories, and comparisons related to concepts in the native language.

**During Reading**

- Supply pattern guides.
- Use marginal glosses.
Chapter 12  Effective Academic Literacy Instruction in Grades 4–8

After Reading
- Conduct semantic feature analysis.
- Structure small-group discussion.

Vocabulary Bookmarks

We like very much a simple and easy idea suggested by Maureen McLaughlin (2010) for helping English learners (EL) and native English speakers improve their academic vocabulary knowledge. Vocabulary bookmarks motivate students to monitor their understanding and learn new words (McLaughlin, 2010, p. 106). In essence, students choose words from their assigned readings they feel the whole class should discuss. Three bits of information are written by students on the bookmark provided by the teacher: (1) the word, (2) what the student thinks is the meaning of the word, and (3) the page number where the word was found. Each student presents their word to the whole class (or in a small group), reads the word in context from the text, and then shares what they feel the word means. This is followed by a group discussion of the word to come to consensus on its meaning. We think it would be a good idea to then have all students add each identified word to their own word banks for future use in writing. In Figure 12.30 we share a vocabulary bookmark for your classroom use.

Motivation and Engagement

Motivating and Engaging Students’ in Grades 4–8 to Read

Students in grades 4–8 are bombarded with all sorts of stimuli and distractions in their lives. From television to cell phones to Facebook, media provide huge stimulation that motivates them to persist in their involvement. English learners often have these distractions coupled to the task of learning to communicate in a new language. These factors can make the education enterprise for teachers even more challenging. Our question becomes how to get our students motivated and engaged in this milieu?

In Malcolm Gladwell’s (2002) popular book, The Tipping Point: How Little Things Can Make a Big Difference, he talks about the history of success of such television programs for children as “Blue’s Clues” and “Sesame Street.” He concludes that repetition works if children learn something new with each repetition and that problems have to be complex enough to challenge and engage learners but easy enough to conquer. Corpus and Giddings (2010) conclude that when we want children to learn new information, we must make it sticky and memorable by presenting it in ways that are both practical and personal. This makes sense to us, so we set out to find new ideas in the literature about how to orchestrate this kind of learning in academic literacy situations.
Scaffolded Think-Alouds

One of the ways teachers can help ELs and students who may be struggling in academic literacy is by carefully structuring or scaffolding each phase of the learning experience. This helps us to maintain a learning challenge yet make the learning task manageable, which then helps keep students engaged. Another way of keeping students motivated and engaged is by linking new information to personal experiences by using discussion. The scaffolded think aloud (McLaughlin, 2010) combines all of these features. You can use the following structure that we have adapted from the work of McLaughlin (2010) to construct scaffolded think-aloud activities for content literacy instruction.

- **Step 1: Explain.** Begin by selecting a passage from your academic unit to read aloud to your students. The passage should be challenging enough so that students will have to think strategically to understand the new ideas. Explain that we use think-alouds as teachers to model for students how we make connections in an informational text to what we already know and understand how we think strategically. Then introduce the passage (i.e., title and topic).

- **Step 2: Demonstrate.** Before reading the text, think aloud about how you make connections to this text. Use such statements as “This title makes me think . . .” or “I read something about this on the Internet . . .” or “I remember seeing something like this when I traveled to . . .” This demonstrates how you make connections to prior knowledge. As you read the passage, think aloud to demonstrate comprehension strategies you use to monitor your own understanding, apply “fix-up” strategies, and visualize what you are learning.

- **Step 3: Guided practice.** After demonstrating think-alouds several times for your students, have them practice with a partner. Match English learners with native English speakers as partners.

- **Step 4: Practice.** After students become comfortable with think-alouds, have them demonstrate it with a partner using a text they are interested in themselves.

- **Step 5: Reflect.** Ask students to write about how thinking aloud helps them to better understand new information in content texts and provide examples.

Singing Across the Curriculum

William Bintz (2010) has adapted a favorite idea of elementary teachers to academic literacy instruction known as “singing across the curriculum.” The idea is simple: have students take familiar tunes and rewrite the lyrics so that they summarize new information learned from academic texts. The following two samples are provided by Bintz (p. 685):

- **The Cloud Song (sung to the tune of “London Bridge is Falling Down”)**

  Cirrus clouds are way up high  
  Highest clouds, in the sky,  
  Cirrus clouds are way up high  
  Clouds, thin and wispy.  
  Cirrus clouds are made of ice  
  Seen before, rain or snow,  
  Cirrus clouds are made of ice  
  Clouds, thin and wispy.  
  Nice weather brings cumulus
Perfect day, puffy clouds,
Nice weather brings cumulus
Clouds, fluffy, puffy.
Sunny days bring cumulus
See the shapes, in the clouds,
Sunny days bring cumulus
Clouds, fluffy, puffy.
When nimbus clouds are in the sky
Take cover quick, watch that wind,
When nimbus clouds are in the sky
A storm is nearby!
Nimbus clouds bring storms right in
Heavy rain, lots of wind.
Nimbus clouds bring storms right in
Cu-mu-lo-nim-bus!
Stratus clouds are way down low
Layers of gray, rain and snow,
Stratus clouds are way down low
Clouds, gray and low.

Magnets (sung to the tune of “Row, Row, Row Your Boat”)
Pull, pull, pull some things,
Pull with all your might.
Use magnetite from a rock
And it will work just right
Mag, mag, magnetite
Contains a lot of iron.
It’s from Magnesia and is magnetic
At least that’s what we’re told.
Say, say, say those words,
In front of Mom and Dad.
Wow! They’ll think your teacher is
The best you ever had!


In the next section, we turn our attention to technology and new literacies that are, by their nature, quite motivational.

**Technology and New Literacies That Promote Literacy in Grades 4–8**

Information and communication technologies provide engaging ways for teaching and learning in content classes (Dalton & Grisham, in press). Following are two ideas to add to your growing list of activities from our book.

**Voice Blogging for English Learners (and Others)**

Research by Sun (2009) has found that voice blogging can be a powerful vehicle for improving learning and language ability with English learners (EL). Our interpreta-
tion of the concept is that students (1) write summaries in English about what they are learning, (2) record an oral reading of their summary into a classroom online site with voice recording ability or on a digital recorder of their own that others may listen to, (3) listen to other students’ voice blog recordings to compare, and (4) revise their original scripts and voice blogs as needed. One of the available services for voice blogs is Google Voice Blog (see web link at the end of this chapter), although our sense is that most teachers would find it just as effective for students to use a cassette or digital recorder for this purpose. Table 12.5 is based on Sun’s (2009) blogging stages (with which students may need some assistance).

**eVoc Strategies**

An “eVoc strategy” (Dalton & Grisham, in press) is a technology-based method used by teachers to develop students’ vocabulary learning and evoke interest in words. Such strategies rely on digital tools and resources as part of the instructional mix, as in the following two examples.

- **WordSift.** A free “word cloud” tool available on the Internet (www.wordsift.com), WordSift can be used to create a word cloud based on text that is cut and pasted into the application. WordSift offers important learning supports. Words can be selected in order to show a collection of related Google images, a word map from its Visual Thesaurus, or a listing of sentences using the word in different contexts. WordSift also sorts words by difficulty and identifies academic words. WordSift supports several different languages, which can be very helpful, a feature particularly helpful to English learners (Adesope, Lavin, Thompson, & Ungerleider, 2010).

- **Text-to-speech tool and audio books.** Sometimes the high readability of some texts on the Internet (i.e., long and complex sentences and paragraphs) can be a

Table 12.5

Voice Blogging for English Learners (and Others)

<table>
<thead>
<tr>
<th>Blogging Stages</th>
<th>Strategies</th>
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</thead>
</table>
| Conceptualizing | 1. Planning what to say and how to say it  
2. Developing an appropriate voice-blog topic  
3. Listening to others’ blogs for ideas and asking advice from peers  
4. Consulting a dictionary/thesaurus or searching the Internet  
5. Note taking on ideas |
| Brainstorming    | 1. Outlining main and supporting ideas  
2. Translating from my first language to English  
3. Writing a script before recording and asking for feedback from peers |
| Articulation     | 1. Rehearsing before recording; on my own first, then read to a partner  
2. Recording my voice blog into a digital recorder (or to a classroom online site) |
| Monitoring       | 1. Listening to my recorded blog re-recording or uploading it  
2. Monitor other blog entries in terms of content, organization, and language usage |
| Evaluating       | 1. Reevaluating my blog content, organization, and language usage after listening to other blogs  
2. Redoing my blog as needed/ if needed |

problem for our students. One solution is to permit students to listen to texts with a text-to-speech (TTS) tool or if available, audio narration (Dalton & Grisham, in press). This gives students access to age-appropriate content and grade-level curriculum. For struggling readers and English learners (EL), TTS can help improve reading speed and comprehension as well as reduce stress. See Web Tools You Can Use in the Classroom for a list of TTS Tools.

Family and Community Connections

Deborah Diffily (2004), in her book titled Teachers and Families Working Together, provides one of the most extensive summaries of ideas on how to connect families and communities to student learning. In this section we summarize and expand on some of her proven strategies we feel are particularly applicable to students in grades 4 through 8.

Interactive Homework

Interactive homework (Epstein, 2001; Nagel, 2008) is a tool whereby parents work with their child to complete an assigned homework task. Much like the joint productive activity (JPA) idea we have discussed elsewhere, interactive homework inspires
a conversation about ideas between the parent and child and connects the primary caregiver to the classroom. Figure 12.31 shows one example of an interactive homework assignment related to science on the theme of global warming.

Homework Hot Line and Homework Voicemail

Diffily (2004) explains that telephone calls are often used by teachers to connect with families, but often this tool is used only when there is a problem. Many school districts offer homework hotlines for parents and students to provide help for completion of homework assignments. These hotlines are typically staffed by volunteer teachers on a rotation basis and should be promoted where they are available.

Another kind of telephone connection tool used by some teachers to connect with families is the homework voicemail. In this instance, teachers use the telephone voicemail system provided to teachers by many school systems (as an answering machine) to record daily homework assignments. In this way parents are able to check each day to find out what their child’s homework assignments are so as to ensure follow-through at home. This is an easy way for teachers to provide whole-class assignments to parents with just one short recording.

Websites

Many families have access to the Internet either on home, on their jobs, or through the public library (Diffily, 2004). It is becoming more commonplace for teachers to
have their own website as part of the school’s website or through their own resources. One tool provided free to teachers as a community service is www.schoolnotes.com. Here teachers can create notes for homework assignments and post them online in just seconds. They also provide many other free resources for elementary and middle school teachers and their students.

**Parent Lending Library**

Many parents do not have access to appropriate books on school subjects for their children or books that help “coach” parents on effective learn-at-home strategies they can use. A parent lending library (Diffily, 2004) can be housed in a special parent resource room or in the school’s library for easy access anytime during the school day.

**Summary**

We have just concluded a very rich chapter detailing how students in grade 4 through 8 can be helped to apply reading skills to learn more about the world around them. Research informs us that there are indeed special reading challenges associated with expository or informational texts. In the field of content area reading instruction, teachers must help students learn how to apply reading and writing skills in mathematics, science, social studies, and the English/language arts texts. This reading terrain is complicated by the distinctive expository text writing patterns used by nonfiction authors. There are marked increases in concept density (i.e., more ideas in smaller chunks of text), unique readability considerations, and significant higher-level comprehension demands.

In preparing to teach, we learned that it is wise to begin with a content analysis. Here teachers assess the important knowledge and vocabulary to be learned: the facts, concepts, and generalizations. This provides the kind of preteaching knowledge needed to organize ideas and plan scaffolded instruction. At this stage of preparation teachers also seek out supplemental texts and materials to ensure understanding by learners who read on variety of reading levels.

We learned about successful strategies for delivering instruction. The key is to consider what activities to offer students before, during, and after they read informational texts. Also discussed was a proven interdisciplinary strategy, themed studies, which integrate the content areas (e.g., science, mathematics, literature, and social studies) with reading and writing instruction. The advantages of this kind of curriculum integration are numerous. Reading and writing abilities are acquired and refined within a rich context of real-world significance, which in turn inspires students to want to know more.

In this chapter we saw how struggling readers can be helped to succeed in content area reading. There are commercial programs available that help struggling readers improve basic reading abilities such as Scholastic’s Read 180. We can also help struggling readers by teaching them to use comprehension skills in unison, or “strategy families,” by helping them improve reading fluency, and by providing group-assisted reading (dyads and buddy reading). We likewise saw how English learners (ELs) can be helped to succeed in reading content texts by modifying linguistic and knowledge variables. In this way we put research to work in our classrooms and ensure reading success for all learners.

A number of other research-proven strategies were presented that help motivate students to stay with and conquer content texts. Included were ways to increase the “stickiness factor” so that new information becomes more memorable and accessible in future learning. New technologies are another motivational realm we discussed for making content learning even more potent for English learners (EL) and struggling students.

Finally, we discovered innovative ways for involving parents in the education process. Teachers can stay connected to parents through interactive homework assignments and by using volunteer homework hotlines and teacher-created homework voicemails. Many teachers are creating their own Internet websites that are connected to their school’s website, others are using free online tools like schoolnotes.com. We also discussed the creation of parent lending libraries to help parents have access to books for reading at home, as well as adult-oriented books that help provide “coaching” on effective strategies they can use to help their child read to learn.
Field and Classroom Applications

- Select a chapter from a social studies book on a level of your choice. Applying the descriptors for expository text patterns discussed in this chapter, identify the patterns of development (e.g., description, comparison) used in the chapter. How often does each pattern occur in the chapter? Are any patterns missing? If so, what might you do to compensate for these omissions? Is it possible that omission of some patterns could lead to learning difficulties for some children? If so, why?
- A thorough content analysis is the foundation for successful teaching in the content areas. To practice and refine this ability, try the following:
  - Form a group with two or three of your colleagues.
  - Select several lengthy magazine articles having to do with various topics relevant to core subjects (social studies, math, science). You may want to extract your articles from such magazines as *Air & Space* or *National Geographic*.
  - After group members read their article, each should develop a content analysis to present to the rest of the group. By comparing analyses, it will be possible to detect whether important bits of information have been neglected and if superfluous information has been included.
- Search the Internet to compile a list of useful sites for the teaching of content area vocabulary and concepts for two topics of your choice. Construct an annotated bibliography of these sites to share with your classmates or colleagues.
- Develop a themed literature unit using one of the following themes: “Courage,” “Relationships,” “Discovering New Worlds,” “Changes,” or “Animals.” Include a web of the unit, a list of books chosen from popular children’s literature, possible reading strategies to be taught in teacher-directed sessions, and ideas for literature-response activities.
- Develop an outline of Tier 2 strategies you will use in your Response to Intervention (RTI) plan for content area reading. Be sure to include vocabulary, comprehension, and fluency strands. Share with at least two experienced teachers for their input on refining your plan.

Recommended Resources

Print Resources

Web Resources
www.boystownusa.org/educators/reading-is-fame
Boys Town Reading
http://crede.berkeley.edu
Dialogic Learning guidelines (CREDE)
googlevoiceblog.blogspot.com
Google Voice Blog
Professional Organizations
www.nctm.org
National Council of Teachers of Mathematics
www.socialstudies.org
National Council for the Social Studies
www.nsta.org
National Science Teachers Association
www.reading.org
International Reading Association
www.ncte.org
National Council of Teachers of English
Radio Plays and Readers’ Theatre Websites
http://teachingheart.net/readerstheater.htm
Garden of Praise
www.myteacherpages.com/webpages/JGriffin/readers.cfm
Joann Griffin (Channelview ISD)
Chapter 12  Effective Academic Literacy Instruction in Grades 4–8

www.educationworld.com/a_curr/reading/ReadersTheater/ReadersTheater005.shtml
  Education World
  www.readwritethink.org
  International Reading Association Teacher Resources
www.ngschoolpub.org
  Reading Expeditions
www2.ed.gov/programs/strivingreaders/index.html
  Striving Readers Projects

Text-to-Speech (TTS) Tools
www.naturalreaders.com
  Natural Readers
www.cross-plus-a.com/balabolka.htm
  Balabolka
www.schoolnotes.com
  School Notes
www.wordsift.com
  WordSift

To come

• To come