

PREFACE

“The most powerful source of vocabulary instruction is the well-focused mind, seeking actively to understand” (Henderson, 1981). Our students learn vocabulary *their way* when they are focused on a topic of keen interest, trying to figure out the what, why, and how of it all. The focus may be a video game, a novel, a car engine, a webpage—it doesn’t matter, really, so long as they are focused. Students acquire the vocabulary of their focus with relative ease. Our challenge is to help them apply that natural tendency to areas in which they may not at first be as interested. You can help students become engaged with the *content* of what you are teaching and reveal aspects of words to them that they might not otherwise notice; the effect on their academic performance will be noticeable.

To teach vocabulary to our students effectively and engagingly is to teach vocabulary *their way*. In contrast to the traditional emphasis on learning a set number of specific words every week or every unit, this text is focused on helping you give students the tools to learn quite literally tens if not hundreds of thousands of words independently—and that is a more learner-friendly and effective approach.

You may teach Freshman English or Senior Honors English; you may teach biology, eighth-grade history, seventh-grade math, or home economics. Regardless of the ages, grades, and subjects you teach, however, you work with students whose brains are organized to detect *patterns*: patterns in the real world, patterns in topics and themes within and across specific content areas such as history/social studies and science, and patterns in *words*. An important part of your vocabulary instruction will be helping your students detect these patterns in words. In so doing, you help them learn specific words and you help them learn *about* words.

In recent years, vocabulary researchers have emphasized the role of *word consciousness* in vocabulary learning: the knowledge and predisposition to learn, appreciate, and effectively use words. Word consciousness is the framework for your teaching of three broad aspects of vocabulary learning and instruction:

- Context-based instruction
- Word-specific instruction
- Generative morphology instruction

Addressing these aspects will enable you to teach vocabulary *their way*. We hope this book will help you build a strong foundation in this knowledge base for teaching academic language and academic vocabulary. There is much that teachers can learn right along with students. If you’re open to the possibilities such learning offers, you will also find that your teaching and your students’ learning will be more rewarding—as well as effective.

A Guide to Using This Book

- Chapter 1 sets the stage for teaching vocabulary *their way*, briefly presenting what we know about how words are learned based on the significant research that has explored how to teach words and how to teach about words.
- Chapter 2 addresses the essentials of vocabulary instruction—how to select which words to teach, how to select the meaningful features of words on which to focus

(prefixes, suffixes, bases, and roots), and how to teach specific words as well as how to teach *about* words.

- Chapter 3 provides straightforward ways to assess students' vocabulary knowledge in your specific subject matter area. Many of these assessments reflect the types of instructional strategies and activities that have been presented throughout the book. Informed assessment is based on an understanding of the literacy and learning development of your students, and Chapter 3 elaborates on a developmental model that should help guide your instructional decisions. The chapter concludes by addressing how you may effectively organize your classroom for effective, differentiated vocabulary instruction.
- Although English learners are mentioned throughout the text, Chapter 4 directly addresses the challenges and opportunities for multilingual learners' vocabulary instruction in the middle and secondary grades. We provide a comprehensive overview of the supportive classroom environment that optimizes your interaction with your students as well as student-to-student interactions. We explore how you can think about the content and language demands of your lessons, and how you may adjust your instruction accordingly.
- Chapters 5 through 9 address vocabulary instruction in each of the disciplines or content areas: english/language arts, social studies, mathematics, science, art/music/physical education, and career and technical education. The academic language and academic vocabulary demands of each domain are described, and word-specific instruction as well as *generative morphological* instruction in each content area are comprehensively addressed.
- The Appendices at the end of the book provide templates for many of the activities addressed throughout the book and vocabulary assessment templates.
- Finally, each chapter includes notes to direct you to the PDToolkit online resource (<http://pdtoolkit.pearson.com>), where you'll find videos of vocabulary instruction in action, interactive and downloadable PDFs of the appendices material, and additional downloadable activities and information.



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New to This Edition

- An expanded author team—each new author has enriched this edition with his or her additional teaching and research insights and expertise.
- Effective and engaging strategies and activities are presented in a new, easily accessible format, including purpose, steps, and, for many activities and strategies, modifications and extensions.
- Separate chapters for the major disciplines or subjects are included: English/language arts, social studies, mathematics, science, art/music/physical education, and career and technical education.
- An expanded number of activity templates are included in the Appendices and on PDToolkit.
- Research in vocabulary acquisition and instruction has been updated.
- For every activity and strategy, references to Common Core standards are included.
- Each chapter includes notes to direct you to the PDToolkit online resource (<http://pdtoolkit.pearson.com>).

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What Every Teacher Needs to Know about Words and about Teaching Them

Your students are naturally set up to learn words and to be interested in words. They thrive on learning and using words that are a part of their world—words having to do with their hobbies, popular culture, and niche subcultures. These words are valuable to them and help define their worth in the eyes of their peers and demonstrate their independence in the eyes of adults. Your vocabulary instruction should capitalize on this natural disposition to learn words as you teach your students the vocabulary that will help them become college and career ready.

To get a feel for this type of exploration, let's observe a slice of Tamara Baren's vocabulary instruction in her eighth-grade English/language arts classroom.

Tamara projects the following sentence on the white board:

Hurricane Sandy decimated much of the Northeast coast of the United States.

Pointing to *decimated*, Tamara asks, "Ladies and gentleman, what do you think this word means in this sentence? . . . Yes, Regina?"

"It's like destroying it or like making things really bad."

"That may make sense here, Regina. Let's see . . . any other ideas . . . yes, Cody?"

"Like flooding? Like it flooded a lot of places?"

"That would make sense, too. I'm wondering *why* Regina and Cody are thinking this word might have this type of meaning. . . . Yes, Caitlyn?"

"Well, it's like we know Sandy caused a lot of damage, and we know it was in that area."

"Okay! Good problem solving at work here! Now let's look at the next two sentences."

Hundreds of people died, hundreds of square miles were flooded, and thousands of buildings were blown down. Few storms in the United States have caused such widespread damage.

"Do these sentences help us with our thinking about this word? Cody?"

"Yeah! See? It says 'flooded.'"

Tyrone interjects, “But that’s not all it says!”

“Tell us some more Tyrone.”

“Well, it also talks about the people who died and about buildings being blown down.”

Fadila adds, “And it also talks about ‘widespread damage,’ which could mean lots of different kinds of damage.”

“You have all shown us some pretty perceptive use of the *context*—the sentences and words around this particular word—to try to figure it out. Ahhhh . . . I see Álvaro surreptitiously slipping his pocket dictionary out! Okay, Álvaro, please tell us what you’ve found.”

Álvaro reads the definition aloud, and Tamara asks the class whether that meaning would work in this passage. Brittany replies, “Kind of, but it only talks about ‘killing,’ and Sandy did more than that.”

“Good point. Álvaro, was that the only definition listed for *decimate*?”

Álvaro reads a second definition that has to do with causing great destruction. “I think *that* fits better!” he suggests.

“Ladies and gentleman, by a show of hands, how many of us concur with Álvaro? . . . Well! Apparently most of us! OK, let’s read back over these three sentences and see how that definition fits.”

Tamara continues: “Let’s look just at the word *decimate* itself. Are there any clues in how the word *looks* that might suggest its meaning? Any prefixes, suffixes, word roots that leap out at us?”

After a few seconds, she continues: “I see a lot of scrunched-up and puzzled faces! You know, nothing leapt out at me, either, when I first looked at this word. What if I reminded you about the Latin word root *dec* that all of us have learned about? Think of the words *decimal* and *decade*.” (She writes them on the smart board.) “What meaning does the root *dec* have? Yes, Carey?”

“Ten!”

“Right you are! What do you think? . . . Might the *dec* in *decimate* also mean ‘ten’? . . . Ah, I see more puzzled faces as you’re thinking this one through.”

“Let me share a story with you that I found in a book titled *Word Origins* by John Ayto. I learned about this book in a graduate course I took last year. Back during the Roman Empire, when those Roman legions were busy trying to conquer just about everybody else in the known world, from time to time some troops or soldiers would get unhappy about things. Maybe not enough good food, working conditions weren’t all that good, they missed their families, whatever. Anyway, if things got bad enough for them they might start talking about a mutiny—about rising up and taking over from their general. Well, if the general became aware of this, he had a very effective way of putting an end to it: Of ten soldiers selected at random, one of them would then be chosen to be put to death. So originally, when you talked about ‘decimating the ranks,’ it meant ‘killing a tenth.’ Over time, as we have learned, the meanings of words usually grow and evolve, and this is what happened with *decimate*. It came to have the meanings that Álvaro found in the dictionary: the concept of random and indiscriminate killing, but also (as in our Hurricane Sandy example) causing great destruction.” ■

Let’s reflect on what’s happened in this lesson. Tamara draws out the students’ thinking about the word *decimate* and encourages more than one contribution. She acknowledges the quality of the students’ ideas (e.g., “That would make sense, too”). She good-naturedly teases yet appreciates Álvaro checking the dictionary. She asks whether there is a consensus about the meaning but checks to make sure one last time. She also uses a few more “academic” words along the way—*perceptive*, *surreptitiously*, and *concur*. She then tells a story about the word and, in doing so, reminds students what they know and are learning about Latin word roots like *dec*, a critical aspect of vocabulary development. These stories about words are also a critical aspect of vocabulary learning: They play an important role in developing students’ **word consciousness**—their curiosity and “interest in, awareness of, and appreciation of words” (Lubliner & Scott, 2008; Stahl & Nagy, 2006, p. 140).

This type of quality interaction with students, of course, doesn't happen out of the blue. Most students do not spontaneously volunteer information, for example, and check definitions in dictionaries. Most students do not talk about other information in a passage and how it can contribute to figuring out the meaning of an unfamiliar word. Many students would be put off by a teacher's spontaneous use of words such as *surreptitiously* and *concur*, as well as by her talking about Latin word parts. We're talking about changing those student attitudes, because we are teaching vocabulary *their way*.

What facilitates and sustains Tamara's vocabulary instructional climate? Over the course of the year, she teaches and models

- How to use **context clues** and whatever information is in a text to help determine the meaning of a word, referring to the dictionary from time to time to confirm a challenging word's meaning
- How to look *within* words for structural clues to their meanings
- The use of **academic vocabulary**
- How to find interesting stories about words (If students were not familiar with the meaning of *dec*, they will not now likely forget it. Some stories may be humorous, some astonishing or alarming—but they always give her students insight into where a word came from and how it grew into the meaning it has today.)
- How words work to give language its precision, appropriateness, and impact

When you model this way of thinking about words, you help your students develop a sensitivity to words that applies well beyond the particular word being analyzed. This sensitivity will help your students develop a whole new level and habit of thinking about words in general. Traditionally, most teachers have not talked about words this way. We want to support you in becoming this type of teacher, and a major goal of this book is to provide this foundation for you. Throughout *Vocabulary Their Way*, we will be demonstrating how you can organize and present your vocabulary instruction to best take advantage of your students' predispositions to learn about word meaning and structure. As you help them become attracted to and excited about words—their meanings, associations, sounds, and histories—your instruction will reflect what research has reassured us is effective as well as engaging instruction.

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What Does Research Say about Vocabulary Learning and Instruction?

Every teacher is a teacher of language. Regardless of the subject you teach—English, math, history/social studies, chemistry, or another subject—you teach the *language* of that subject or discipline. By providing this language, you are giving your students the keys to accessing the important ideas and concepts of your discipline (Bailey, 2007). Teaching vocabulary is a critical part of teaching this language. As Nagy (2007) observed, it “is more than teaching words, it is teaching *about* words: how they are put together, how they are learned, and how they are used” (p. 71).

In a nutshell, vocabulary knowledge *is* content knowledge. Research reveals that vocabulary knowledge is the single best indicator of students' reading ability, comprehension, and familiarity with academic discourse (Baumann, Kame'enui, & Ash, 2003; Schleppegrell, 2004; Townsend, Collins, & Filippini, 2009). And because of this, vocabulary knowledge is one of the best predictors of student success in school. As a teacher, you are in a position to affect your students' vocabulary development significantly, so you will also widen their worlds.

Knowing a word is not an all-or-nothing phenomenon—either you know it or you don't. Rather, there are *degrees* of knowledge or familiarity about a particular word or **concept** (Dale, 1965; Fisher, Blachowicz, & Watts-Taffe, 2011). Which of the following

words would you say you know a lot about and are comfortable using? Which do you not know at all? Which have you heard or seen, but aren't sure about?

prefix	suffix	root	morphology
connotation	free morpheme	bound morpheme	denotation
etymology	simile	metaphor	idioms
context	academic language	general academic vocabulary	domain-specific vocabulary

You may have a general knowledge of some of these words—**root**, for example—but are wondering whether we will use it in the same way that you do. You may know what **prefixes** are but be uncertain whether a group of letters in a particular word is in fact a prefix. You may know that **etymology** (because it has the suffix *-logy*) has to do with the study of something, but you're not sure exactly what. If you teach the sciences, you know that **morphology** has to do with the form and structure of organisms, and are wondering whether it has a similar meaning in language.

Your self-assessment of these terms probably gives you insight into the challenges of teaching vocabulary to your students. Many are words they may not have heard or seen; others they have partial knowledge about; still others they know well—but in a different context, and they need to learn the meanings relevant to the discipline *you* teach. Helping you assess and teach the vocabulary, or language of your discipline, is the fundamental focus of this text.

Research has revealed that we do not learn words one at a time, like adding beads on a string: Words and the concepts they represent are interconnected in many different ways. In addition, for almost every word we learn, there are potentially many, many more words we could learn at the same time. Research also clearly supports the need for students to be actively involved in vocabulary learning (Townsend & Collins, 2009), and an important effect of this involvement is the development of *word consciousness*—favorable attitudes toward, and a keen curiosity about, words and word learning. In fact, as Figure 1.1 shows, word consciousness is the framework within which your teaching of the following three broad aspects of vocabulary learning and instruction is nested (Stahl & Nagy, 2006):

- Context-based instruction
- Word-specific instruction
- Generative morphology instruction

Although real-world instruction will often blur the boundaries between these aspects, your awareness of them and attention to them will ensure that your students will be immersed in powerful experiences and engagements with words.

Context-Based Instruction

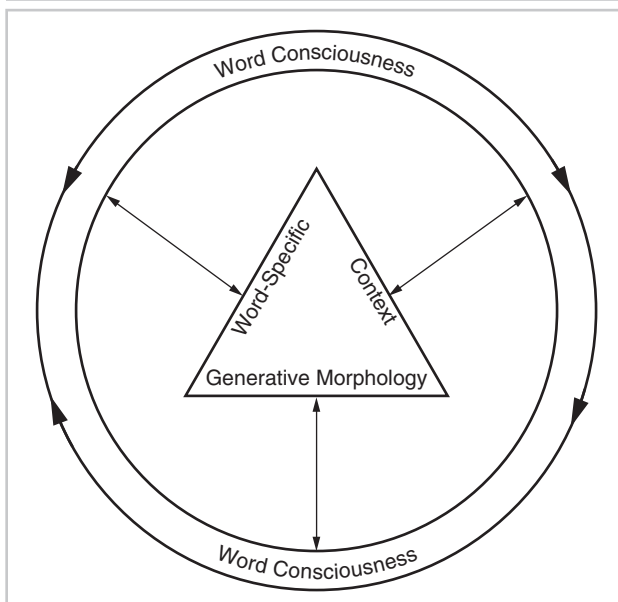
Independent reading and assigned reading provide opportunities for exploring how writers select and use words. This aspect of *word consciousness* reflects the craft of writing and the craft of reading more deeply. *Wide reading* in developmentally appropriate and engaging text is critical. The more your students read, the larger their vocabularies will be and the more extensive their background knowledge. From the intermediate grades on, many other things besides books claim our students' attention, so it is especially important to find ways to keep your students

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PROMOTING WORD CONSCIOUSNESS

Amy Burton describes how she builds word consciousness with the "Words We Treasure" box.

FIGURE 1.1 A Comprehensive Approach to Vocabulary Instruction



motivated to continue reading independently outside of school. Tapping into their individual interests is one of the best ways of accomplishing this. When your students are reading and encounter an unfamiliar word, using the *context* in which that word occurs to try to figure it out is an important skill.

In addition to being immersed in written texts, rich *oral language* in the classroom also plays a critical role: This includes your use of important **academic language** and **academic vocabulary** the students are learning and have yet to learn, as well as your comments on and observations about words throughout the week. Part of this rich oral language environment includes reading aloud to your students, using both narrative and informational materials. These read-alouds allow you many opportunities to make words interesting and give your students a feel for the language of your discipline. Reading aloud and even providing audio recordings of your literary and informational texts can be particularly powerful for struggling readers, whose listening comprehension abilities are often above their independent reading abilities. Beyond the elementary grades, however, most teachers rarely read to their students. If you teach at the middle or secondary level, it is essential that you plan to read to your students at least once a week from an example of well-crafted writing in your subject area.

Word-Specific Vocabulary Instruction

Word-specific vocabulary instruction refers to the teaching of specific word meanings. This aspect of vocabulary instruction is what most teachers think of when they discuss teaching vocabulary. How you go about teaching your most important or *key* vocabulary words will depend on your purposes and on your students' background knowledge (see Chapter 2). Some words will be merely mentioned, whereas others will be explored deeply, involving many exposures to the words in meaningful contexts, both in and out of texts (Flanigan, Hayes, Templeton, Bear, Invernizzi, & Johnston, 2011). Your students should have, on average, at least 12 to 15 exposures to each of these words. These experiences include attending to the words before reading, during reading, and after reading, as well as in more than one context—in addition to being *read*, they must be *heard*, *spoken*, and *written*. Some of the words you select may be *technical* (though new, these terms' meanings are so specific that they may not require much time and effort), whereas other words may be *abstract*, which require a significant investment of time and effort.

Generative Morphology Instruction

What if there were a vocabulary system that could help our students crack the meaning of thousands of words? Many students are surprised to learn that there is such a system. It is based on the *structure* of words—their *morphology*. Students' reading and learning words in many different contexts prepares them for the examination of those words: their meaningful parts and how those parts are combined. Becoming aware of and understanding how prefixes (such as *un-*, *re-*, *dis-*) and suffixes (such as *-ment*, *-ous*, *-al*) combine with roots (many of which come from Greek and Latin) will support a student's ability to *generate* knowledge about thousands of words encountered in his or her instructional and independent reading. In a classic study, Nagy and Anderson (1984) observed that "Knowledge of word-formation processes opens up vast amounts of vocabulary to the reader" (p. 314). For example, knowing that the Latin root *jud* means "judge," and seeing how it combines with different prefixes and suffixes, allows a student to learn and understand more deeply many other words—*prejudice*, *judiciary*, *adjudicate*, *judicatory*, *injudicious*, and so on.

You will teach these generative morphological processes as they apply to the vocabulary of your discipline, because most students do not discover (much less apply) them on their own. Because of your guidance, when they encounter an unfamiliar word in their reading they will be able to analyze its parts, thinking about the meaning that each word part contributes and how the combined meaning of the parts works in the context

in which they encounter the word. *And* they are more likely to remember and be able to use that word.

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What Are the Different Types of Vocabulary?

Over the years, researchers and educators have used a number of terms to describe different types of vocabulary. Estimates vary, but children entering kindergarten average a **listening/speaking vocabulary** of approximately 5,000 words. As children progress in their abilities to read and write, they develop their **reading/writing vocabularies**, which over time grow to include most of the words in students' listening/speaking vocabularies and, from the upper elementary grades on, may come to include many more words than their listening/speaking vocabularies. Vocabulary has also traditionally been considered in terms of **receptive vocabulary**, the words students "receive" or take in and understand through listening and reading; and **expressive vocabulary**, the words students are able to use in speaking or writing. The vocabulary many middle school and secondary students draw on when reading and writing is larger than the vocabulary they use in their everyday speech, referred to as their **conversational vocabulary**. This includes the most common and most frequently occurring words in the spoken language, such as *talk*, *have*, and *under*. Beck, McKeown, and Kucan (2008, 2013) refer to these words as "Tier 1" vocabulary.

Academic Language and Vocabulary: Tools for Thinking and Learning

When we move beyond conversational vocabulary, we enter the much larger category of *academic language*, which encompasses **general academic vocabulary** and **domain-specific vocabulary** (Baumann & Graves, 2010; Nagy & Townsend, 2012). We use academic language in this text as the overarching term for "the specialized language, both oral and written, of academic settings that facilitates communication and thinking about disciplinary content" (Nagy & Townsend, 2012, p. 92). As Table 1.1 illustrates, academic language includes not only words, but also phrases, sentences, and even larger text structures that historians, scientists, and mathematicians use to convey the abstract and nuanced ideas and concepts of their specific disciplines (Townsend, Bear, Smith, Morency, Sweeney, Crawford-Ferre, Wulfin, & Burton, 2013).

How do all of these parts of academic language fit together? And what does this mean for you as a teacher and for your students? For the remainder of this section, we will take you on a brief tour of the academic language landscape, referring to Table 1.1 along the way. Because our focus is on academic vocabulary, we'll start at the middle of Table 1.1—at the word level—and proceed on up from there.

ACADEMIC LANGUAGE: GENERAL ACADEMIC VOCABULARY AND DOMAIN-SPECIFIC VOCABULARY. As you can see from Table 1.1, within academic language there are two broad categories of vocabulary at the word level: general academic vocabulary and domain-specific vocabulary. *General academic vocabulary* includes those words that may not occur a lot in everyday spoken language but which students may encounter frequently in their reading—for example, *abundant*, *transmit*, *energetic*, and *paradox*. They are likely to occur across all subject areas because they are high-utility words and students should also be able to use them in their writing. These words also occur in more formal oral language contexts, such as a lecture format. Beck and her colleagues refer to these

TABLE 1.1 Academic Language

Academic Language: The specialized language that facilitates communication and thinking within and across academic disciplines (Nagy & Townsend, 2012).

Text Level	<p>Sample Overarching Text Structures:</p> <p><i>Compare/Contrast</i> <i>Cause/Effect</i> <i>Sequence</i> <i>In-Depth Description</i> <i>Problem-Solution</i> <i>Persuasion</i></p>	<p>Text Features:</p> <p><i>Charts</i> <i>Visuals</i> <i>Diagrams</i> <i>Models</i> <i>Photographs</i> <i>Digital Media</i> <i>Videos</i></p>
Phrase and Sentence Level	<p>Phrases: <i>in relation to, on the other hand, as a consequence of, as a result of, this led to, along the same lines, for instance</i></p> <p>Sentence: <i>As a result of the passing of the Homestead Act of 1862, cheap land was made abundant to thousands of immigrants, yet another pull factor enticing many to come to the United States.</i></p>	
Word Level	<p>Domain-Specific Vocabulary:</p> <p><i>Homestead Act, rectilinear, potentate, mercantilism, Transcontinental Railroad</i></p>	<p>General Academic Vocabulary:</p> <p><i>abundant, energetic, paradox, acquire, transmit, analyze</i></p> <p>Signal Words:</p> <p><i>therefore, however, furthermore, because</i></p>

Generative Morphological Knowledge

Trans—meaning “across”
(from *Transcontinental* and *transmit* above)

Transcontinental Railroad, transmit, transatlantic, transfer, transcendentalist, transcendent, transcend, translate, intransigent, transaction, transcribe, transcript, transient, transfer, transform, transfix, transgression, transplant, transparent, transport

types of words as “Tier 2” vocabulary. Also of high utility are **signal words**—general academic vocabulary words that signal relationships between ideas and information, such as *therefore, however, and analyze*. Although the words and phrases of academic language must be learned and applied in the context of the tasks and tests with which students engage across all subject matter areas, it generally falls to the English, reading, or language arts teacher to make sure that students understand academic language.

Domain-specific or “Tier 3” vocabulary refers to words that occur in specific subject matter areas or disciplines such as science, history and social science, mathematics, and the arts—terms such as *Homestead Act, rectilinear, potentate, and mercantilism*. These words represent abstract or technical concepts about which students often have little background knowledge. Abstract concepts such as *mercantilism* often take large amounts of instructional time and considerable student effort to grasp. On the other hand, because they are narrower in scope and fairly specific, many technical concepts such as *rectilinear* and *potentate* often do not require quite so much time and effort.

**TEACHING ACADEMIC
VOCABULARY**

Amy Burton helps her students connect the meaning of *conclusion* in science with its meaning in English/language arts.

These three categories are not hard and fast. There are many words that blur the boundaries. For example, the word *function*—typically regarded as a general academic word—has a discipline-specific and technical definition in math. When students are first introduced to the word *sanctuary*, it may be a part of the domain-specific vocabulary in science, referring to a reserved and protected area for animals or birds. As time goes on, however, students will learn that the word occurs in other disciplines as well, such as English and social studies, so it becomes a general academic word. However, despite this occasional overlap, when you think about the students, subjects, and grade levels you teach, it will still be useful to keep these distinctions between types of vocabulary in mind.

ACADEMIC LANGUAGE AT THE PHRASE AND SENTENCE LEVEL: PUTTING THE PIECES TOGETHER. Although word-level knowledge is absolutely necessary to your students’ academic success, it is not sufficient. Because words live in context, students also need to understand how these words work in combination with other words and common academic phrases to create sentences and complete, complex thoughts. For example, as we move up Table 1.1 from the word level to the phrase level, you can see common phrases used in academic prose to signal relationships between ideas. In addition, you can see how sentences at this level of language combine both general academic and domain-specific vocabulary to create complex thoughts, such as the following: “As a result of the passing of the Homestead Act of 1862, cheap land was made abundant to thousands of immigrants, yet another pull factor enticing many to come to the United States.” Notice how densely packed this sentence is with complex ideas and information, including:

- Three domain-specific vocabulary words: *Homestead Act*, *immigrants*, and *pull factor*
- Four general academic words/phrases: *As a result of*, *yet another*, *abundant*, and *enticing*

ACADEMIC LANGUAGE AT THE TEXT LEVEL: OVERARCHING CONCEPTS AND TEXT STRUCTURES. The words and sentences our students read in academic texts are placed within even larger contexts at the text level. Examples of these larger text structures in Table 1.1 include compare/contrast, cause/effect, and persuasion. These underlying text structures are not always apparent to the reader, and often must be inferred through the signal words and phrases the author uses. These signal words and phrases are often referred to as the “mortar” of academic language (Dutro & Helman, 2009; Dutro & Moran, 2003), bonding together the “bricks” in the foundation of the text—the general academic and domain-specific words. A student who is aware that words and phrases such as *gave rise to*, *as a result of*, *as a consequence*, and *consequently* can all signal a larger cause/effect relationship has a much better chance of making sense of a larger piece of text than a student who is not aware of how these academic words and phrases work. Students will learn how to attend to and use *text features* such as diagrams and linked videos to complement and elaborate text content.

THE BUILDING BLOCKS OF ACADEMIC LANGUAGE: GENERATIVE MORPHOLOGICAL KNOWLEDGE. Finally, we would like to end with the bottom of Table 1.1 (but by no means the least important type of vocabulary knowledge): generative morphological knowledge. Imagine that a history class was discussing the *Transcontinental Railroad*, the first railroad to connect the Atlantic and Pacific Oceans in the United States. It would be a great help if the students knew that *trans-* was a Latin prefix meaning “across,” helping them understand that this railroad literally went “across” the continent. However, knowledge of this one prefix goes beyond this one word. In Table 1.1, notice the 19 other words that have been generated by combining this one prefix with a base word or root. Each of these words shares a core meaning of “across.” Knowledge of just one single prefix can help students in understanding the meaning of 20 words; with generative morphological instruction, a little goes a long way.

What Does It Mean to “Know” a Word?

Our knowledge about a word and the concept that it represents falls along a continuum from feeling pretty confident to total unfamiliarity. Dale (1965) popularized this way of thinking about vocabulary knowledge and suggested that it is one of the best ways to assess our students’ vocabulary knowledge (see Chapter 3).

The following five types of knowledge underlie every word that you—and your students—in some sense “know” (Perfetti, 2007; Stahl & Nagy, 2006):

- The *range of meanings* of the word, both literal and figurative (For example, the dictionary definition for *effervescent* refers to a carbonated or fermenting liquid in which small bubbles of gas are emitted, but it may also refer to an individual’s behavior or personality.)
- The *situations and contexts* to which the word applies, including conversational and academic speech and writing
- The ways in which the *grammatical form* of a word affects its meaning (For example, *effervesce*, a verb, is the action of bubbling up; *effervescence*, a noun, refers to the process of bubbling up; and *effervescent*, an adjective, attributes the nature and qualities of that process to something or someone.)
- Other words that are likely to occur with the word
- The probability of encountering the word

By the middle and secondary years, most students become increasingly able to step back and think about these aspects of word knowledge—what linguists term **metalinguistic awareness**. For example, when students are using their expressive knowledge—speaking or writing—their knowledge of the probability of encountering specific words will affect their sensitivity to their audience and their resulting word choices. The degree to which they are able to think explicitly about words in these ways, however, will largely depend on *your* guidance.

Digging Deeper: Learning about How Words Work

Morphology: What Do Teachers Need to Know?

Morphology refers to the meaningful structure of words. We introduced generative morphology earlier; this section digs deeper by introducing and defining the major related terms. Table 1.2 not only defines these terms, but also illustrates how these related terms fit together under our umbrella term, *generative morphology instruction*.

Morphology is the study of the word parts related to syntax and meaning (Goodwin, Gilbert, & Cho, 2013; Templeton, 2011/2012, 2012). **Morphemes**, the building blocks of a morphological system, are the meaningful chunks in a language. More precisely, linguists define morphemes as the smallest units of meaning in a language. As Table 1.2 illustrates, there are two types of morphemes: free and bound. **Free morphemes** are units of meaning that can stand alone and which cannot be broken down into smaller units of meaning. Examples of free morphemes include the words *bird* and *seven*.

Bound morphemes, in contrast to free morphemes, cannot occur by themselves, but must be *bound* to other words or other bound morphemes. As seen in Table 1.2, bound morphemes include (1) Greek and Latin roots, and (2) **affixes**. Bound morphemes are, in fact, *the content* of your generative vocabulary instruction. For example, *gress* is an example of Latin root that means “go.” Notice how *gress* cannot stand alone;

TABLE 1.2 Generative Morphology Instruction and Related Terms

Generative Morphology Instruction: Instruction that helps students understand the processes of word formation in English—how prefixes, suffixes, base words, and Greek and Latin word roots combine.

Morphology: The study of word parts related to syntax and meaning

Morphemes: The smallest units of meaning in a language, including base words, affixes, and roots

<i>Free Morphemes</i>	<i>Bound Morphemes</i>
Morphemes that can occur by themselves	Morphemes that cannot occur by themselves
Words that can stand alone (<i>however, scatter, convection</i>)	Greek and Latin Roots: Word parts, often of Latin or Greek origin, that can be combined with other word parts to form words (<i>photo, cred, bio</i>)
	Affixes: A word part that can attach to the beginning or end of a base word or root
	<ul style="list-style-type: none"> • Prefixes: Affixes that can attach to the beginning of base words or roots (<i>pre-, re-, un-</i>) • Suffixes: Affixes that can attach to the end of base words or roots (<i>-ion, -ful, -less, -ible/able</i>)

something must be added to it. If we add the word part *pro-* (meaning “forward”), to *gress*, we get the resulting word *progress*, which means to go or step forward. This is an example of how we can combine a root with an affix, which is the second type of bound morpheme in Table 1.2. Specifically, an *affix* is a word part that can attach to the beginning or end of a base word or root. There are two types of affixes. (1) *Prefixes* are affixes that can attach to the beginnings of base words or roots (e.g., the prefix *pro-* in *progress*). (2) *Suffixes* are affixes that can attach to the end of a base word or root (e.g., the suffix *-ible* in *incredible*).

Not only do we use these terms in this text, but we also advocate using five of these terms with your students: *base word*, *root*, *affix*, *prefix*, and *suffix*. We find that when we explicitly teach these five terms to our students and use them regularly in classroom discussions, we give our students a common language to talk about vocabulary. This common language will provide your students an essential tool they need to do the type of **metacognitive** thinking that will foster deeper and more engaged word learning.

Most words in English have been—and continue to be—created through morphology. Once we move beyond the most frequent words used in the English language, we find that most words are created by combining prefixes, suffixes, bases, and roots: *un-kind*, *re-play*, *dis-con-sol-ate-ly*, *sub-terra-anean* (science), *Re-con-struct-ion* (history), *bi-sect-or* (math). How many words are we talking about? How potentially powerful is this meaning system that pervades the English language? What does it mean for you as a content area teacher? Consider the following:

- Over 60 percent of all of the words in the English language contain Latin or Greek affixes and/or roots (Nagy & Anderson, 1984).
- Over 90 percent of discipline-specific words contain Latin or Greek affixes and/or roots (Flanigan et al., 2011; Green, 2008).

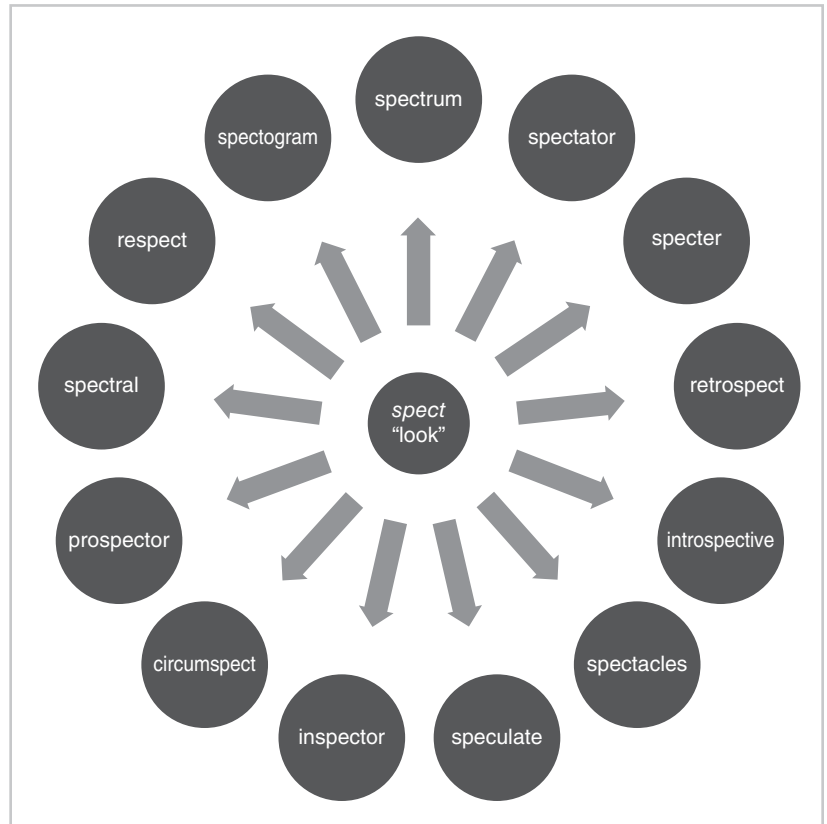
This last point is particularly telling for content teachers at the middle and secondary levels: The vast majority of the vocabulary words you are expected to teach belong to a vocabulary system based on the Latin and Greek origins of English. If most of the words you teach belong to a vocabulary system, wouldn't it make sense to explicitly teach your students about this system? We strongly believe that taking some time to teach the high-utility affixes

and roots that occur in your content area will pay big dividends—not only in your students' current learning and ability to learn independently across the disciplines, but also in their increased motivation. To this end, in each of the content area chapters (Chapters 5–8), we have carefully selected the most common and high-utility affixes and roots found in each discipline.

Throughout the middle and secondary grades and beyond, students' understanding and application of this type of knowledge may generate acquisition of thousands of words. As Figure 1.2 illustrates, knowledge of just one root can be key to unlocking the meanings of many words—both discipline-specific and general academic. Notice that of the 13 words generated from the Latin root *spect* in Figure 1.2, we see vocabulary that could be found in science (*spectrum, spectrogram*), in social studies (a *prospector* during the Gold Rush), and in English/language arts (*introspective, retrospect, circumspect*). All of these words share the core meaning of “look.” A prospector is “looking” forward in the hopes of finding something, an introspective person is “looking” inward, and a retrospective stance is one of “looking” backward.

When we teach this way, learning one root leads to learning 10, 20, 30 words, or more. Throughout the remaining chapters, we will show you how to incorporate this generative morphology vocabulary instruction seamlessly into your content area teaching.

FIGURE 1.2 Generative Power of the Root *spect*



The Spelling–Meaning Connection

The powerful role of morphology in the English language has a surprising but important influence on the way we *spell* words in English. Yes, it is true that spelling does not represent individual sounds as consistently as we might like, but it does a very good job of representing *meaning* more directly. Consider for a moment what words might look like if we spelled them the way they sound; then contrast those spellings with the actual spellings:

kumpeet	<i>compete</i>
kumpetitiv	<i>competitive</i>
komputishun	<i>competition</i>

The italics in the conventionally spelled words show the effects of morphology: These words *look* similar. This is no coincidence, because these words are related in meaning. Because of the way morphology works in English, the words *competitive* and *competition* are generated from the base word *compete*, and when suffixes are added to *compete*, its pronunciation changes. The spelling of the base, however, changes very little—we drop the *e*, and that’s it. Were we to spell these words so that they represent sound more directly, as in the left-hand column, we would lose this *visual* relationship between the words, and the meaning connection would not be as obvious. You will help your students understand that words that are similar in meaning are very often similar in spelling as well, despite changes in sound (Templeton, 1983, 2012). When you demonstrate this for them, writing the derivatives of a base word directly underneath it, you are also providing them with a

very helpful spelling strategy. At the same time, you are showing them how their awareness of morphology can generate their vocabulary growth. We will explore this connection between spelling and meaning in greater depth in Chapter 5.

The Power of Polysemy

Polysemy—at first glance it seems like a word only linguists could love, but *polysemous* words are everywhere in the language. Composed of the Greek word parts *poly* (“many”) and *sem* (“meaning”), *polysemous* is a word your students may come to enjoy throwing around—a “big” word that means, simply, that a word has many meanings. People create, use, and combine words in ways that are constantly changing. The longer a word has been in the language, the more opportunities there are for extending its meaning. *Run*, for example, goes back to Old English, has well over a hundred meanings, occurs in 15 phrases containing almost 50 separate meanings (*run across*, *run on*), and is part of 20 idiomatic expressions (*run at the mouth*, *run rings around*). In this section, we highlight the most important categories of word use: how words are used “polysemously.”

ETYMOLOGY. As we’ve just noted, an important reason *why* words and phrases take on additional meaning has to do with their histories. *Etymology* is the study of the origin or history of words. Tamara Baren’s lesson involving the history behind the word *decimate* is an example of etymology at work. Through sharing these historical narratives with students, we make words more interesting and provide students with a deeper sense of how they work. There are etymological stories to be shared in every discipline, and in later chapters we will be sharing some of these, as well as offering resources for you and your students to discover etymologies on your own.

DENOTATION AND CONNOTATION. Words have both *denotative* meanings that describe what the words literally mean or refer to, as well as *connotative* meanings, which are what the words suggest to us, how they make us feel, and the associations we bring to them beyond their literal meanings. For example, it makes a difference whether we refer to a person as *old* or as *elderly*; *elderly* has a kinder, more respectful implication than if we were to refer to someone simply as *old*. Both words literally denote an older person, but we select one over the other in most contexts because of its more effective and appropriate connotative meaning.

Let’s say you’re a history or social studies teacher, and you wish to teach about the origins of the Republican and the Democratic parties. As soon as you display these terms on the smart board, however, you discover you’ve ignited a debate. “Republicans are spoiled rich people.” “Democrats just want to take our money and give it to people who don’t want to work.” Yes, these are usually attitudes and understandings many students pick up at home, but they are nonetheless real for your students. You want to address the literal or denotative meaning of these terms, but your students are revealing their connotative meanings for these terms; associations very often with affective and emotional overlays that are suggested by the words. The word *republican* literally means or *denotes* “having to do with a republic”; depending on your experiences and attitudes, the term may *connote* “the party of spoiled rich people” or “the party that preserves important values of family, country, and religious faith.”

This doesn’t apply only to potentially controversial terms like *Republican* and *Democrat*. The word *dog*, while having a literal meaning that most students could agree on, also has a connotative meaning—a meaning not shared in common by all students. If a particular student’s experiences with dogs have been pleasant, warm, and fuzzy, the word have a very positive connotative meaning. In contrast, if the student’s experiences include being attacked by a dog, the word will have a strongly negative connotation.

FIGURATIVE LANGUAGE. Zwiers (2008) and others have noted that figurative language is a hallmark of academic language across content areas. When we extend beyond the denotative meaning of words, we are in the domain of *figurative language*. *Connotation* is a type of figurative language; *similes*, *metaphors*, and *idioms* are other important types.

Similes and Metaphors. Similes and metaphors are much more common than we often realize in our language (Bartel, 1983; Nilsen & Nilsen, 2004). Students can learn the straightforward definitions: *Simile* expresses a comparison using the terms *like* or *as*. In *Timothy of the Cay*, Theodore Taylor (1993) writes in the first person of how young Phillip was rescued from the cay on which he had been stranded: “I’d been brought aboard from the rescue boat, naked as a plucked pigeon” (p. 2). Taylor has used a simile, “naked as a plucked chicken,” to describe Phillip’s condition. In *Gulliver’s Travels*, Jonathan Swift describes Gulliver’s perception of a crowd of brightly clad women in Lilliput as “spread out like an embroidered petticoat.”

Metaphor also expresses a comparison, but without the words *like* or *as*. In *The Brief Wondrous Life of Oscar Wao*, Junot Díaz (2007) enfolds one metaphor after another as he describes, through the adolescent Lola’s eyes, the first time she fell in love. From “a sweet morenito named Max Sánchez” came “the bruja feeling that comes singing out of my bones, that takes hold of me the way blood seizes cotton” (p. 72).

We should let students know that our purpose for exploring simile and metaphor is to identify instances when words have been used to express something in a fresh, new, compelling way. We then help them apply this awareness in their writing and in their appreciation of what they read (see also Beck et al., 2008, 2013).

Idioms and Idiomatic Expressions. Phrases such as *flying off the handle*, *tongue-tied*, and *kick the bucket* may not be understood by putting together the literal meanings of the words. Rather, their meaning is purely figurative. *Idioms* and *idiomatic expressions* work like individual words, although their meanings are hidden in underlying concepts. Idiomatic expressions exist in conversational English but also occur within each academic domain or content area: for example, *get wires crossed* and *reinvent the wheel* in science; *six of one and half dozen of the other* and *in round numbers* in math; *the rest is history* and *history tailgates* in social studies/history. As we will explore in Chapter 4 and throughout this text, we usually need to give focused attention to idiomatic expressions when working with our students who are acquiring English as an additional language.

Writers who use words effectively usually have a deep sensitivity to the *nuances* of words—their sounds, structures, meanings, figurative use, and histories. This is why they can select and arrange those words that work most effectively in a particular context. Similarly, readers who read most effectively are alert to sound, structure, meaning, figurative use, and evolving word histories. Our ultimate goal is of course to grow *wordsmiths*—students who know how words are put into play and how writers use them in literature and informational texts to craft images, to engage feelings, and to prompt action.

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Vocabulary Learning in the Digital World

Applications of new technology continue to evolve almost exponentially, and they can support both teachers and students in teaching and learning vocabulary. For example, the publishing companies from which your district has adopted your subject matter texts—science, social studies, English/language arts, and math—usually provide access to a website with an ever-evolving array of resources, including glossaries. Other online sites, including online dictionaries and vocabulary websites, provide you and your students

information and resources about words. We will recommend a number of these throughout this text.

Classroom-based technologies such as interactive whiteboards offer quite exciting opportunities for presenting information and engaging students in the exploration of that information. Interactive whiteboards can be used as chalkboards—saving information you and your students have written from day to day, allowing you to revise whenever you wish. Interactive whiteboards also allow you to use any of your Microsoft- and Mac-based applications more interactively, including vocabulary sorting or categorization activities. Most students love coming up to the interactive whiteboard to add information and re-sort words. This is because the interactive whiteboard screen functions just like a laptop or desktop computer screen—rather than using a mouse, however, students have the appealing “big sweep” engagement in which they may tap the screen, mark text or an image, and then drag and drop this information into different categories. You can save these co-constructed presentations—as well as the chalkboard-type presentations—as PDF files, placing them on your website so that your students may later access them and use them as a basis for extension activities.

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Vocabulary: Principles of Differentiation for Diverse Learners

Why do some students find learning academic vocabulary particularly challenging? Among many possible reasons are a mismatch between a student’s background knowledge and the level of knowledge assumed by the curriculum or a text; insufficient experience reading, writing, and speaking academic language in a particular discipline or domain; an identified specific learning disability; and the challenge of learning English as a new language. Because the learners in your classroom are diverse in terms of backgrounds and abilities, differentiation is necessary in vocabulary instruction. Effective differentiated instruction

1. *Is developmentally appropriate.* Match your activities and materials to the developmental level of your students and to the background knowledge (including the academic vocabulary knowledge) that they bring to a particular topic of study or text.
2. *Is explicit and systematic.* Model and think aloud, physically demonstrate with concrete objects and experiences, provide multiple opportunities for guided and independent practice with specific feedback, and modify language by clearly articulating and emphasizing key words and with expressive body language.
3. *Is active.* Actively engage students with activities and experiences in which they are constantly reading, writing, thinking, and talking about words. Generally, your students should be talking, reading, and/or writing as much as or more than you talk during any given lesson. We call this the “51 percent rule” to express the ratio of student engagement to teacher talk.
4. *Connects concepts and words across a variety of rich contexts.* Guide students in making connections (1) between words, including from known words and concepts to new words and concepts, (2) between synonyms with nuances of meaning differences, (3) by clustering and categorizing words by semantic or meaning categories, and (4) by connecting the students’ own personal lives and experiences to the content. (Flanigan et al., 2011; Helman, Bear, Templeton, Invernizzi, & Johnston, 2012)

This differentiation strand will continue throughout this text, particularly in the modifications to many vocabulary activities throughout Chapters 5–8.

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SUMMARY

This chapter has established the foundation for your effective teaching of academic language and vocabulary. Built on a strong research base, your vocabulary instruction will enable your students to access, understand, and apply the core understandings of your discipline. Vocabulary knowledge *is* content knowledge.

A comprehensive approach to vocabulary instruction develops interest in an appreciation of words by addressing three aspects of *word consciousness*. These three aspects are *context-based* instruction, *word-specific* instruction, and *generative morphology* instruction.

There is a common perspective of vocabulary that highlights listening/speaking and reading/writing in the contexts of receptive and expressive language. These distinctions are important, but for instruction in the content areas or disciplines, we have emphasized *academic language* and *academic vocabulary*. Academic language is a specialized language with the important purpose of facilitating learning and communication in specific disciplines, and it includes the academic vocabulary—the important terms and phrases in each discipline. Most of our focus in this text will be on providing you the foundation for teaching the most important words and concepts in your subject area—your specialized, domain-specific vocabulary.

Your instruction should address *generative morphology*. You will demonstrate for your students how an awareness and understanding of the structure of words—the meaningful elements known as affixes, bases, and roots—will support their learning of key vocabulary terms as well as generate an understanding of hundreds of other words they will encounter in their independent reading and study within your discipline. The vast majority of these meaningful elements come from Latin or Greek.

Your instruction should address the nature of words *beyond* their structure—their history or *etymology*, and how words often have several meanings, a characteristic we refer to as *polysemy*. Context is a guide to determining which meaning may apply, as well as whether the word is used denotatively or connotatively. And connotation flows into figurative language, which is found in all disciplines.

Your classes present you with a range of abilities and languages. To support your vocabulary instruction in this context, we have offered guidelines for effectively differentiating your instruction.

Essential Vocabulary Strategies and Activities

Joyce Crandall, a high school mathematics teacher, reads Isaac Asimov's foreword to *A History of Mathematics* to her students during the first week of school. Here's an excerpt:

Aristotle, one of the greatest minds ever to contemplate physical laws, was quite wrong in his views on falling bodies and had to be corrected by Galileo in the 1590s . . . Even Newton, the greatest of all scientists, was wrong in his view of the nature of light . . . His masterpiece, the laws of motion and the theory of universal gravitation, had to be modified by Einstein in 1916 . . .

Only in mathematics is there no significant correction—only extension. Once the Greeks had developed the deductive method, they were correct in what they did, correct for all time. Euclid was incomplete and his work has been extended enormously, but it has not had to be corrected. His theorems are, every one of them, valid to this day. (Boyer, 1991, pp. vii–viii)

Joyce has told us that Asimov really pulls her students in with his prose and his insight that mathematics may be one of the few true constants in the world. Of course, Joyce is “channeling” Asimov through her own voice, inflections, and emphasis as she reads aloud to her students. Throughout the year, she will plan to read aloud to her students from time to time, sharing texts that embody the essence of mathematics and the language of mathematics. She will also model *how* to read and understand complex mathematical language (as we will describe later in this chapter and in Chapters 5–9 of this text). Through this modeling and her instruction, Joyce will help her students learn how to *think* like mathematicians and *read* like mathematicians (Carnegie Council on Advancing Adolescent Literacy, 2010; Shanahan & Shanahan, 2008).

Joyce is also able to talk about some of the vocabulary Asimov uses, how it functions in the discipline of mathematics, and the morphology that underlies some of that vocabulary. She herself is learning more about generative morphology and how she may develop her students' awareness, understanding, and application of this knowledge in mathematics. For example, after the Asimov read-aloud, she writes the term *deductive method* on the smart board and explains:

“You'll be talking about Latin and Greek roots in most of your classes this year. There's a fascinating Latin root that lives within the term *deductive method*. [She underlines *duc*.] This Latin root means 'to lead,' and when it's combined with the prefix *de-*, meaning 'down,' it results in the literal meaning 'to lead down.' That's what we do in the *deductive method*, or any process of *deduction*: Our thinking process 'leads down' from general principles to specific facts or examples that result from those principles.” ■

In this chapter, we explore four important areas for which we laid the groundwork in Chapter 1:

- We set the stage for the exemplary vocabulary instruction that develops academic language and academic vocabulary
- We establish and explore the foundation for effective instruction in generative morphology
- We present effective and engaging activities that develop deep understanding of specific key concepts and vocabulary

Setting the Stage for Exemplary Vocabulary Instruction

Modeling and Thinking with Academic Language

Model the use of academic language and also model how to think when you read in your discipline. If you are a social studies teacher, for example, you might walk through and think aloud as you read the classic “Blood, Toil, Tears, and Sweat” speech Winston Churchill made to Parliament (1940/2004). Following are two excerpts:

I have nothing to offer but blood, toil, tears, and sweat. We have before us an ordeal of the most grievous kind. We have before us many, many months of struggle and suffering . . .

You ask, what is our policy? I say it is to wage war by land, sea, and air. War with all our might and with all the strength God has given us, and to wage war against a monstrous tyranny never surpassed in the dark and lamentable catalogue of human crime. That is our policy.

Begin by contextualizing this text through developing background knowledge for the students’ close and deep reading, and rereading, of the speech. This exploration is part of your teaching about the causes of the Second World War and Hitler’s rise to power in Germany. Winston Churchill, after being appointed prime minister of England, delivered this address to the House of Commons on May 13, 1940. In the two years prior to this date, Nazi Germany had invaded nine countries, the most recent being France just a few days before Churchill delivered this speech.

Display the speech to the class as you read it aloud, or play a recording of Churchill delivering the speech. Then, go back through and share how you are thinking about the text as you read it. For example, you might pay special attention to the following sentence:

War with all our might and with all the strength God has given us, and to wage war against a monstrous tyranny never surpassed in the dark and lamentable catalogue of human crime.

Pointing to the words “a monstrous tyranny,” you say,

“Churchill says that the British Empire will wage war against a monstrous tyranny. And how did we define *tyranny* on our Vocabulary Wall? Right, when a single ruler has *absolute* power. So he refers to Nazi Germany not just as a tyranny—that’s bad enough—but as a *monstrous* tyranny. He is really telling the British public how incredibly horrible this regime is. Then he goes on to say ‘never surpassed in the dark and lamentable catalogue of human crime.’ He could have just said ‘never surpassed in human history,’ but that phrase is pretty common, and he wanted to make an impression on his listeners about just how awful Nazi Germany really was. I’m thinking that he probably chose *lamentable* because it means tremendous regret and pity. *Catalogue*, in this case, is not a book or

website that lists products we can buy, of course; Churchill's using it in the sense of an exhaustive list of all of the wars ever waged and crimes ever committed by humankind. He wants people to understand that the tyranny of Nazi Germany is worse than all of those crimes and wars."

Do not define all of the new words in advance. Some words, such as *lamentable*, can be defined as you go. Remind students of any target vocabulary, such as *tyranny*, that has already been discussed. You will not, of course, think aloud this way through every sentence in a text. But you do think about what you want your students to understand, and about how the author of the text uses academic language to convey his or her intent.

You may go on to explain that there were still many people in Britain who believed Hitler could not be stopped and should instead be appeased, and then analyze how Churchill developed his argument (Hillocks, 2011) for declaring war on Germany. You'll point out Churchill's word choices and the language that he employed to support each aspect of his argument—why he was committing Great Britain to war (Templeton & Gehsmann, 2014):

- He identifies the immediate problem or challenge: "ordeal," "struggle and suffering"
- He describes the nature of the challenge: "monstrous tyranny"
- He describes the nature of the response: "our task"
- He concludes with a powerful quotation: "Come then, let us go forward together with our united strength." (Templeton, Shane; Gehsmann, Kristin, *Teaching Reading and Writing: The Developmental Approach*, 2nd Ed., © 2014. Reprinted and electronically reproduced by permission of Pearson Education, Inc., Upper Saddle River, New Jersey.)

PD  TOOLKIT™
for Vocabulary Their Way®

TEACHING ACADEMIC
VOCABULARY

Amy Burton discusses and teaches the understanding of the academic language and vocabulary of the *argument* form.

Guidelines for Teaching General Academic and Domain-Specific Vocabulary

In Chapter 1 we pointed out that vocabulary knowledge *is* content knowledge. It follows, then, that *learning* vocabulary is *learning* content knowledge. That's why your vocabulary instruction will be at the core of your instruction. To support you, the following general guidelines emerge from the research in vocabulary instruction:

- Teach for *independent* word learning, developing use of contextual support, familiarity with generative morphology, and word consciousness.
- Activate *background knowledge*. Through discussion and pre-assessment, determine what your students already know about the significant terms and concepts and relate this to familiar concepts and newer concepts they have recently learned. There is usually a range of understandings among your students (see Chapter 3), so getting them involved in discussion is very important.
- Use a *variety of activities* that involve students in using words and thinking about their meanings. Activities include sorting or categorizing the words, thinking of related words, and discussing and explaining the words, including examples and non-examples. graphic organizers (see p. 47) support these explanations and discussions. Ask students what they learned that is new and interesting, what they have questions about, what has confirmed information or ideas that they already have. As students read and discuss, pose questions to which they all may respond that include new vocabulary: "What did you find out about the *lithosphere*?" "Think of a recent *serendipitous* event that you have experienced." Ask students to turn and talk, answer questions, and make comments so that they *all* are involved in language use—rather than having just one or two students participating as in the typical "question, answer, and evaluate" mode. For example, say, "Turn to your neighbor and discuss how the Earth's *crust* and *mantle* are similar, and how they are different." This emphasis on discussion is deliberate and imperative, because words and larger dialogue in general become internalized over time, and in turn drive intellectual growth.
- Periodically *review* important key vocabulary, and make a point of using the words yourself.

How Do You Decide Which Words to Teach?

“So many words, so little time.” This is a common lament among teachers at all levels. Remember, however, that most of our students’ vocabularies grow through wide reading and discussion about that reading. This may be a bit reassuring, but you still feel the responsibility of choosing those words that *should* be directly addressed. Publishers of the textbooks and e-books that you may be required to use are increasingly paying attention to criteria for selecting and highlighting vocabulary that students probably need to know. But this doesn’t mean that you can assume that there’s nothing else you’ll need to do. Based on the particular selection to be read or unit to be explored, you should find the following guidelines helpful in selecting your “target” vocabulary:

- **Which words are critical to address in depth before moving into the unit/selection?** Reading through the selection, chapter, or unit as a whole, what are the words that represent major concepts and for which students will need to develop a deep understanding? You will introduce and develop these at the beginning of the unit of study and before the reading, as well as during and after. Examples from math are *proof* and *algebraic expression*; from science, *organ* and *cell*; from social studies, *civil rights*; and from English, *foreshadowing*.
- **Which words are critical to address only briefly before moving into the unit/selection?** What words are necessary to know for the specific reading assignment but do not require deep understanding? You may mention these, providing definitions, but will not explore further unless it becomes necessary for some students.
- **Which words are critical but might lend themselves to students’ problem solving during their reading?** What words are important but may be figured out by the students through application of their generative morphology strategy together with help from the context? You may follow up on these after the students have read.

To support your thinking about these guidelines, the following more specific questions will help:

- Who are my students? Are they reading at or above grade level, or are they striving readers? Do they have extensive background knowledge in my content area, or will we be building much of that this year?
- What do they need to know to meet the objective for today/this unit? What knowledge do I really care that my students will have when they walk out the door? What words are truly essential to those new understandings?
- What will they need to know in future years in my content area? What concept knowledge will serve as building blocks for their success in their next year of math (or social studies, automotive studies, and so forth)?

The final piece of the puzzle here is, as with many things in teaching, the experience of trial and error. If you select a list of words that require a great deal of “back story,” then you may have needed an easier set of words with which to begin. As with all vocabulary practice, the students should be the ones using the words. If our teacher-driven explanations are monopolizing class time, then that is a good indicator that we may have selected words that were too far removed from our students’ background knowledge.

In Chapters 5–9 we elaborate on these guidelines for each subject area.

Addressing Vocabulary and Literacy Standards

All states in the United States (as well as other English-speaking countries) ground their English/Language Arts instruction in standards that highlight important knowledge, skills, and understandings. In addition, these standards set expectations at particular

grade or year levels for the acquisition of this knowledge and these skills and understandings. In the U.S., most states have adopted the English/Language Arts standards in the *Common Core State Standards* (2010). Those few states that have not adopted the Common Core base their instruction on standards that in general follow a similar scope and sequence as the Common Core.

Table 2.1 presents the Language, Reading, and Writing Standards of the Common Core that the vocabulary instruction in *Vocabulary Their Way* addresses. Although vocabulary standards are presented within the Language category of the Common Core, the instruction that best develops vocabulary knowledge also supports reading and writing. For each activity and strategy presented in this chapter, we list the Common Core standards that are addressed. Table 2.1 lists the abbreviations for each standard that will be included with each activity or strategy.

TABLE 2.1 Common Core Language, Reading, and Writing Standards Addressed in *Vocabulary Their Way*

**LANGUAGE STANDARDS, 6–12:
VOCABULARY ACQUISITION AND USE (VAU)**

Grades 6–8:

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on [grade level reading and content], choosing flexibly from a range of strategies.
 - a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience*, *auditory*, *audible*).
 - c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
 - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

Grades 9–12:

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on [grades 9–12] reading and content, choosing flexibly from a range of strategies.
 - a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., *analyze*, *analysis*, *analytical*; *advocate*, *advocacy* [grades 9–10]; *conceive*, *conception*, *conceivable* [grades 11–12]).
 - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology.

**READING STANDARDS FOR LITERATURE 6–12:
CRAFT AND STRUCTURE (RL)**

Grade 6:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.

Grade 7:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.

Grade 8:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

Grades 9 and 10:

4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).

Grades 11 and 12:

4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)

**LANGUAGE STANDARDS, 6–12:
VOCABULARY ACQUISITION AND USE (VAU)**

- d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Interpret figures of speech (e.g., *euphemism*, *oxymoron* [grades 9–10]; *hyperbole*, *paradox* [grades 11–12]) in context and analyze their role in the text.
 - Analyze nuances in the meaning of words with similar denotations.
6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

**READING STANDARDS FOR LITERATURE 6–12:
CRAFT AND STRUCTURE (RL)**
**WRITING STANDARDS 6–12:
TEXT TYPES AND PURPOSES (WS)**
Grade 6:

- 2d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- 3d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.

Grade 7:

- 2d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- 3d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.

Grade 8:

- 2d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
- 3d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.

Grades 9 and 10:

- 2d. Use precise language and domain-specific vocabulary to manage the complexity of the topic.
- 3d. Use precise words and phrases

Grades 11 and 12:

- 2d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
- 3d. Use precise words and phrases

**READING STANDARDS FOR INFORMATIONAL
TEXT 6–12: CRAFT AND STRUCTURE (RI)**
Grade 6:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.

Grade 7:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.

Grade 8:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

Grades 9 and 10:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

Grades 11 and 12:

4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in *Federalist* No. 10).

Generative Morphology

Wide reading is absolutely critical for vocabulary growth. As pointed out in Chapter 1, however, your students' vocabulary will grow more significantly if they understand the generative characteristic of most English words—those processes of word formation that govern how prefixes, suffixes, base words, and Greek and Latin roots combine. By adding prefixes and suffixes to bases and roots, we are able to generate many other words and, more important, understand them as well. If you know *courage*, for example, you should also be able to learn *courageous*, *courageously*, *encourage*, *encouragingly*, *discourage*, and *discouragingly*. Knowledge of the generative nature of English vocabulary also powerfully supports figuring out unfamiliar multisyllabic words students encounter in their reading (Anglin, 1993; Carlisle & Stone, 2005). Beyond knowing how to add simple prefixes and suffixes, however, most students are unaware of generative morphology. It is up to you to show them.

Generative Morphology: Teaching Students the Basics

How do you know which morphological elements (prefixes, suffixes, and Greek and Latin roots) should be taught across the grades? Table 2.2 presents the most frequently occurring elements found in general academic vocabulary across all subject areas (Gardner & Davies, 2013; White, Sowell, & Yanagihara, 1989; Zeno, Ivens, Millard, & Duvvuri, 1995). For example, the prefixes *un-*, *re-*, *in-/im-/il-/ir-*, *dis-*, and *non-* are addressed early on. This is because these prefixes occur in the majority of all prefixed words in analyses of written texts in first grade through college. When these prefixes combine with most base words,

TABLE 2.2 Core Affixes and Roots: Middle and Secondary Grades

The following prefixes and suffixes have usually been introduced in the primary grades, but they should be addressed in the intermediate and middle grades as they combine with the words that are appropriate at these levels:

Prefixes ¹		Suffixes			
<i>un-</i>	not, opposite	<i>unlock</i>	<i>-y</i>	like	<i>lacy</i>
<i>in-</i>	not, without	<i>incorrect</i>	<i>-ly</i>		<i>gladly</i>
<i>im-</i>		<i>impossible</i>	<i>-er</i>	comparative	<i>colder</i>
<i>il-</i>		<i>illegible</i>	<i>-est</i>	superlative	<i>coldest</i>
<i>ir-</i>		<i>irresponsible</i>	<i>-less</i>	without	<i>penniless</i>
<i>re-</i>	again, back	<i>remake</i>	<i>-ness</i>	condition	<i>happiness</i>
<i>dis-</i>	opposite, not, apart	<i>disagree</i>	<i>-ful</i>	full of, like	<i>hopeful</i>
		<i>dislike</i>	<i>-er</i>	people who	<i>teacher</i>
		<i>disconnect</i>	<i>-or</i>	do things	<i>actor</i>
<i>non-</i>	not	<i>nonfiction</i>	<i>-ist</i>		<i>pianist</i>
<i>mis-</i>	badly, wrongly	<i>misfortune</i>			
		<i>misfire</i>			
<i>pre-</i>	before	<i>preview</i>			
		<i>preseason</i>			
<i>uni-</i>	one	<i>unicycle</i>			
<i>mono-</i>	one	<i>monorail</i>			
<i>bi-</i>	two	<i>bicycle</i>			
<i>tri-</i>	three	<i>tricycle</i>			

The following prefixes and suffixes have usually been introduced in the intermediate grades, but they should be addressed in the middle grades and beyond as they combine with the words that are appropriate at these levels:

Prefixes		Suffixes			
<i>com-</i>	together, with	<i>compress</i>	<i>-al</i>	like, characterized by	<i>national</i> <i>natural</i>
<i>sub-</i>	under	<i>submarine</i> <i>suburban</i>	<i>-ous</i>	possessing, full of	<i>courageous</i>
<i>de-</i>	remove, opposite	<i>defuse</i> <i>detract</i>	<i>-ment</i>	result, action, or condition	<i>development</i> <i>excitement</i>
<i>post-</i>	after	<i>postgame</i> <i>postseason</i>	<i>-ion²</i>	action, process of, or result	<i>inspection</i>
<i>inter-</i>	between	<i>intercontinental</i> <i>interrupt</i> <i>interact</i> <i>intervene</i>	<i>-ic</i>	of, relating to, or characterized by	<i>angelic</i> <i>formulaic</i>
<i>intra-</i>	within	<i>intrastate</i> <i>intramural</i>	<i>-able</i> <i>-ible</i>	capable of, likely to	<i>profitable</i> <i>flammable</i> <i>credible</i>
<i>trans-</i>	across	<i>transport</i> <i>transcontinental</i>	<i>-ant</i> <i>-ent</i>	performing or causing an action	<i>observant</i> <i>confident</i>
<i>anti-</i>	against	<i>antifreeze</i> <i>antiprejudice</i>	<i>-ance</i> <i>-ence</i>	action or process	<i>observance</i> <i>confidence</i>
			<i>-ity</i>	quality, condition	<i>acidity</i> <i>morality</i>
			<i>-an</i> <i>-ian</i>	relating to, specializing relating to, belonging to	<i>Chicagoan</i> <i>musician</i> <i>Canadian</i> <i>dietician</i>

As students read within and across different genres and content areas, they encounter an increasingly larger number of bases and roots that combine with the following prefixes and suffixes:

Prefixes		Suffixes			
<i>super-</i>	over; greater	<i>supervise</i> <i>supernatural</i>	<i>-logy</i> <i>-logist</i>	science of, scientist	<i>geology</i> <i>geologist</i>
<i>counter-</i>	opposing	<i>counteract</i> <i>counterfactual</i>	<i>-phobia</i> <i>-phobic</i>	abnormal fear	<i>claustrophobia</i> <i>aquaphobic</i>
<i>contra-</i>		<i>contradict</i> <i>contraindicate</i>	<i>-ism</i>	condition, belief	<i>autism</i> <i>capitalism</i>
<i>ex-</i>	out	<i>exit</i> <i>excommunicate</i> <i>excise</i>	<i>-ist</i>	one who does, believes, specializes	<i>pianist</i> <i>capitalist</i> <i>podiatrist</i>
<i>e-</i>		<i>enormous</i> <i>erupt</i> <i>emit</i>	<i>-crat</i> <i>-cracy</i>	rule	<i>autocrat</i> <i>democracy</i>
<i>ex-</i>	former	<i>ex-president</i>			
<i>fore-</i>	before	<i>foreword</i> <i>foreknowledge</i>			
<i>pro-</i>	in front of, forward; in favor of	<i>proactive</i> <i>prospect</i> <i>pro-American</i> <i>pro-development</i>			

(continued)

TABLE 2.2 Core Affixes and Roots: Middle and Secondary Grades (*continued*)

Prefixes		Suffixes
<i>in-</i>	in, into	<i>indent</i>
<i>im-</i>		<i>implode</i>
<i>il-</i>		<i>illuminate</i>
<i>ir-</i>		<i>irradiate</i>
<i>en-</i>	cause to be, in, on	<i>encourage</i> <i>enable</i> <i>encircle</i>
Absorbed Prefixes		
The process of "absorbing" prefixes is examined explicitly:		
<i>in-</i>	not, in/into	<i>in + literate = illiterate</i> <i>in + port = import</i> <i>in + rational = irrational</i> <i>in + mediate = immediate</i>

The following roots are usually introduced in the upper elementary grades, but they should be addressed in the middle grades and beyond as they combine with affixes and one another to create words at these levels.

Greek Roots			Latin Roots			
<i>tele</i>	far, distant	<i>television</i> <i>telegraph</i> <i>telegram</i> <i>telescope</i> <i>telephoto</i>	<i>aud</i>	hear	<i>audible</i> <i>audience</i> <i>auditory</i>	<i>auditorium</i> <i>audio</i> <i>audition</i>
<i>therm</i>	heat	<i>thermometer</i> <i>thermostat</i> <i>thermal</i> <i>exothermic</i>	<i>spec</i>	look	<i>spectator</i>	<i>prospect</i>
<i>photo</i>	light	<i>photograph</i> <i>telephoto</i>	<i>spic</i>		<i>inspect</i> <i>spectacle</i>	<i>suspect</i> <i>conspicuous</i> <i>perspicacious</i>
<i>gram</i>	thing written	<i>diagram</i> <i>monogram</i> <i>telegram</i> <i>grammar</i> <i>program</i>	<i>port</i>	carry	<i>import</i> <i>export</i> <i>transport</i>	<i>portable</i> <i>portfolio</i> <i>report</i>
<i>graph</i>	writing	<i>telegraph</i> <i>autograph</i> <i>biography</i> <i>photography</i> <i>graphic</i> <i>calligraphy</i> <i>polygraph</i> <i>digraph</i>	<i>rupt</i>	break ³	<i>bankrupt</i> <i>eruption</i> <i>disrupt</i> <i>interrupt</i>	<i>rupture</i> <i>abrupt</i> <i>corrupt</i>
<i>micro</i>	small	<i>microscope</i> <i>micrometer</i> <i>microfilm</i> <i>microwave</i>	<i>fract</i>	break ³	<i>fracture</i> <i>fraction</i> <i>refract</i>	
			<i>tract</i>	drag, pull	<i>distract</i> <i>tractor</i> <i>tractable</i> <i>extract</i> <i>detract</i> <i>trace</i>	<i>contract</i> <i>retract</i> <i>attract</i> <i>traction</i> <i>protract</i>
			<i>mot</i>	move	<i>motion</i> <i>motivate</i>	<i>promotion</i> <i>emotion</i>

Greek Roots		Latin Roots				
<i>scop</i>	target, view, see	microscope microscopic telescope telescopic periscope kaleidoscope	<i>scrib</i>	write	<i>inscribe</i> <i>transcript</i> <i>prescribe</i> <i>manuscript</i> <i>transcribe</i> <i>describe</i>	<i>inscription</i> <i>transcription</i> <i>prescription</i>
<i>phon</i>	sound	telephone <i>phonics</i> <i>symphonic</i> <i>euphony</i> <i>homophone</i>	<i>dict</i>	say	<i>dictate</i> <i>diction</i> <i>predict</i> <i>edict</i> <i>contradict</i>	<i>indict</i> <i>dictator</i> <i>benediction</i> <i>jurisdiction</i>
<i>bio</i>	life	<i>biology</i> <i>biography</i> <i>biome</i> <i>biopsy</i>	<i>vis</i>	see	<i>vision</i> <i>invisible</i> <i>television</i> <i>revise</i> <i>advise</i>	<i>vista</i> <i>visit</i> <i>supervise</i> <i>video</i> <i>provide</i>
<i>auto</i>	self	<i>autograph</i> <i>autobiography</i>	<i>struct</i>	build	<i>construct</i> <i>structure</i>	<i>instruct</i> <i>destruction</i>
			<i>gress</i>	go	<i>progress</i> <i>regress</i>	<i>digression</i> <i>aggressive</i>

If not taught earlier, the following affixes and roots should be addressed in the middle and secondary grades:

Middle and High School Latin Affixes and Roots					
<i>pos</i> <i>pon</i>	put, place	<i>compose</i> <i>expose</i> <i>oppose</i> <i>position</i> <i>component</i> <i>exponent</i> <i>opponent</i>	<i>cred</i>	believe	<i>credo</i> <i>credible</i> <i>incredible</i> <i>credence</i> <i>incredulous</i> <i>credible</i>
<i>duc</i> <i>duct</i>	lead	<i>produce</i> <i>reduce</i> <i>conduct</i> <i>educate</i> <i>seduce</i> <i>product</i> <i>reduction</i>	<i>ced</i> <i>ceed</i> <i>cess</i>	go	<i>intercede</i> <i>concede</i> <i>proceed</i> <i>process</i> <i>exceed</i> <i>excess</i>
<i>vers</i> <i>vert</i>	turn	<i>revert</i> <i>adverse</i> <i>versatile</i> <i>controversy</i> <i>divert</i> <i>introvert</i>	<i>ven</i> <i>vent</i>	to come	<i>intervene</i> <i>covenant</i> <i>venue</i> <i>circumvent</i>
<i>ject</i>	throw	<i>reject</i> <i>inject</i> <i>eject</i> <i>interject</i> <i>object</i> <i>project</i>	<i>clud</i> <i>clus</i>	close	<i>exclude</i> <i>conclude</i> <i>include</i> <i>exclusion</i> <i>conclusion</i> <i>inclusion</i>
			<i>jud</i>	judge	<i>prejudice</i> <i>judicious</i> <i>adjudicate</i>

(continued)

TABLE 2.2 Core Affixes and Roots: Middle and Secondary Grades (*continued*)

<i>Middle and High School Latin Affixes and Roots</i>					
<i>leg</i>	law	<i>legal</i> <i>legislate</i> <i>legitimate</i> <i>privilege</i> <i>legible</i>	<i>fac</i>	make	<i>factory</i> <i>facsimile</i> <i>factor</i> <i>satisfaction</i> <i>facilitate</i>
	read		<i>fec</i>	make	<i>infect</i> <i>effect</i> <i>affect</i>
<i>fer</i>	bear, carry	<i>transfer</i> <i>infer</i> <i>acquirer</i> <i>defer</i> <i>afferent</i> <i>efferent</i>	<i>fic</i>	make	<i>fiction</i> <i>efficient</i> <i>beneficial</i> <i>deficient</i>
<i>bene</i>	good, well	<i>benefit</i> <i>beneficial</i> <i>benefactor</i> <i>benevolent</i>	<i>fy</i>	make	<i>beautify</i> <i>falsify</i> <i>satisfy</i> <i>personify</i> <i>objectify</i> <i>classify</i>
<i>corp</i>	body	<i>corporation</i> <i>incorporate</i> <i>corpulent</i> <i>corpse</i> <i>corporeal</i>	<i>man</i>	hand	<i>manual</i> <i>manage</i> <i>manufacture</i> <i>emancipate</i> <i>manacle</i>
<i>sta</i> <i>stat</i> <i>stit</i>	stand	<i>stable</i> <i>static</i> <i>statistics</i> <i>constant</i> <i>constitution</i> <i>distant</i>	<i>mis</i> <i>mit</i>	send	<i>mission</i> <i>missile</i> <i>dismiss</i> <i>promise</i> <i>transmit</i> <i>emit</i> <i>remit</i>
Prefixes			Absorbed Prefixes		
<i>mal-</i>	bad	<i>malfunction</i> <i>maladjusted</i> <i>malcontent</i> <i>malefactor</i> <i>malaria</i>	<i>ad-</i>	to, toward	<i>ad + count = account</i> <i>ad + firm = affirm</i> <i>ad + gress = aggress(ion)</i> <i>ad + locate = allocate</i> <i>ad + null = annul</i> <i>ad + point = appoint</i> <i>ad + rest = arrest</i> <i>ad + sign = assign</i> <i>ad + tend = attend</i>
<i>a-</i>	without, not	<i>apart</i> <i>amoral</i>			
<i>an-</i>		<i>anemia</i> <i>anarchy</i>			
<i>retro-</i>	backward, past	<i>retrospect</i> <i>retroactive</i> <i>retrorocket</i> <i>retrogressive</i>	<i>syn-</i> <i>syl-</i> <i>sym-</i>	together, with	<i>syn + bol = symbol</i> <i>syn + drome = syndrome</i> <i>syn + agogue = synagogues</i> <i>syn + chronic = synchronic</i> <i>syn + logistic = syllogistic</i> <i>syn + metrical = symmetrical</i> <i>syn + phonic = symphonic</i>
<i>per-</i>	through, thoroughly	<i>pervasive</i> <i>perennial</i>			

Additional Prefixes		Absorbed Prefixes		
<i>epi-</i>	upon, on, over, near, at, before, after	<i>epicenter</i> <i>epidemic</i> <i>epidermis</i> <i>epiphenomenon</i>	<i>com-</i> together, <i>con-</i> with <i>co-</i> <i>cor-</i>	<i>com</i> + <i>active</i> = <i>coactive</i> <i>com</i> + <i>note</i> = <i>connote</i> <i>com</i> + <i>duct</i> = <i>conduct</i> <i>com</i> + <i>clude</i> = <i>conclude</i> <i>com</i> + <i>gress</i> = <i>congress</i> <i>com</i> + <i>locate</i> = <i>collocate</i> <i>com</i> + <i>quest</i> = <i>conquest</i> <i>com</i> + <i>rupt</i> = <i>corrupt</i> <i>com</i> + <i>spire</i> = <i>conspire</i> <i>com</i> + <i>tract</i> = <i>contract</i> <i>com</i> + <i>vene</i> = <i>convene</i> <i>com</i> + <i>operate</i> = <i>cooperate</i> <i>com</i> + <i>educate</i> = <i>coeducate</i> <i>com</i> + <i>motion</i> = <i>commotion</i> <i>com</i> + <i>passion</i> = <i>compassion</i> <i>com</i> + <i>incidence</i> = <i>coincidence</i>
<i>dia-</i>	through across	<i>diagnose</i> <i>diagram</i> <i>diarrhea</i> <i>diameter</i> <i>diachronic</i> <i>diaspora</i>		
<i>ana-</i>	up back/backward	<i>anatomy</i> <i>analyze</i> (loosen up) <i>anachronism</i> <i>anaphora</i> <i>anathema</i> <i>Anabaptist</i> (baptize again)		
<i>ab-</i>	again off, away	<i>absent</i> <i>abduct</i> <i>abstract</i> <i>abnormal</i> <i>abhor</i> <i>abdicate</i>		
<i>meta-</i>	change, beyond	<i>metamorphosis</i> <i>metaphor</i> <i>metacognitive</i>		

¹Most prefixes have more than one meaning. In this scope and sequence, notice that the meanings of prefixes are not all taught at the same time. Students need time to learn, explore, and understand how a particular meaning for the prefix consistently performs. For example, the most common meaning of *in-* is “not”; it is important that students explore, understand, and appreciate how the meaning of “not” is consistently represented across a wide range of words before later introducing the next most common meaning of *in-*: “in, into.” (From a developmental perspective, it is similar to trying to teach a first- or second-grade student all of the spellings of long *a* at once and expecting the student to be confident about learning all of them at the same time and being able to use the correct spelling in writing.)

²*-ation*, *-ition*, *-sion*, and *-tion* are all variations of *-ion*. Which spelling is used depends on the base or root to which the suffix is attached.

³Occasionally, more than one root from Latin with a similar meaning has come down to us, as is the case with *rupt* and *fract*. More often, however, it is the case that a root from Latin and a root from Greek have come to us with the same meaning; the PDToolkit presents a comprehensive table of Greek and Latin roots paired according to their meanings.

their meaning—usually “not” or “the opposite”—results in words with meanings that are straightforward and transparent (for example, *inflexible*, *incomplete*, *illiterate*). As another example, the suffix *-ly*, meaning “like,” is one of three suffixes that occur in almost 20 percent of suffixed words in written texts. (The other two are *-er* and *-or*.) When this suffix combines with most base words, the resulting meaning is also usually straightforward (for example, *slowly*, *dangerously*, *solemnly*).

Even though most of these affixes are addressed in the elementary curriculum, this does not guarantee that most students will know them or be able to apply them in reading and remembering longer words and using them to figure out what words mean. It is often important to address them again at the middle grades and above, in words that are appropriate for those grade levels.

Sample lessons for many of these elements are provided in the content-specific instructional chapters in this text. In addition, the PDToolkit contains a number of games that will reinforce understanding of word formation processes and specific words. Specific games will be mentioned in later sections. In Chapters 5–9, discipline-specific

roots and affixes are presented; these elements will be addressed by subject area teachers from the middle grades on up. Although these elements may not occur frequently across all academic domains, they do occur with considerable frequency within a subject area.

Table 2.3 will help you match instructional activities with your goals in teaching generative morphological knowledge.

The following two principles guide instruction in “the basics”:

1. Teach prefixes and suffixes first in the context of familiar base words.
2. Model how to apply knowledge of the new affix in context.

Activity 2.1 illustrates how these principles may be applied.

Activity 2.1 Teaching and Modeling the Basics: Prefixes and Suffixes

Beginning with familiar base words not only helps students focus on the process of word formation, but also ensures that the function of the affix will be clearer to them. For example, teach *-ly* using the following procedures.

Procedures

1. Affix *-ly* to words such as *quiet* and *delicate*: “Let’s look at the word *quietly* in the following sentence.”

Susan quietly tiptoed upstairs when she got home an hour and a half after her curfew.

“What is the base word in *quietly*?” [*quiet*] “Correct! What’s the suffix? Right; it has to be *-ly*, doesn’t it? Now let’s look at the word *delicately* in the following sentence.”

Josh delicately lifted the boiling test tube out of the rack.

“What is the base word in *delicately*?” [*delicate*] “Right again! What’s the suffix? Yes, once again, it’s *-ly*. I wonder what the suffix *-ly* means or tells us when we see it attached to a base word?”

With familiar base words and derived words, students are led to the awareness that *-ly* has the general meaning of “like” whatever it is affixed to.

“It serves as an adverb that describes how something is done.”

TABLE 2.3 Generative Morphology Activities Selection Chart

	TEACHING AND MODELING THE BASICS: PREFIXES AND SUFFIXES	WORD SORT WITH AFFIXES/ROOTS	STRATEGY FOR DECODING LONGER WORDS	TEACHING THE TYPES OF CONTEXT CLUES
What, specifically, do I want my students to know about generative morphology? I want my students to:				
Understand the processes of word formation (how prefixes, suffixes, roots, and base words combine to form words)	✓	✓		
Compare and contrast the spellings and meanings of derived words from two or more affixes/roots (e.g., <i>tract</i> vs. <i>spect</i>)		✓		
Decode the meanings of longer words by prefix, suffix, root, and/or base word	✓	✓	✓	
Apply generative knowledge in context				✓

When adding an affix results in a spelling change in the base word, here's how the lesson may go:

"Let's look at the word *indication* in the following sentence."

There was no indication that we would have an early release day.

"What is the base word in *indication*?" [*indicate*] "Correct! What's the suffix? Right! It's *-ion*. Now let's look at the word *illustration* in the following sentence."

Which illustration best captures the theme in this story?

"What is the base word in *illustration*?" [*illustrate*] "Okay! What's the suffix? Yes, once again, it's *-ion*. So, what do you think the suffix *-ion* means or tells us when we see it attached to a base word?"

2. The students may not come up with the exact meaning of the suffix, but their discussion will lead in that direction. You can either give them the definition of "the act or result of (the base word)" or have them check the dictionary.

3. Next, ask students about the spelling change when *-ion* is added to each of the words. If they note that suffixes may change the part of speech of a word, terrific! If not, you can point out that the verb *illustrate* becomes the noun *illustration*—the result of illustrating—with the addition of *-ion*. That is something you will be exploring with them explicitly.

In these examples, make sure that students understand that the base words and the words derived or generated from them share the same *core* meaning. Often students have learned from the definition of a suffix that "it changes the meaning of a word"; that gets in the way of seeing the common meaning. Only a few suffixes radically change the meaning of a word—for example, *-less* (*luckless*).

4. This type of explicit walk-through of how the suffix works with the base word in a sentence may often be followed by word sort activities (discussed in the next activity).

5. Apply knowledge of the new affix in context. For example, after teaching the most common meaning of the prefix *in-* with familiar words ("not" or "the opposite" of whatever it is added to), model how to apply this knowledge to an unfamiliar word in which the prefix occurs:

Display the following sentence:

I never felt as incompetent as when I played in a pickup game with three of the first-string varsity.

"OK, we see *in-*, don't we? If we cover it, what's left? Right—*competent*. When you are *competent* in doing something, what does that mean? So when we add *in-* back on, would the meaning 'not' work in this sentence?"

Activity 2.2 Word Sort Activities to Support Generative Morphology with Base Words and Affixes

Using base words and affixes as the focus, the following sort is an example of how the common suffix *-ion* affects the meaning of the base to which it is attached.

VAU 9-12: 4.b

Procedures

1. Explain to students that you're going to examine the suffix *-ion* and its effect on base words. Begin by pairing the base word *elect* with *election* in one column and *possess* with *possession* in the other column.

2. Next, have students pair up bases with their derivatives, in the following manner:

elect	possess	predict
election	possession	prediction
extinct	oppress	detect
extinction	oppression	detection

Ask students what they notice about the words in each grouping. How are the base word and its derivative alike? How are they different? These questions will move the students toward thinking about meaning and about the role each word plays in a sentence—the act (e.g., *oppress*) in comparison to the result

of the act (*oppression*), or the verb (e.g., *detect*) versus the noun (*detection*). Encourage students to cast the words into sentences; this will also highlight the similarities and differences.

Generative Morphology: Beyond the Basics

Knowledge of Latin and Greek word roots is potentially a very powerful aspect of generative vocabulary knowledge. As students learn meanings for the most frequently occurring of these roots in general academic vocabulary—such as *struct* (meaning “build”)—and in domain-specific vocabulary, they may generate an exponential boost in their vocabulary growth. As an additional benefit and byproduct, this knowledge should help high school students significantly on the vocabulary components of the SAT and the ACT.

To guide your selection of which roots to emphasize, Table 2.2 presents some of the most frequently occurring Latin and Greek roots in general academic vocabulary. Students may learn them and revisit them throughout the middle and secondary grades. We want to emphasize that the sequence in Table 2.2 provides general guidelines only and is not hard and fast. There should be a degree of serendipity in the exploration of words—words will pop up on many different occasions. You and your students will want to puzzle about why particular words work the way they do. Should you wish a more structured sequence and presentation of roots, lessons in Chapters 5–9 will be a strong and supportive foundation.

The following principles guide instruction in teaching about Greek and Latin roots:

1. Begin with a root in familiar words. These words should contain affixes students have already learned.
2. Examine unfamiliar words whose meanings, when affixes and roots are examined, are clear.
3. Examine words whose meanings, when affixes and roots are examined, are more abstract or challenging.

Activity 2.3 illustrates how these principles may be applied. (See also Bear, Flanigan, Hayes, Helman, Invernizzi, Johnston, & Templeton, 2014.)

Activity 2.3 Applying the Principles

Procedures

1. Begin with a root in familiar words. For example, a science teacher may list the following words and ask students what they think each word part means:

microscope *telescope* *microphone* *telephone*

If necessary, the teacher may mention how the two parts of *microscope* give a sense of viewing (pointing to *scope*) something that is very small (pointing to *micro*).

“If something is very small we say it is *microscopic*. A *telescope* is used to view [pointing to *scope*] something that is far [pointing to *tele*] away. *Microphone* literally means ‘small sound.’ A microphone is not itself a small sound but helps us hear sounds that are close by that would otherwise not be heard very well. How is that different from a *telephone*?”

English/language arts teachers may write the words *tractor* and *contraction* and underline the root *tract* in each:

“These words contain the Latin word root *tract*, meaning ‘to pull.’ Is a *tractor* used to *pull* something? Of course! We think of a tractor pulling a combine or a tractor/trailer combination. OK, let’s think about the word *contraction* [display on smart board]. What are some examples of *contractions*? [Write them on the smart board as students call them out.] So, we have the words *can’t*, *didn’t*, *wouldn’t*, and *don’t*. These contractions each came from two words: *can not*, *did not*, *would not*, and *do not*. What happened to these two-word pairs? They were each *pulled together* into one word. So, looking at the word *contraction*, it literally means the act [pointing to *-ion*] of pulling [pointing to *tract*] together [pointing to *con*].”

VAU 6-8: 4.b

VAU 9-12: 4.b

2. Examine unfamiliar words whose meanings, when affixes and roots are examined, are clear. For example, walk through the word *intractable*:

“With *intractable*, *in-* is probably a prefix, so take that off. What’s left? *Tractable*. Knowing the meaning of *tract*, if we say that someone is *tractable*, what might that mean? Right! They are easily pulled along or influenced. If someone is *intractable* they are *not* easily pulled along; they are sticking to their position.”

3. Examine words whose meanings, when affixes and roots are examined, are more abstract or challenging. For example, display the following sentence:

Understanding Avogadro’s number is hard for me because it’s a really abstract concept.

“If it is difficult or challenging to understand something, we are *pulled* (point to *tract*) *away* (point to *abs-*) from understanding the concept rather than being pulled *toward* understanding.”

Activity 2.4 Word Sort Activities to Support Generative Morphology with Greek/Latin Roots and Affixes

Procedures

1. After initial direct walk-throughs in which you’ve illustrated how Greek and Latin roots work within words, present a number of words such as *dictate*, *audible*, *contradict*, and *audience*. Ask students to sort them according to their common root. This could either be done individually or in pairs. The students’ completed sort would look like the following:

dictate	audible
contradict	auditorium
verdict	auditory
diction	audience
edict	audiotape
dictionary	inaudible
dictator	audiology
benediction	audition
indict	

2. Engage the students in a discussion of what they think the roots might mean. Ideas are checked in the unabridged dictionary. Because there is a mix of known and unknown words, students discuss what they think the unknown words might mean, given the possible meanings of the roots. For *dict*, the sense of “having something to do with talking or speaking” usually emerges—although *dictionary* may be a puzzler at first. Depending on the students’ background knowledge, some may have a sense of *indict* and *benediction*, but these might also need to be checked against the dictionary. The meaning of *aud* is pretty straightforward in *audible* and *auditory*, but how does the meaning “to hear” work in the words *audition* and *auditorium*? As with *indict* and *benediction*, after students offer their ideas, the dictionary may be the final judge.

Applying Generative Morphological Knowledge and Context Clues

Activity 2.5 Applying the Basics: Strategy for Determining the Meaning of Longer Words

Students should apply knowledge of the prefixes and suffixes they are learning—and later, Greek and Latin roots—to figuring out unfamiliar words in their reading. Here are the steps:

- Look at the word for meaningful parts—base word, prefixes, or suffixes.
 - If there is a prefix or a suffix, take it off so you can find the base.
 - Look at the base to see whether you know it or if you can think of a related word (a word that has the same base).
 - Reassemble the word, thinking about the meaning contributed by the base, the suffix, and the prefix. This should give you a more specific idea of what the word is.



ROOT TRACT, DAY 1 AND DAY 2

Kelly Rubero discusses the Latin root *tract* with her class.

VAU 6-8: 4.b

VAU 9-12: 4.b

VAU 6-8: 4.a, 4.b, 4.c, 4.d

VAU 9-12: 4.a, 4.b, 4.c, 4.d

2. Try out the meaning of the word in the sentence; check whether it makes sense in the context of the sentence and the larger context of the text that is being read.
3. If the word still does not make sense and is critical to the meaning of the overall passage, look it up in the dictionary.

Procedures

1. To illustrate how to figure out an unfamiliar word, underline the word *ungovernable* in the following sentence:

The country reached the point where it was ungovernable.

2. Pointing to *ungovernable*, you ask the students, “If you ran into this word in your reading, how would you figure it out? Here’s our strategy: First, are there any prefixes or suffixes? If so, take them off.” Remove *un-* and *-able*.

3. “What’s left? Right, the base word *govern*. Do you know it? Now, put the affixes back on—the suffix and the prefix—think about the meaning, and try out that meaning in the context of the sentence. Sometimes, you need more than just the sentence—you may need to think about the paragraph or even the topic or main idea of the whole text.”

It takes some time to walk students through this strategy at first. Be consistent and systematic in doing so, however: Understanding and getting a feel for this way of thinking about the role of morphology in figuring out words builds an incredibly strong foundation for independent word learning.

You may find the “Break It Down” template in the PDToolkit to be very helpful in reinforcing this process and the thinking that goes along with it. Table 2.4 organizes some examples of teacher talk into language for engaging students in thinking about *why* and *how* they are applying their generative morphological knowledge.

Activity 2.6 Teaching the Types of Context Clues

Applying generative morphological knowledge in context is most effective when you directly teach different types of context clues (Baumann, Edwards, Font, Tereshinski, Kame’enui, & Olejnik, 2003; Graves, 2006). There are four types of context clues that deserve attention (Templeton & Gehsmann, 2014):

- *Definition*. The author explicitly provides the meaning of the word in the sentence or selection: “It is earth’s only natural *satellite*. A satellite is an object that travels around another object.”
- *Synonym*. The author uses a word similar in meaning: “A glove is the *fundamental*, or basic, tool of an outfielder in a baseball game.”
- *Antonym*. The author uses a word opposite in meaning: “Cindy found this to be *tedious* work—very different from the almost constant excitement when she was river rafting.”
- *General*. The author offers several words or statements that give clues to the word’s meaning: “Antonio felt like an *outcast* in his new school. No one sat close to him at lunch or asked him to join in any sport.”

Provide examples of these different types of clues, discuss them with students, and encourage students to keep this list in their Vocabulary Notebooks. Discipline-specific examples are offered in Chapters 5–9.

Occasionally, generative morphological knowledge may not seem to help, so include counterexamples that emphasize how to rely primarily on the context in which an unfamiliar word occurs.

Procedures

1. After exploring how knowledge of the prefix *in-* helps to determine the meaning of unfamiliar words, you may share the following sentence:

Many scientists believe that these higher-than-average summer temperatures are indices of a genuine climate change.

2. Your discussion may go something like this:

“Do the letters *in-* seem to be a prefix? If we cover them, what is left? Would *dices* make any sense? We may not even be sure how to *pronounce* this word. And even if we pronounce it correctly, if we

VAU 6-8: 4.a, 4.b, 4.c, 4.d

VAU 9-12: 4.a, 4.b, 4.c, 4.d

TABLE 2.4 Questions for Critical Thinking about Generative Morphological Knowledge

PROBLEM SOLVING	REFLECTION	APPLICATION AND TRANSFER
What do you notice about these words? How are they alike? How are they different from this set over here?	Tell me how it went. What kinds of questions were raised? What were you sure of/unsure of?	What if we changed that prefix to another prefix? What would the word mean then?
Where in the word do you find the base word? root?	In your reading, which word root do you see more frequently?	If you weren't sure what a word meant, what could you do to figure it out?
How else could you figure that out?	How did you figure that out? What word parts did you use?	Can you think of other words that have the same root or base word?
What are some ways we could figure out the meaning of that word? How could we check?	Why do you think it has that root (or prefix or suffix)?	One of the things people do when they are unsure about a word is to think of another word they know that has a similar base word or root. Let's try it. Let's say you don't know the meaning of <i>recital</i> . What other word might you think of that you do know?
Which part of the word are you sure about? Which part are you not sure about?	Do the word parts give you information about the word's meaning?	What other word can you think of that has the same root?
Can you divide the word into parts? What is the base word? Are there any prefixes or suffixes?	Write down an observation about this word that you wish you had made.	Let's try making some new words with these word parts. Let's try it and see whether we can guess the meaning.
How are you planning to go about this? What resources will you use?	What problems did you come across?	How or when could you use this word?

Source: "Critical Thinking about Vocabulary" (2014). *Vocabulary Their Way: Words and Strategies for Academic Success* (Teacher Edition) (pp. T18–T21). Glenview, IL: Pearson.

haven't heard of it before we wouldn't get any clue to the meaning. We've got to think about how the word fits in the sentence, the paragraph, and the overall topic of what we're reading about.

"OK, this sentence with the word *indices* in it occurs in an article on global warming. Keeping that in mind, and thinking about the word in this specific sentence, it seems to me that the word could either mean the temperatures are causing the genuine climate change or are telling us something about genuine climate change. But as we've been learning, higher temperatures are caused by other things—they don't just happen by themselves. So, that's probably not the meaning in this sentence. On the other hand, the meaning of 'telling' or 'letting us know' might work here. Those words seem to substitute nicely in the sentence. Let's look it up to check my hypothesis."

Along the way, students may realize—or you will point out—that *indices* is a plural form of *index*.

This type of modeling or think-aloud and questioning has as much to do with teaching *comprehension* as it does vocabulary (Beck & McKeown, 2008). This is important to keep in mind. This type of discussion is also very effective in helping students apply both knowledge of word structure with context, or context alone, in determining the meaning of unfamiliar words (Goerss, Beck, & McKeown, 1999; Stahl & Nagy, 2006).

Word-Specific Activities

As you have seen, most of the words in English in general, and in subject areas specifically, can be decomposed into identifiable affixes, bases, and roots. One of the most powerful means of learning, remembering, and using new words is by attending to these meaningful elements. In this section, additional ways of introducing, developing, and extending these understandings of specific words are examined. The vocabulary activities selection chart in Table 2.5 will help you match instructional activities with your instructional goals.

TABLE 2.5

Vocabulary Activities Selection Chart

What, specifically, do I want my students to know about the word/ concept? I want my students to:	Word Wall	Concept Sorts	Vocab-O-Gram	Vocabulary Cards and Clue Review	List/Group/Label	Semantic Gradient	Analogies	Concept Map	Vocabulary Web	Venn Diagram and Compare/Contrast	4-Square Map
Compare and contrast two or more concepts in depth	✓	✓			✓		✓			✓	
Know the defining features, and non-features, of one concept in depth								✓			✓
Develop a deep and elaborate understanding of one concept/word		✓						✓	✓		✓
Differentiate shades of meaning between related words	✓				✓	✓	✓				
Organize related concepts by main ideas, subtopics, and details	✓	✓	✓		✓						
Summarize and connect related concepts	✓		✓		✓		✓			✓	
Self-select words and “notice” interesting words in reading											
Apply the word/concept beyond the classroom	✓										
Review word definitions in a motivating format				✓							
Compare and contrast two or more concepts in depth			✓		✓						

What, specifically, do I want my students to know about the word/concept? I want my students to:	Word Wall	Concept Sorts	Vocab-O-Gram	Vocabulary Cards and Clue Review	List/Group/Label	Semantic Gradient	Analogies	Concept Map	Vocabulary Web	Venn Diagram and Compare/Contrast	4-Square Map
Know the defining features, and non-features, of one concept in depth				✓	✓	✓	✓				
Develop a deep and elaborate understanding of one concept/word	✓	✓			✓	✓	✓				
Differentiate shades of meaning among related words					✓						
Organize related concepts by main ideas, subtopics, and details	✓	✓			✓		✓	✓			
Summarize and connect related concepts			✓		✓		✓	✓			
Self-select words and "notice" interesting words in reading				✓							
Apply the word/concept beyond the classroom				✓							
Review word definitions in a motivating format					✓		✓				

Our purpose with the chart is to give you an informed way of thinking about instructional activities. In Chapters 5–9, you will find this type of chart for each disciplinary area.

You will find templates for a number of the activities described in this chapter in Appendix A, and in the PDToolkit.

Activity 2.7 Vocabulary Walls

Purpose

Vocabulary Walls are a visual, “living” repository of essential classroom vocabulary that serves as a springboard for reading, writing, thinking, and talking about vocabulary terms and related concepts.

Vocabulary Walls, or “Word Walls” as they are often called, are an essential classroom resource, providing the foundation for a number of activities. To learn domain-specific vocabulary, students need many opportunities to *read* that vocabulary. Vocabulary Walls place the most essential words front and center, giving students multiple opportunities to read the words that are most important for their content-area learning.

Procedures

1. *Choose words to post.* For any content area, identifying both discipline-specific academic words and general academic words is essential. Students need opportunities to practice with both types of words in order to increase their access to academic texts. Following are examples of what types of words might be included on classroom Vocabulary Walls:

- Key terms from the content area that will be relevant all year
- Key terms from the content area that relate to the current unit
- General academic words that support understanding of the key terms

The first list item would likely be posted for the entire year, while the second two list items would change from unit to unit. Students can be an active part in the process of developing word lists for Vocabulary Walls. In addition, after a few classes of introductory activities in a unit, students could work together to generate a list of key content words and general academic words that they think are most relevant to the unit of study they are about to enter.

2. *Physically create the Vocabulary Wall.* This part of the process can and should involve students. In addition to the words themselves, materials for Vocabulary Walls may include technical definitions, student-friendly definitions, and graphic support. These materials can be created by students in small groups or as homework or extra credit assignments. Involving students in the creation of the materials provides an additional opportunity for students to practice with the words and helps the students invest in their classroom learning environment at the same time. However, if finding student work time to put toward this activity is a challenge, teachers can often inexpensively print or handwrite the words, and Vocabulary Wall materials can also be ordered.

Not all teachers have their own classroom, and this is a very real issue for utilizing Vocabulary Walls. To address the space limitations, we suggest two possible solutions. The first solution is digital. Do you have a smart board, a doc cam, or an overhead projector? If so, keep your lists on a flash drive or on transparencies and “post” them digitally on a regular basis. The second solution is a portable one. With classroom space limitations, having students keep Vocabulary Notebooks comes in very handy (see Activity 2.8, pp. 37–38). The front and back covers can serve as individual Vocabulary Walls for each student. Laminating a set of Vocabulary Wall cards to be passed out at the beginning of each class might also be a viable solution.

3. *Use the Vocabulary Wall.* Possibilities for using Vocabulary Walls are endless, limited only by your imagination. Here, we will share a set of specific activities and ideas that can be utilized on a daily basis, and we group them according to the “four Rs”: *reward, require, respond, and record*. Some of these activities may be a better fit than others for specific teaching styles; pick and choose what works for you!

- *Reward.* Provide recognition of students when they catch their peers or their teachers using Vocabulary Wall words, or when they point out the words in instructional materials. A teacher might keep a running tally on the board, or ask students to do so in their notebooks, to keep track

RL 6-8: 4
RL 9-12: 4
RIT 6-8: 4
RIT 9-12: 4



PROMOTING WORD CONSCIOUSNESS

Amy Burton describes one way in which her students examine words and add them to the Word/Vocabulary Wall.

of instances when a student notices a Vocabulary Wall word being used and can comment on how it is being used. Such an activity raises students' awareness of ways in which vocabulary words appear in instructional materials and classroom conversation.

- *Require.* Require that students use Vocabulary Wall words—and use them accurately in terms of their meaning—when they do writing assignments of any kind, from brief exit slips to full essays.
- *Respond.* Craft classroom discussion activities so that students have to respond to each other and the teacher using Vocabulary Wall words.
- *Record.* Have students keep word journals as a section in their notebooks, or keep an entire Vocabulary Notebook, where they record information about important words. Such information might be concept maps, morphological information, or graphics. As classroom discussions occur around Vocabulary Wall words, students can record new information in their journals.

Following are suggested *entry* and *exit slip* prompts using Vocabulary Wall words:

- Write down the words _____, _____, and _____ from our Vocabulary Wall. With a partner, write down everything you think you know about them.
- Here are two questions we'll be answering today. Which Vocabulary Wall words do you think will be most important in addressing these questions?
- Write down two words from our Vocabulary Wall and explain the relationship between them.
- Write down one new thing you learned today and use at least two of our Vocabulary Wall words in your response.
- From our Vocabulary Wall, select the words that were the most important from today's lesson.

Activity 2.8 Vocabulary Notebooks

Purpose

Vocabulary Notebooks serve as a place to record and reflect on word learning, including identifying the meanings of specific words, analyzing the underlying structure of words, and making connections to contextual reading and writing.

Vocabulary Notebooks are an integral part of students' word learning. They are used to record word sorts, concept sorts, and other appropriate vocabulary activities, as well as to record information about new words encountered in their reading. Composition books, spiral-bound notebooks, or three-ring binders work well for Vocabulary Notebooks, which are used for recording resources like the following:

- Collaborative word study activities, including concept sorts, interesting collections of words, and key vocabulary for a unit or theme study
- New and interesting words students encounter in their reading

When students do word or concept sorts with target words, they may write these in columns in their notebooks, just as they sorted them. At the bottom of their sorts, they write, in their own words, what they learned about the words and their features: meanings of words, meanings of roots, and affixes.

Just as English/language arts teachers encourage their students to write down "golden lines" from their reading—examples of language that reached out and grabbed them as they were reading—students should be encouraged to record new and interesting words they encounter. We encourage them to be alert to "golden words"—words that really catch their fancy. They should write the sentence in which the word occurs, underline the word, and include any other information about it that may be helpful. Although this is usually a new word, it could be a familiar word used in a new, engaging way. The following steps are commonly used for entering new and interesting words in the Vocabulary Notebook.

Procedures

1. While reading, students place a question mark above words they find difficult and cannot figure out using morphological analysis and context. They place a question mark in the margin for easy reference. If it is a book they cannot mark in, they use a sticky note. When through reading, they go back to the question marks or sticky notes.

VAU 6-8: 4.a, 4.b, 4.c, 4.d
 VAU 9-12: 4.a, 4.b, 4.c, 4.d
 RL 6-12: 4
 RIT 6-12: 4
 WS 6-12: 2.d, 3.d

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Amy Burton talks with students about how to use their Vocabulary Notebooks as a resource.

VAU 6-8: 4.b, 4.d

VAU 9-12: 4.b, 4.d, 5.b, 6

2. The students each select a word that really intrigues them. They write their selected word in their notebooks, followed by the sentence in which it was used, the page number, and an abbreviation for the title of the book. (Sometimes the sentence will be too long, but they should write enough of it to give a clue to meaning.)

3. Next, the students think of other words that are like this word, and write them underneath the part of the word that is similar.

4. Using the dictionary, record the meaning (the one that applies to the word in the context where they found it) using just a few words. Looking above and below the dictionary entry, students should find similar words (both in form and meaning) and add them to the list started in step 3. If the dictionary gives the origin of the word, they can add it to the notebook entry if it is interesting.

5. As they are doing with vocabulary words placed on the Vocabulary Wall (see Activity 2.7, pp. 36–37), students should collect examples of the word and its use outside of the classroom—where they have seen it and heard it—and enter their findings in their Vocabulary Notebooks.

6. Review the words at least once a week.

A realistic goal is to collect 5 to 10 words a week. These words may be brought up in class and shared.

Activity 2.9 Concept Sorts

Purpose

To develop a deep understanding of concepts through the process of comparing, contrasting, and categorizing.

Concept sorts follow the same format as do word sorts, but the focus is on word *meaning* rather than structure. (On occasion, the two may overlap.) The words to be sorted are key vocabulary words, and any important related words, for a topic of study. To provide more support, you may tell students the categories into which they will sort the words; we refer to this as a teacher-directed *closed sort*. If you believe students need less support, ask them to come up with their own categories as they examine the words—an *open sort*.

Procedures

1. The vocabulary words may be written on index cards, sticky notes, or in a Vocabulary Notebook or learning log.

2. In a unit on “Producers and Consumers” in an earth science class, for example, present examples and have the students work in pairs to do a closed sort in which they will sort the terms according to whether they have to do with producers or with consumers. Afterward, the sorts will be compared. You may have the students do this same sort at the conclusion of the unit as one means of assessing their learning. The completed sort is shown below. (Note: Students may check the meaning of roots about which they are unsure: *troph*, for example, means “nutrition.”)

<i>Producers</i>	<i>Consumers</i>
autotrophs	heterotrophs
(<i>auto</i> , self + <i>troph</i> , nutrition)	(<i>hetero</i> , other + <i>troph</i> , nutrition)
photosynthesis	herbivores
solar energy	carnivores
chemosynthesis	omnivores
plants	detrivores
biomass	decomposers
	animals

3. When you have students do an *open* concept sort, you may offer different degrees of support if you feel it is necessary: Students may be told there are two or three categories, or that there is a certain number of terms in one category and a certain number in the other category.

4. Students may record one or two sorts in their Vocabulary Notebooks. As students move along through the unit of study, they may re-sort as well as come up with new categories and new words to add. They may also create a *Power Map* from their concept sort (see Activity 2.26, pp. 51–53). All of these

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Mary Keller describes and teaches a concept sort in Algebra.

sorts allow both students and teachers an opportunity to revisit during and after the unit of study to reflect on and confirm learning and understanding (see Chapter 3).

Activity 2.10 Content Directed Reading–Thinking Activity (Content DR-TA)

Purpose

To use students' predictions and hypotheses as a motivator for purposeful and focused reading in informational text.

Many educators are familiar with the use of the Directed Reading–Thinking Activity (Stauffer, 1969; 1975) in stories, in which teachers ask students to make predictions and engage in rich discussions about narrative texts at preplanned stopping points. However, we rarely see the incredible power of predictions used in informational texts—Content DR-TAs. Instead of asking your students, “*What do you think might happen next?*” as we do in narratives, in Content DR-TAs we ask students to make predictions about the content they are about to learn *before* reading, and then to confirm or modify these initial thoughts after reading. These predictions, guided by focus questions (see Chapter 6, Figure 6.10, for examples from the discipline of history), are one of the most powerful motivators for reading and learning we know; your students may not initially be interested in the content, but they will be interested in their predictions about the content, because they want to see whether they are right.

Procedure

1. Identify a vocabulary term or concept that students are going to explore deeply during a unit of study, particularly in a reading. For example, in a unit exploring water resources, an important concept might be *water rights*.
2. Identify three to four *focus questions* for that vocabulary term or concept. These focus questions should target the major components of the concept you want to target. Skim the text in advance to help you develop these focus questions. Or pick a few thought-provoking, higher-level questions from the end of the section/chapter. Focus questions usually include:
 - a. Higher-level *why* or *how* questions
 - b. Thought-provoking questions without one right answer
 - c. “Eye-openers” that focus students on important facts that make a larger point
3. Ask students to try to predict their answers to the questions before reading or beginning to explore a topic (including before a lecture, viewing a film, or doing research). This hypothesis-making step is powerful because it (1) activates their background knowledge, (2) helps you as a teacher assess what background knowledge your students have, and (3) provides a highly motivating purpose for reading (“Is my prediction *right?*”).
4. Before reading, share student predictions as a whole class, asking students to explain their hypotheses about the upcoming reading. This step is essential. As a teacher, you want to “stir the pot,” getting students with opposing ideas engaged and debating (for example, “Many of us think property owners should have first rights to the water from a river, and the rest of us think that doesn’t sound fair—let’s start reading to see how what you think compares to what the law says, and what the opinions of different stakeholders are”).
5. During reading, individually or in pairs, students write their answers to the focus questions. They confirm the parts of their predictions that were correct, and modify the parts that were not correct or were incomplete, noting where they found the information. This actively engages students during the reading.
6. Bring the class back together to share what students learned about each focus question, affirm correct predictions, clarify misconceptions, and connect with other vocabulary.

Modifications/Extensions

- Instead of focus questions, you can use true/false statements, such as “Brownian movement tends to lower the temperature of a gas”; “It is impossible to divide by zero.” Students decide on true/false answers before reading, discuss their decisions, then revisit their answers after reading.
- Students can use sticky notes to take notes during reading, then reference them as they discuss afterward.

VAU 6-8: 4.a, 4.b, 4.c, 4.d
 VAU 9-12: 4.a, 5.b, 4.c, 4.d,
 5.a, 5.b, 6
 RIT 6-12: 4

Activity 2.11 Quick-Writes and Pair-Shares

Purpose

To provide for valuable processing and reflection time with important concepts, and to seamlessly integrate active academic vocabulary practice.

Opportunities for students to write and discuss their preconceptions, their budding understanding, and their mastery of concepts cannot be underestimated. Quick-Writes are opportunities for students to “write to learn” and crystallize their thinking. Pair-Shares fulfill needs for social connection and collaboration in the learning process. And both Quick-Writes and Pair-Shares provide a source of informal assessment as teachers monitor discussions. Quick-Writes and Pair-Shares can be used with any words, and at any point in a lesson. They can be used in the beginning of a lesson to prime students’ thinking and help students attend to important new words and concepts. They can be planned activities or “on-the-fly” activities used any time a teacher determines that students need an opportunity to process and connect new words. Finally, they can be used following in-depth study of words and concepts as an opportunity for students to cement and confirm their understanding. For busy secondary teachers, often with upwards of three separate course preparations and 150 students, Quick-Writes and Pair-Shares just might be the easiest and most seamless ways to incorporate active academic vocabulary practice. Quick-Writes and Pair-Shares can be seamlessly integrated to lessons, do not require substantial time during a lesson, and provide the essential active practice with vocabulary words that students require for content-area learning.

Procedures

1. During lesson planning, identify key terms that students will need practice with in order to meet the objective for the lesson.
2. Write brief prompts that can be “sprinkled” during the lesson to give students active practice with discussing or writing about vocabulary words.
3. Have generic prompts on hand to use at any time during a lesson when students’ cues suggest that they need a chance to process an important idea. Such cues include both looks of confusion and eyes glazing over. In the case of the latter, a Quick-Write or Pair-Share can re-engage students who have tuned out from the lesson.

Modifications/Extensions

Both Quick-Writes and Pair-Shares can be integrated with Vocabulary Walls and Vocabulary Notebooks. Quick-Writes can be recorded in Vocabulary Notebooks and then revisited and revised during continued study of key terms. Prompts for both Quick-Writes and Pair-Shares can be related to Vocabulary Wall words (e.g., “We just watched a short video on genetics. Turn to a partner and discuss which words from our Vocabulary Wall most closely relate to what we saw in the video.”).

Activity 2.12 Vocabulary Jigsaw

Purpose

To help students’ build expertise in using concepts collaboratively, and to then become responsible for teaching other students.

The Jigsaw strategy (Aronson & Patnoe, 1997) is a research-based activity that allows for students to build expertise in small groups, and then to teach other students what they have learned with their peers. With a Vocabulary Jigsaw, students are provided the scaffolding needed to build depth of word knowledge and build a rich representation of a particular concept. Students are first divided into four or five small groups. Each group is assigned a different vocabulary word representing an important concept. In these groups, students become experts on their concept by reading, discussing, writing, and/or viewing digital media. The students in each group work together to build a rich understanding of the concept. Then the groups are shuffled so that each *new* group includes representative students from each of the *original* groups. In the new groups, students teach each other what they learned in their original groups, and then the new groups tackle a bigger concept or question that ties all of the concepts together.

VAU 6-12: 4.a

VAU 9-12: 5.a, 5.b

WS 6-12: 2.d, 3.d

RL 6-12: 4

RIT 6-12: 4

VAU 6-8: 4.a, 4.b, 4.c, 4.d

VAU 9-12: 4.a, 5.b, 4.c, 4.d,

5.a, 5.b, 6

RL 6-12: 4

RIT 6-12: 4

Although this activity may be time consuming to prepare, the payoff for students is substantial. With the right set of resources from the teacher, which are getting easier and easier to provide in this era of accessible digital media, students become stewards of their own and each other's learning. A Vocabulary Jigsaw can be used with discrete technical terms (e.g., *hadron*, *entrepreneur*, *scatterplot*) or with broader concepts (e.g., *geopolitics*, *color scheme*, *coordinate system*). In the case of technical terms, the Vocabulary Jigsaw would not require as much time. In the case of broader, more abstract concepts, the activities Vocabulary Jigsaw could be spread over several lessons.

Procedures

1. The teacher divides students into five to six groups of students with four or five students each. These are the "home" groups. Each home group is assigned a different vocabulary word or key concept.
2. Each group is given either a packet of information on the assigned concept or the opportunity to research the assigned concept using textbooks or digital devices. The members of each home group are all responsible for becoming an expert on the assigned concept.
3. The teacher then reshuffles the group into the jigsaw, or teaching groups. Each new group consists of members from each of the original home groups. In the teaching groups, each member is responsible for teaching his or her new group about the concept he or she studied with the home group.
4. In the teaching groups, it is beneficial for all students to have a graphic organizer, and for one student to serve as a note-taker for recording what they learn from each other. Such a note-taker can also serve as valuable formative assessment for the teacher, documentation for the teacher to observe and correct any misconceptions that arose about the concepts.

Modifications/Extensions

- Following the vocabulary jigsaw, teachers can direct students' attention to the particular content standard that was addressed.
- In conjunction with the vocabulary jigsaw, students can create materials for Vocabulary Walls and record their learning in vocabulary journals. Each home group could prepare a poster on the assigned concept that can be posted for the duration of the unit of study as a reference point. Students can record their learning in their vocabulary journals and use their notes as reference points for future discussion, writing, and debate.

Activity 2.13 Sentence/Paragraph Puzzles

Purpose

To give students opportunities to explore how key vocabulary terms are used in connected text.

All vocabulary instruction should serve comprehension. In other words, we want students to understand key words so that they can understand and use those words in speech and writing. Sentence and paragraph puzzles can build students' knowledge of specific words *and* help them understand how those words are used in the language of the disciplines. When students have to piece back together a sentence or a paragraph that includes key terms, they need to be able to distinguish between main ideas and supporting phrases/details. The opportunity for students to practice with key terms in the authentic and connected texts that express the relationships between them can be powerful. In addition to helping students build understanding of key disciplinary terms, sentence and paragraph puzzles can also help students build understanding of connectives—those signal words that connect and show relationships between ideas (*however*, *therefore*, *first*, *because of*, *following*).

Procedures

1. Preview the texts that students will be reading as part of a lesson. Select a brief excerpt that includes several key terms that students need to learn.
2. Cut the excerpt into chunks, either sentences or parts of sentences (depending on length of excerpt and complexity of text).

VAU 6-8: 4.a, 4.b, 4.c, 4.d
 VAU 9-12: 4.a, 4.b, 4.c, 4.d,
 5.a, 5.b, 6
 RL 6-12: 4
 RIT 6-12: 4

3. Students work in groups to reassemble the text, making note of what connectives and other cues helped them decide the order of the text.
4. Students write key terms from the text in their vocabulary journals, explaining what they learned about them from the passage.

Modifications/Extensions

Sentence and paragraph puzzles can be used with many different goals. The primary purpose of the puzzles may be to give students practice with specific terms or with the overall density of academic language. However, despite the primary purpose, the very act of piecing together clauses and sentences can make that dense academic language more accessible to students, allowing them to better comprehend and use such language in later activities. Sentence and paragraph puzzles need to be (and can easily be) differentiated for students. Within the same class, some students may use all of the allotted time to piece together just a few clauses, whereas others may be able to piece together a full paragraph. Teachers can group their students so that those with a stronger background in academic language can scaffold those who struggle with comprehending academic language. Alternatively, teachers can group students based on their strengths or challenges with academic language and, accordingly, assign different lengths or complexities of puzzles.

Activity 2.14 Vocab-O-Grams

Purpose

To develop deeper understanding of key vocabulary terms by classifying them according to different aspects of the text in which they appear.

The Vocab-O-Gram is typically based on the structure or elements of a story (Allen, 2007; Blachowicz & Fisher, 2010). The activity engages students in making predictions about how particular key vocabulary words will be used by the author in developing the narrative. It may also be adapted for use with content material. As with concept sorts, Vocab-O-Grams help to activate background knowledge and generate interest in and questions about the story or topic. The following procedures are for a Vocab-O-Gram for a secondary English/language arts class.

Procedures

1. To introduce this activity, prepare a Vocab-O-Gram similar to Figure 2.1, based on the short story “Checkouts” by Cynthia Rylant (1990). (Once students understand how to use a Vocab-O-Gram, you may

FIGURE 2.1 Vocab-O-Gram for Cynthia Rylant’s “Checkouts”

Discuss what you know about each of the words. Think about how Cynthia Rylant might be using the words to develop her story and write the words where you think they will be used to develop each story element. The words may be used more than once. If there are words that your group is not sure about, list them as Mystery Words. Use the vocabulary words to make predictions about “Checkouts,” and write your predictions in the right-hand column next to the words.

intuition	solitary	distract	lapse	impulse	bland	shards	deftly
reverie	meditation	depression	witty	grocery	cocky	dishevelment	
Setting							
Characters							
Problem or Goal							
Actions							
Resolution							
What Question(s) Do You Have?							
Mystery Words							

VAU 6-8: 4.a, 4.b

VAU 9-12: 4.a, 4.b, 4.d, 5.a,
5.b

RL 6-12: 4

RIT 6-12: 4

in the future simply display the vocabulary words and ask the students to sketch the Vocab-O-Gram chart in their Vocabulary Notebooks and then fill in the words.)

2. Arrange the class into groups of three to five students each. Announce that they will be reading a short story by Cynthia Rylant from a collection of short stories titled *A Couple of Kooks and Other Stories about Love*. Pass out copies of the Vocab-O-Gram to each group. Read and discuss the directions with them:

1. Discuss what you think each word means.
2. Discuss how you think the author will use each word to develop the story. In the left-hand column, classify the words according to the story element each word may be used to develop; words may be classified into more than one category. Unfamiliar words you have never heard or seen before are listed in the "Mystery Words" category.
3. Based on the words placed in each category, make predictions about how you think the narrative will develop. Write these predictions in the right-hand column.
4. List questions you have about the narrative. [These questions will emerge from the discussions about word meanings and how the words might be used to develop different elements of the story, as well as from your predictions. Questions become, in effect, *purposes* for reading.]
5. Share your classifications, predictions, and questions. [Based on this discussion, decide whether any of the vocabulary words you selected need further discussion or whether any uncertainties may be resolved as students read the words in the context of the story. Often, words that a particular group listed as Mystery Words become clarified in the whole-class discussion.]
6. Read the story.

After the story is read, predictions and questions are revisited and perhaps revised, and vocabulary words are revisited and discussed.

VAU 6-8: 4.a, 4.b, 4.c

VAU 9-12: 4.a, 4.b, 4.c, 5.b

Activity 2.15 Vocabulary Cards

Purpose

As shown in Figure 2.2, vocabulary cards may be used for the most important key vocabulary in a selection or unit of study—those words that represent the "big ideas."

VAU 6-8: 4.a, 4.b, 4.c

VAU 9-12: 4.a, 4.b, 4.c, 5.b

RL 6-8: 4

RIT 6-8: 4

1. Model how to make these cards so that students will subsequently be able to make their own. The basic format has the key vocabulary word on the front and the definition on the back.

2. As students construct their own cards, they should select the definition from the text itself, include a sentence in the text that uses the word, or both. For informational texts, this is fairly straightforward. For narrative texts, students may need to refer to a glossary (if the selection is in an anthology) or to a good dictionary. *Susceptible* in Figure 2.2 is from a unit based on Charles Dickens's *Oliver Twist*.

3. As students learn and use different types of graphic organizers, they may also include these formats on cards—for example, the back of the cards may be a 4-Square design (see Activity 2.24, p. 49).

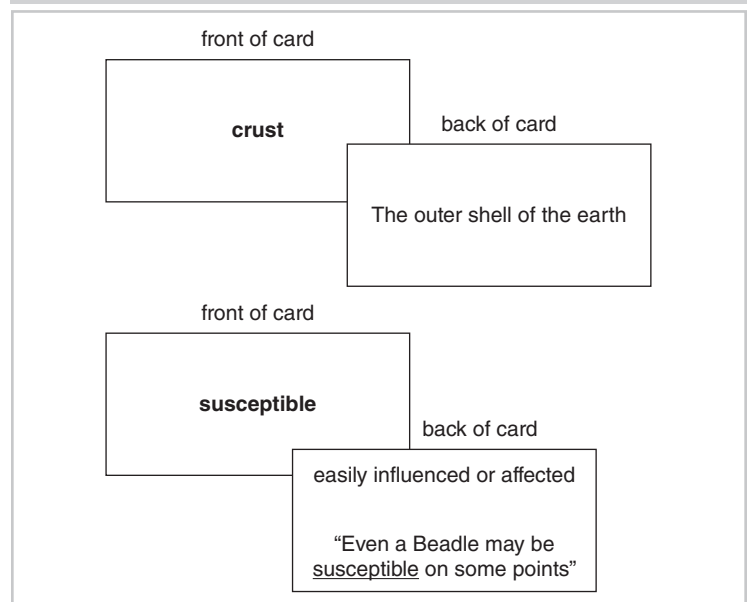
Activity 2.16 Clue Review with Vocabulary Cards

Purpose

To engage students in reviewing and reinforcing their knowledge of vocabulary definitions in a motivating and easy-to-use format.

Using vocabulary cards in Clue Review provides multiple experiences with a word across a range of contexts. Unlike many review activities, every student is engaged all of the time.

FIGURE 2.2 Vocabulary Cards



Procedures

1. Pair the students: (1) clue giver and (2) “hot seat.”
2. The student on the “hot seat” shuffles the deck of vocabulary cards and, without looking, places the first card on his or her forehead. The front of the card (the vocabulary term) should show, and the back of the card (the definition) is against his or her forehead. This way, the clue giver can see the word, but not the definition. The “hot seat” sees nothing.
3. The clue giver gives the “hot seat” a clue. For example, for *crust* the clue giver says, “the outermost shell of the earth’s surface” or “the mantle lies underneath this part of the earth’s surface.”
4. If the “hot seat” gets the word correct, the pair moves on to the next vocabulary card. If not, the clue giver provides additional clues. If partners cannot arrive at the target word, the clue giver flips the card over and they review the definition.
5. Partners aim to correctly identify as many vocabulary cards as they can without needing to check definitions.
6. After going through the deck once, partners switch roles. This allows both students the opportunity to provide definitions in their own words.

Here are some tips for “Clue Review”:

- Definitions and clues must relate to important features of the word/concept. For example, students might try “rhymes with *dust*” for *crust*—that won’t count!
- On occasion, you should partner more proficient students with less proficient students. Less proficient students may be striving readers, or they may be English learners. More proficient students will be the first clue giver to provide a language model for their less proficient partner.
- From time to time, switch pairs so that students will hear multiple ways of defining the same word.
- Homework assignments may involve partnering with a family member—parent, grandparent, or sibling.

Activity 2.17 List/Group/Label

Purpose

To activate and assess your students’ background and developing knowledge about a topic before, during, and after reading or a unit of study.

1. *List.* Students are presented with key vocabulary and related terms, or they brainstorm all the words they can think of having to do with a particular topic.
2. *Group.* Students suggest logical ways to group the words.
3. *Label.* Students suggest a label for each group.

List/Group/Label may be an effective activity to use before moving to the use of graphic organizers (see the section that follows). When used after a unit of study or a reading assignment, the only adjustment is that students brainstorm all the words they can recall from the reading selection or unit of study. Then they will group and label them. The content of the lists and the nature of the groups and labels will evolve and change when comparing “before” and “after,” and offer excellent opportunities for you and your students to reflect on and assess their learning.

Procedures

1. After students have read and discussed, ask the students to brainstorm, in small groups, all the terms they can recall. The students then share as a whole class. The sharing ensures that a term or terms not recalled in a particular group will be added when the whole class compares notes. This is the *list* step of the procedure. For example, the following are the terms recalled from a selection addressing the dangers of living in the shadow of the volcano Mt. Rainier, specifically *lahars*, which are landslides or mudflows of volcanic fragments that flow down the sides of a volcano:

VAU 6-8: 4.a, 4.b

VAU 9-12: 4.a, 4.b, 4.d, 5.a,
5.b

RL 6-12: 4

RIT 6-12: 4

mudflow geothermal aquifers percolating glacier hydrothermal alterations
 cohesive lahar sulfuric acid clay geothermal fluids fumaroles semiliquid mud
 slurry

2. Next, the students *group* the terms and then discuss and decide on a *label* for each group:

What Lahars Are Made of and What They Look Like

mudflow
 slurry
 cohesive lahar
 semiliquid mud
 sulfuric acid clay

How Lahars Occur

geothermal aquifers
 percolating
 glacier
 hydrothermal alterations
 geothermal fluids
 fumaroles

Activity 2.18 Semantic Gradient

Purpose

To differentiate and explore shades of meaning and nuances among related words.

When students explore antonyms and synonyms, they attend to the finer distinctions or gradations among words. An effective way to involve students in this type of discussion is through the use of a *Semantic Gradient* (Blachowicz & Fisher, 2010). This leads to deeper understanding of concepts and the relationships between concepts. The common definition of *antonym* is “opposite in meaning,” though there are different degrees of opposite. For example, *hot* and *cold* seem clearly opposite, but when students begin to explore terms that may fall between these polar opposites, they realize they may have to make subtler distinctions—and they wind up making distinctions among *synonyms* as well.

Along a continuum with *hot* and *cold* at each end, for example, where would you place *warm*, *cool*, *frigid*, *tepid*, and *crisp*? Make the connection to writing by mentioning *word choice*; explain how attending to these types of distinctions helps students become more sensitive to finding and using the most appropriate and effective words in their writing. Figure 2.3 is an example of a continuum you could use to introduce the idea of how to arrange terms between two polar opposites.

Procedures

1. Provide small groups of students with a set of related words, mixed up, that may be arranged across a synonym/antonym continuum or Semantic Gradient (e.g., *foggy*, *visible*, *clear*, *murky*, *opaque*, *translucent*).
2. To begin, discuss a couple of “anchor terms” with your students. It usually works best if these anchor terms are already familiar to your students. For example, you may discuss the differences between *clear*, *visible*, and *opaque*. Which describes something that is easier to see? More difficult? How is *visible* different than *clear*?
3. In groups, students discuss where to place the remaining words along the gradient. This is an excellent opportunity for students to use dictionaries and thesauruses, both print and online, to explore and discuss the nuances among words.
4. Follow up as a whole class by having groups share their gradients. Ask them to explain their rationales.
5. The goal is not for the groups to come up with the same gradients, but to generate deep and purposeful discussion.

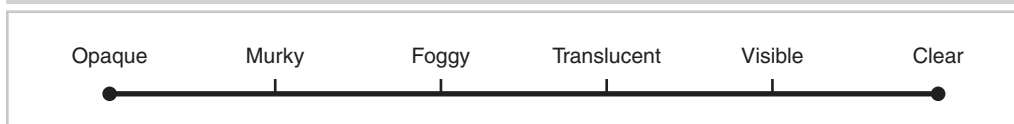
VAU 6-8: 4.a, 4.b

VAU 9-12: 4.a, 4.b, 4.d, 5.a,
 5.b

RL 6-12: 4

RIT 6-12: 4

FIGURE 2.3 Semantic Gradient for Opaque/Clear Distinction



Activity 2.19 Analogies

Purpose

To differentiate and critically explore different types of relationships between concepts that are not commonly associated.

Analogical reasoning is a powerful means of thinking critically and of developing deeper understanding of specific words. Students also develop understanding of complex relationships and logical reasoning. The following sequence may guide your students' exploration of analogies (Templeton, 1997).

Procedures

1. To teach the form of analogies, begin with simple analogies such as "hot is to cold as strong is to weak."
2. Present analogies in which one of the words is omitted and possibilities for completion are offered: "ice is to cold as fire is to _____ (fireplace, hot, water)." At this level and the next two levels, you can include target vocabulary words.
3. Analogies are presented without possible choices.
4. Present analogies in which the missing word or term occurs in places other than the final slot.

Activity 2.20 Signal Vocabulary Banks

Purpose

To help students apply a knowledge of signal words and phrases in their reading, writing, and discussions.

Imagine how difficult a social studies textbook, science manual, English anthology, or newspaper would be to comprehend if a reader didn't understand the following signal words and phrases: *however*, *in conclusion*, *on the other hand*, *gave rise to*, and *accordingly*. Indeed, a hallmark of academic language is the use of signal words, which cue readers into how phrases, sentences, and ideas are related to each other within a text. These types of words and phrases have been referred to as the "mortar" of academic language because of their critical role in connecting domain-specific concepts together in academic prose (Dutro & Moran, 2003).

Based on the work of Zwiers (2008) and Townsend (2011), the Signal Vocabulary Banks in Table 2.6 organize common, high-utility signal words and phrases by common text structures found across the content areas. For example, the Compare/Contrast text structure in Table 2.6 includes words and phrases like *however*, *on the other hand*, and *are similar in that they*.

To use Signal Vocabulary Banks in your classroom, we recommend the following.

Procedures

1. *Develop.* Work with other content teachers at your grade level, or across grade levels, to develop and share a few common Signal Vocabulary Banks that could be used across all subjects. Start the ones listed in Table 2.6 and modify based on what you identify as important in your discipline and with your students.
2. *Read.* Post these Signal Vocabulary Banks in all the content classrooms and encourage students to look for them while reading academic text. Model and think aloud how they might be used ("This gave rise to. . .Hmmm. That phrase means what came right before this sentence in some way caused what I'm about to read next."). Ask your student to use sticky notes to flag these signal words as they come up in their reading and discuss their meanings during class discussion.
3. *Write.* Encourage students to use these signal words while writing essays, short-answer responses on tests, or in their Quick-Writes. For more structure, require them to use a certain number of signal words per assignment (e.g., "You must include at least two signal words from one of the Signal Vocabulary Banks in this short answer:").
4. *Categorize.* Periodically, after you have introduced a number of signal words, ask your students to do a "signal vocabulary concept sort." (See Activity 2.9, pp. 38–39.) The headers for the sort will be the text structures (e.g., *Compare/Contrast*, *Cause/Effect*). In groups, students must categorize the signal words by text structure and then, in the ensuing class discussion, justify why they categorized the signal words/phrases as they did.

VAU 9-12: 4.b, 5.a, 5.b

RL 6-12: 4

RIT 6-12: 4

WS 11-12: 3.d

VAU 6-8: 4.a, 4.d

VAU 9-12: 4.a, 4.d

RL 6-12: 4

RIT 6-12: 4

WS 6-12: 3.d

TABLE 2.6 Signal Vocabulary Banks

Compare/Contrast	Description/In-Depth Exploration
although, also, alike, however, nevertheless, in contrast, on the other hand, yet, but, similarly, at the same time, either . . . or, in the same way, in comparison, whereas, yet, just as, likewise, are similar in that they, the former . . . the latter, on one side . . . on the other side, while, along the same lines, as . . . so did . . . , furthermore, even though, even so, still, though, otherwise, as opposed to, on the other hand, despite that, in spite of, notwithstanding, regardless, on the contrary, instead	is like, including, such as, to illustrate, characteristics of, for example, for instance, properties of, another example, because, including, additionally, in addition, generally, typically, furthermore, as in, between, appears to be, at its core, in short, in sum, in conclusion, moreover, in this case
Cause/Effect	Summarizing
if . . . then, so that, thus, therefore, as a result, this led to, hence, due to, because, . . . gave rise to . . . , in turn, for this reason, it follows, the effects of the crisis/battle/event . . . , may be due to, consequently, accordingly, ramifications of, as a consequence	consequently, taken as a whole, all in all, altogether, finally, in brief, in conclusion, in other words, in particular, in short, in simpler terms, in summary, on the whole, that is, therefore, to put it differently, to summarize
Sequence	Additive
first/second/third/etc., later, before, next, finally, then, later, since, previously, after, when, at that point, at the same time, years later, soon or immediately after, initially, by (or at) the turn of the century/decade, . . . succeeded . . . , following, afterward, not long after, meanwhile, preceding, ultimately, eventually	another, in addition, again, also, and, and then, besides, equally important, finally, first, further, furthermore, in the first place, last, moreover, next, second, still, too

Graphic Organizers

The several examples of graphic organizers presented here effectively support your explorations of both general academic and domain-specific academic vocabulary. For each of the graphic organizers presented here, be sure first to introduce and model its use for the whole class. Then, as your students understand the purpose and the “routine,” you may have them use these organizers in small groups and in pairs. More examples and applications of graphic organizers will be provided in Chapters 5–9. Templates for all graphic aids can be found in Appendix A and in the PDToolkit.

Activity 2.21 Concept Map

Purpose

To generate rich and deep discussion and thinking about new concepts.

Figure 2.4 presents an example of concept map from earth science. Concept maps guide students in considering these essential questions about word meaning:

- What is it? (*category*)
- What is it like? (*characteristics*)
- What are some *examples*?

As they lend themselves to your objectives, you may adapt concept maps to explore character traits and accomplishments of important individuals in social studies, science, math, and so forth.

Activity 2.22 Vocabulary Web

Purpose

To support the exploration and development of deep knowledge about one word/concept, particularly in the area of general academic vocabulary.

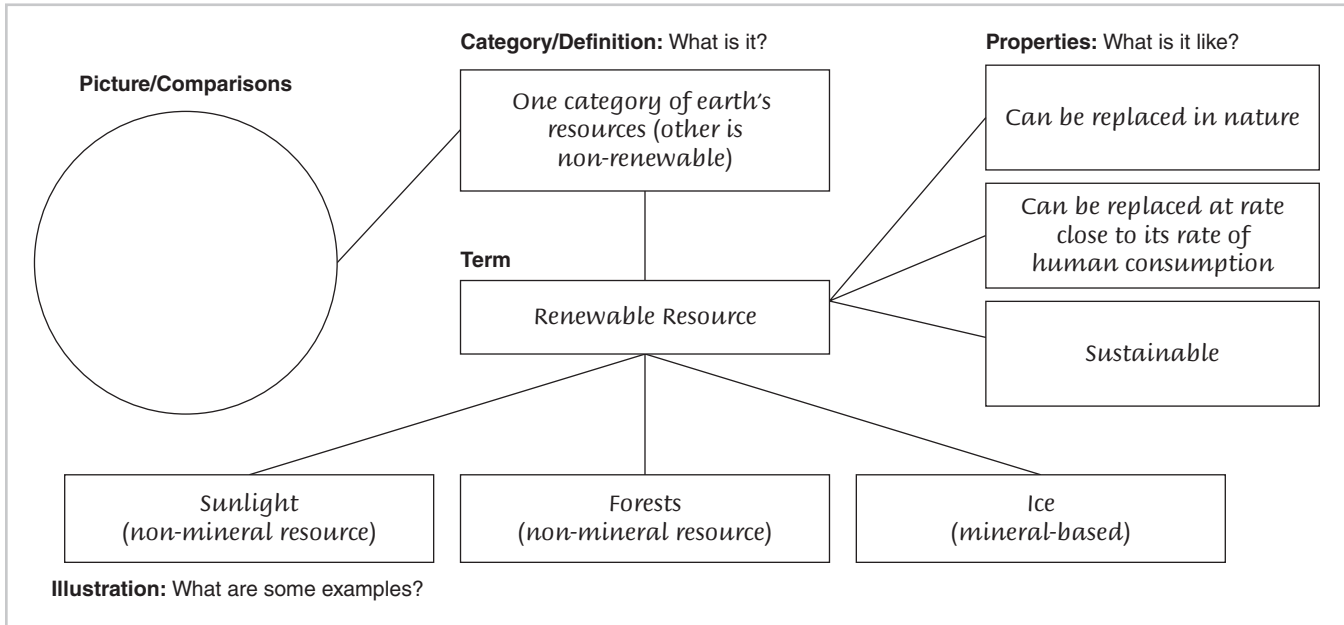
VAU 6-8: 4.a, 4.b, 4.c
VAU 9-12: 4.b, 4.c, 5.b
RL 6-12: 4
RIT 6-12: 4
WS 6-8: 2.d, 3.d

PD  TOOLKIT™
 for Vocabulary Their Way®

**MAKING TIME FOR
 VOCABULARY INSTRUCTION**

Mary Keller introduces and explains the concept map to her students in algebra class.

VAU 6-8: 4.a, 4.b, 4.c
VAU 9-12: 4.a, 4.b, 4.c, 5.b
RL 6-12: 4
WS 6-8: 2.d, 3.d

FIGURE 2.4 Concept Map—Earth Science Example

Source: Adapted from Schwartz, R. M., & Raphael, T. E. (1985). Concept of Definition: A Key to Improving Students' Vocabulary. *The Reading Teacher*, 39(2), 198–205.

Vocabulary Webs address synonyms, antonyms, and parts of speech. They are appropriate for your introduction of words to the whole class, as well as for students to use for interesting words they find in their independent reading. Students' discussion and development based on these webs work best in small groups.

Procedures

1. Students are given a word to examine, or identify one they wish to explore (for example, *sympathy* in Figure 2.5). Then they will apply their own background knowledge, the context of the sentence in which the word was found, and a dictionary and thesaurus to find the following additional information: synonyms (*understanding, sensitivity, connection*), antonyms (*apathy, disdain, callousness*), parts of speech, and related words. The original sentence or student-generated sentence is written down.
2. The value of this activity is in the quality thinking that it generates. The meanings and nuances of words are often developed through physical movement.
3. The Vocabulary Web may be modified by adding additional categories: For example, what related words might students generate morphologically?

Activity 2.23 Venn Diagram and Compare/Contrast Graphic Organizers

Purpose

To compare and contrast two concepts in depth.

You are probably familiar with the classic Venn Diagram, perhaps the most frequently used graphic organizer in education. Figure 2.6 shows an example of a Venn Diagram comparing and contrasting *spiral* and *elliptical* galaxies. Compare/Contrast Graphic Organizers have the advantage of explicitly highlighting the categories of contrast between the two concepts. Compare/Contrast Graphic Organizers are often more effective with striving readers (Flanigan et al., 2011) and older students exploring disciplinary content in-depth. As Figure 2.6 illustrates, students know that they will compare and contrast the two types of galaxies, but also know that they will compare and contrast focusing on the features of *shape, movement, and age*.

Compare/Contrast organizers may be used before, during, and after reading. Before reading, you will introduce the two concepts and discuss with the students those features they believe will be compared. These same features are often section headings and subheadings in the content textbook. This

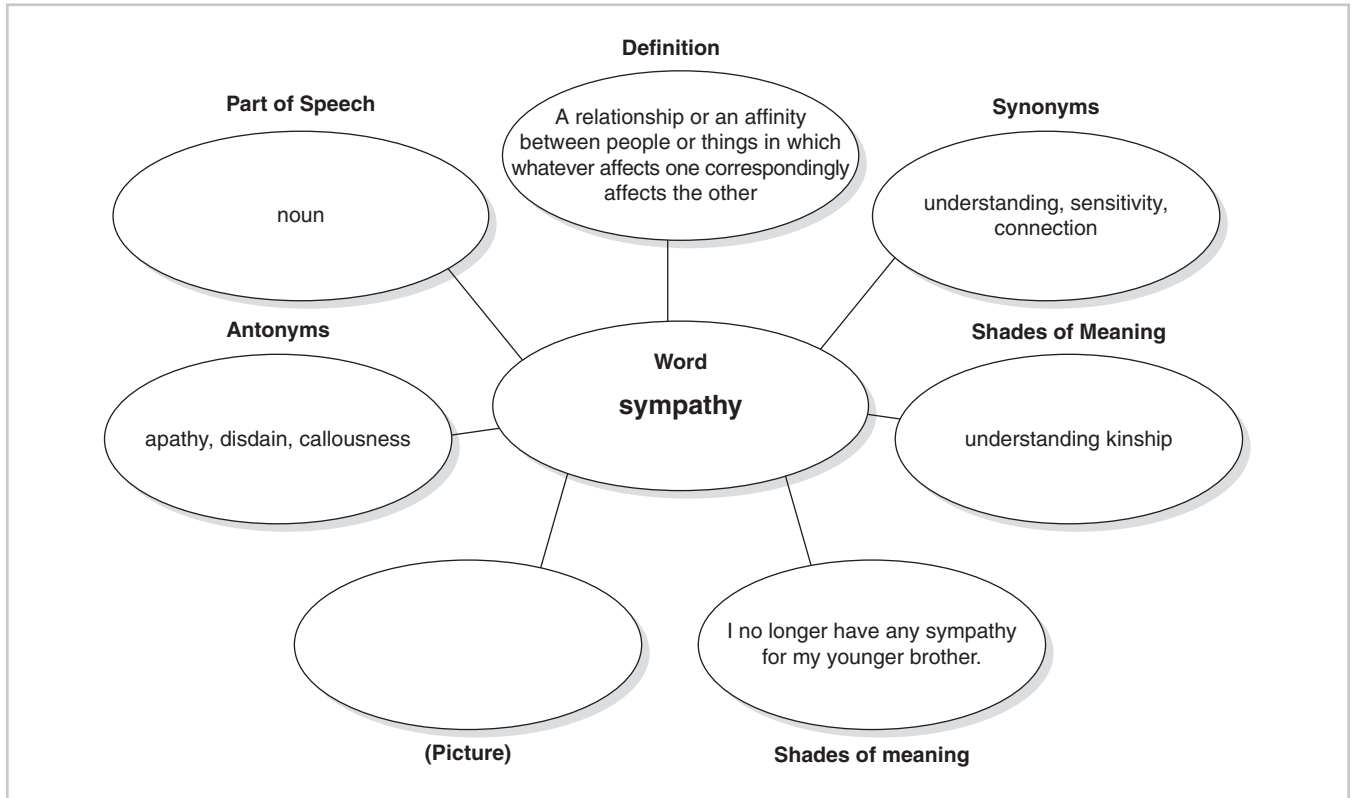
VAU 6-8: 4.a, 4.b, 4.c, 4.d

VAU 9-12: 4.a, 4.b, 4.c, 4.d,
5.b

RL 6-12: 4

RIT 6-12: 4

WS 6-8: 2.d, 3.d

FIGURE 2.5 Vocabulary Web Graphic Organizer for General Academic Words

Adapted from Flanigan, Kevin; Hayes, Latisha; Templeton, Shane; Bear, Donald R.; Invernizzi, Marcia; Johnston, Francine, *Words Their Way With Struggling Readers: Word Study For Reading, Vocabulary, and Spelling Instruction, Grades 4–12*, 1st Ed., © 2011. Reprinted and electronically reproduced by permission of Pearson Education, Inc., Upper Saddle River, New Jersey.

provides a direct visual link between the text students are reading and the Compare/Contrast organizer they are completing. Before reading, you could ask the students to make predictions. During reading, students working in pairs could fill out the Comparison/Contrast chart together. After reading, you can bring the class together to share their thinking and their answers, and clarify any misconceptions.

Activity 2.24 4-Square Map

Purpose

To explore a single key vocabulary term/concept in depth.

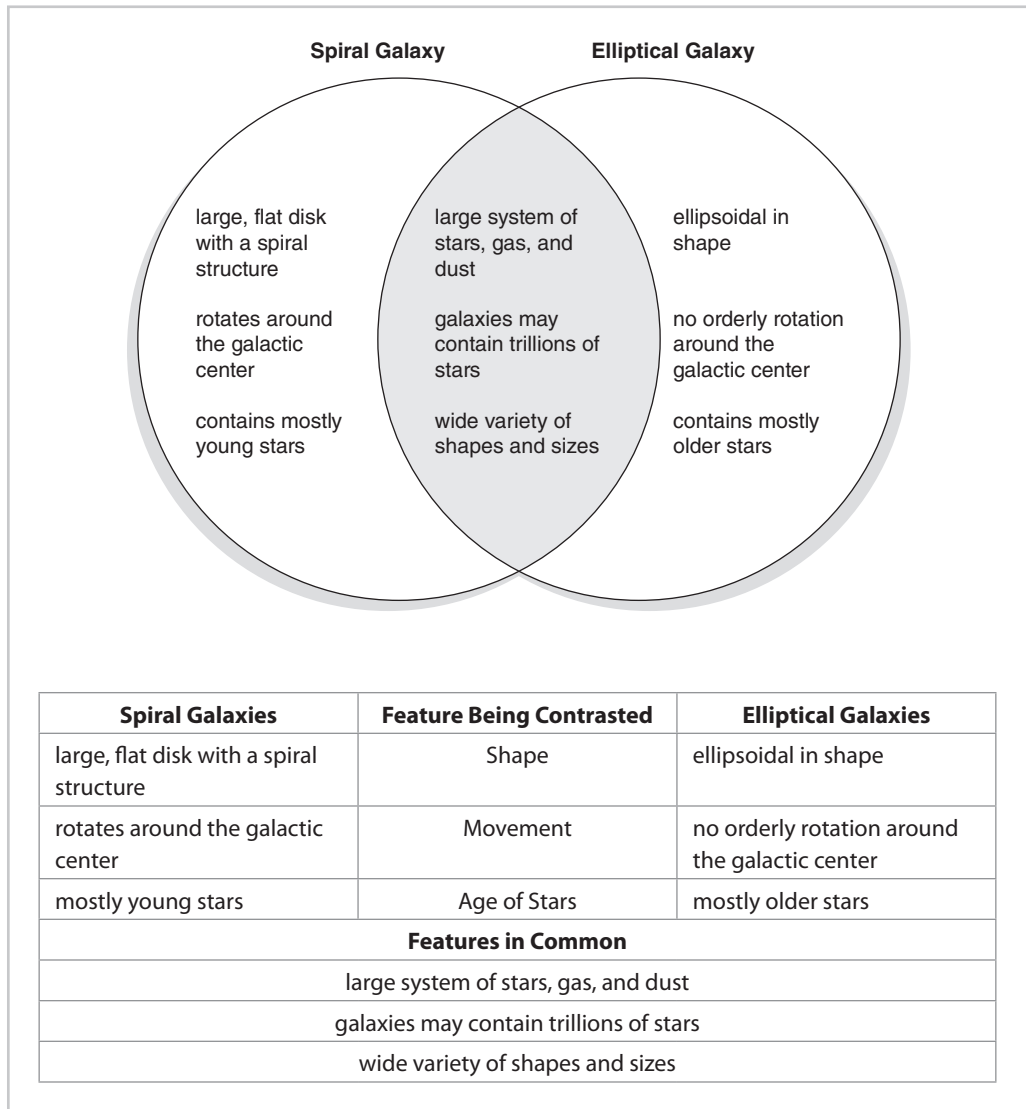
Originally known as the “Frayer model” (Frayer, Frederick, & Klausmeier, 1969), the 4-Square Map (Eeds & Cockrum, 1985) provides a format for student exploration of concepts: After your modeling, they will contribute examples and non-examples of a concept, and often generate definitions in their own words.

Procedures

1. Ask students to divide a sheet of paper into four squares.
2. Begin by defining the word for the students.
3. Ask students for examples, non-examples, and synonyms for the word. As you guide the discussion, you may occasionally provide examples.
4. Students write definitions in their own language. English learners and struggling readers can draw pictures of their word/concept on the backs of their 4-Square Maps.
5. On completion, these 4-Square Maps should be kept in the students’ Vocabulary Notebooks.

Figure 2.7 (p. 51) is an example generated by a group of students in a sophomore English/language arts class for *abstract*.

VAU 6-8: 4.b, 4.c, 4.d
 VAU 9-12: 4.b, 4.c, 4.d, 5.a,
 5.b, 6
 RL 6-12: 4
 RIT 6-12: 4

FIGURE 2.6 Venn Diagram and Compare/Contrast Table: “Types of Galaxies”

Source: Templeton, Shane; Gehsmann, Kristin, *Teaching Reading and Writing: The Developmental Approach*, 2nd. Ed., © 2014. Reprinted and electronically reproduced by permission of Pearson Education, Inc., Upper Saddle River, New Jersey.

Activity 2.25 Semantic Map

Purpose

To develop a deep understanding of one overarching concept through mapping out relations between the main ideas, subtopics, and details related to that fundamental concept.

A semantic map provides support throughout a unit of study. Focusing on the main word or concept, the steps in collaboratively constructing a semantic map with students are as follows.

Procedures

1. Display the central concept in a circle.
2. Students brainstorm words/concepts that come to mind when they think of the main concept—for example, volcanoes.
3. Add words to the brainstormed list that are important related terms in the unit.
4. Guide the students in discussing how to map and categorize the terms on the list; those that you add are indicated in parentheses.

VAU 6-8: 4.b, 4.c, 4.d

VAU 9-12: 4.b, 4.c, 4.d, 5.a, 5.b, 6

5. As students read and discuss the content of the unit over several days, they may change categories or add categories to the map.

For example, if you are a teacher of American history teaching a unit on “Nixon to Carter: A Search for Order 1968–1980” (Flanigan, Hayes, Helman, Bear, & Templeton, in press), your completed semantic map for “foreign policy” as you begin your unit might look much like the one in Figure 2.8. Over the course of the unit, you will guide your students’ understanding of how the issues on the semantic map (e.g., Watergate, succession) affected not only the domestic scene but the nation’s foreign policy as well. If you anticipate that brainstorming “foreign policy” for the era 1968–1980 may not yield many ideas, brainstorm instead for each of the three presidents, and then arrange them around the central idea of “foreign policy” when you are categorizing the terms that the students, and you, contribute.

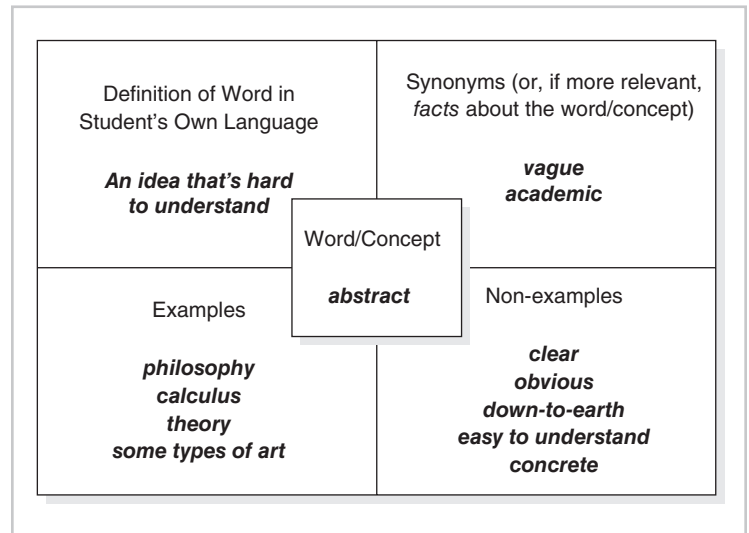
Activity 2.26 Power Maps

Purpose

To support students who have difficulty understanding the implied hierarchical relationships between words/concepts in concept sorts and in graphic organizers.

Based on the technique of “power thinking” (Jones, 2009; Santa, Havens, & Valdes, 2004), Power Maps offer additional support for students who may not readily see these hierarchical relationships between the big ideas, subtopics, and details or examples. To construct a Power Map, different levels of importance are assigned to the words/concepts in a unit. The Power 1 level is vocabulary related to the “main” or “big idea” level. The Power 2 level is vocabulary related to subtopics. The Power 3 level is

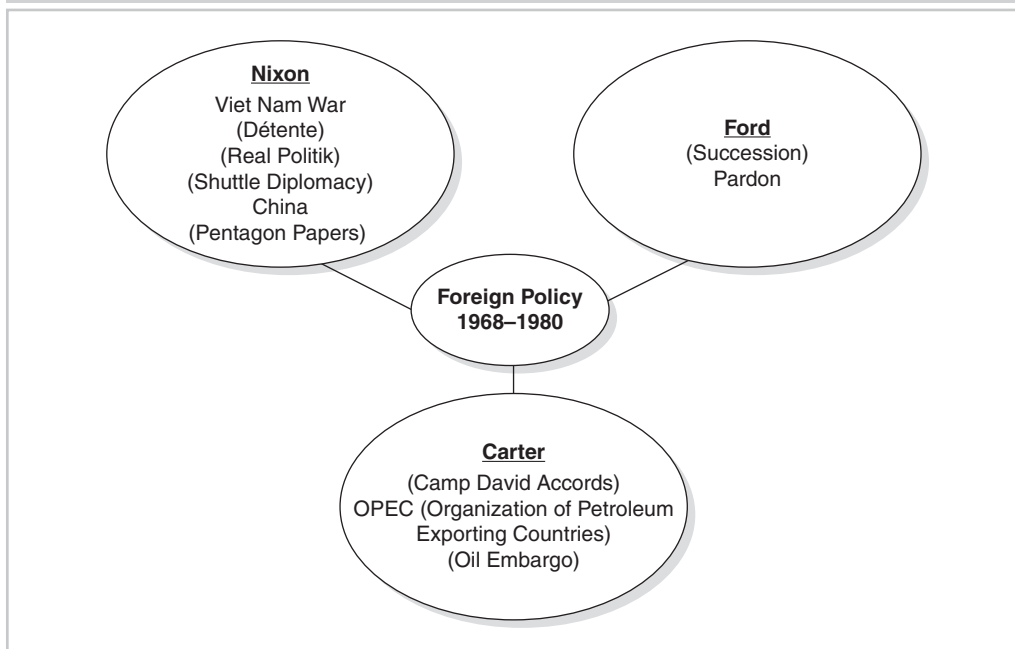
FIGURE 2.7 4-Square Map for the Concept “Abstract”



VAU 6-8: 4.b, 4.c, 4.d

VAU 9-12: 4.b, 4.c, 4.d, 5.a, 5.b, 6

FIGURE 2.8 Semantic Map: Nixon to Carter, 1968–1980



Source: Flanigan, Kevin; Hayes, Latisha; Helman, Lori; Bear, Donald R.; Templeton, Shane; *Vocabulary Their Way with American History: Vocabulary and Concept Development with Middle and Secondary Students: Pre-Columbian through the Civil War, Part One*, 1st Ed., © 2015. Reprinted and electronically reproduced by permission of Pearson Education, Inc., Upper Saddle River, New Jersey.

vocabulary that represents supporting details or examples. The terms *Power 1*, *Power 2*, and *Power 3* are used to help students make more explicit the nature and the level of the relationships between main ideas or topics, supporting details or defining features, and examples. The strategy is introduced with topics the students know well, such as movies or sports. Shapes or colors should consistently be used to differentiate Power 1, 2, and 3 vocabulary; for example, circles are Power 1, triangles are Power 2, and rectangles or straight lines are Power 3 (Flanigan, Hayes, Templeton, Bear, Invernizzi, & Johnston, 2011). Figure 2.9 shows a “movie” Power Map used to introduce and walk through this activity.

Procedures

1. Once you have selected the key vocabulary terms for a unit of study, determine the power level of each term or concept. Biology teachers, for example, often begin study of biological classification—kingdom, phylum, class, order, family, genus, species—with three of the six kingdoms that are more obvious to students and about which they have more background knowledge. Power 1 is kingdom, Power 2 is examples of kingdoms, and Power 3 is examples from each specific kingdom. (Figure 2.10 illustrates this simple map.) Then write these vocabulary terms on sorting cards.
2. In pairs or groups, ask the students to sort the terms into categories based on common features. In this case, the students are not aware of the power levels of the vocabulary words; they must figure them out during the sort. Encourage students to use the Power 1, 2, and 3 language as they sort. We have found that this simple addition of asking the student to use “power language” goes a long way in helping make explicit the structure of the information and in clarifying their own thinking. It also gives students a common language to communicate with peers and the teacher.
3. For additional support, you might tell the students that there is one Power 1 and three Power 2s, but not tell them what they are. For more support, you might tell your students what the Power 1s and 2s are (for example, “*Kingdom* is your Power 1, and *Fungi*, *Plantae*, and *Animalia* are your Power 2s”). Or you might give them the Power 1s and 3s, but not the Power 2s. In this case, they will need to label each Power 2, or each category, themselves. This variation is similar to the List/Group/Label strategy described in Activity 2.17 (pp. 44–45).

FIGURE 2.9 Introductory Power Map: Movies

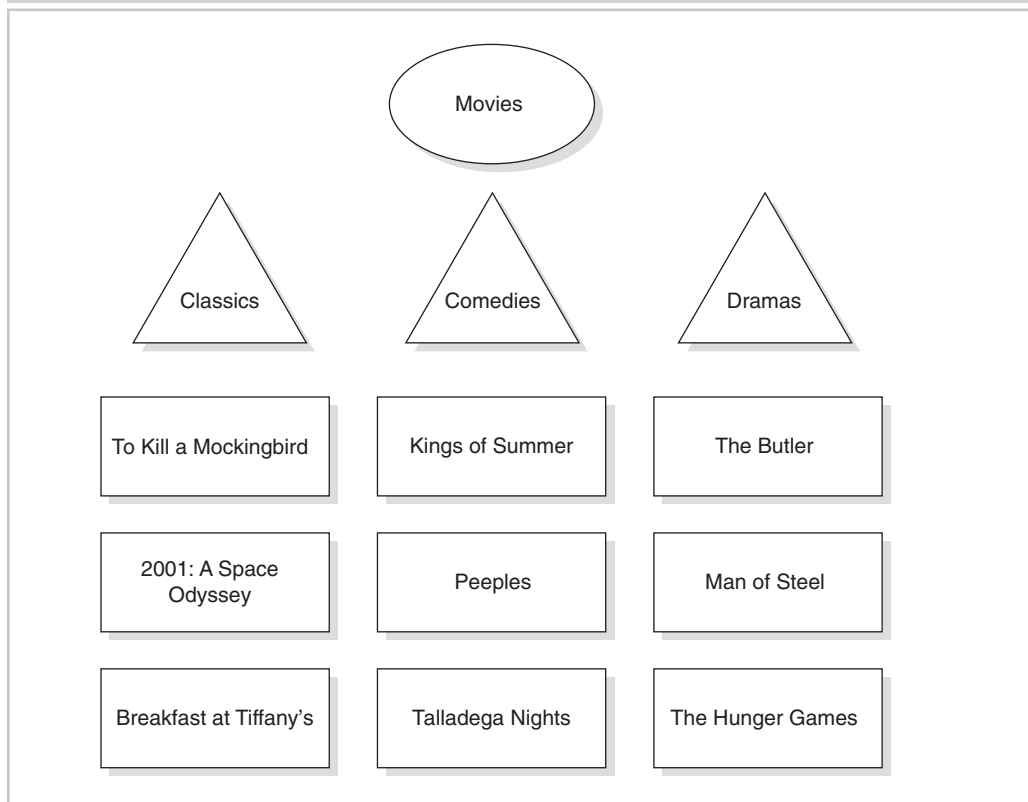
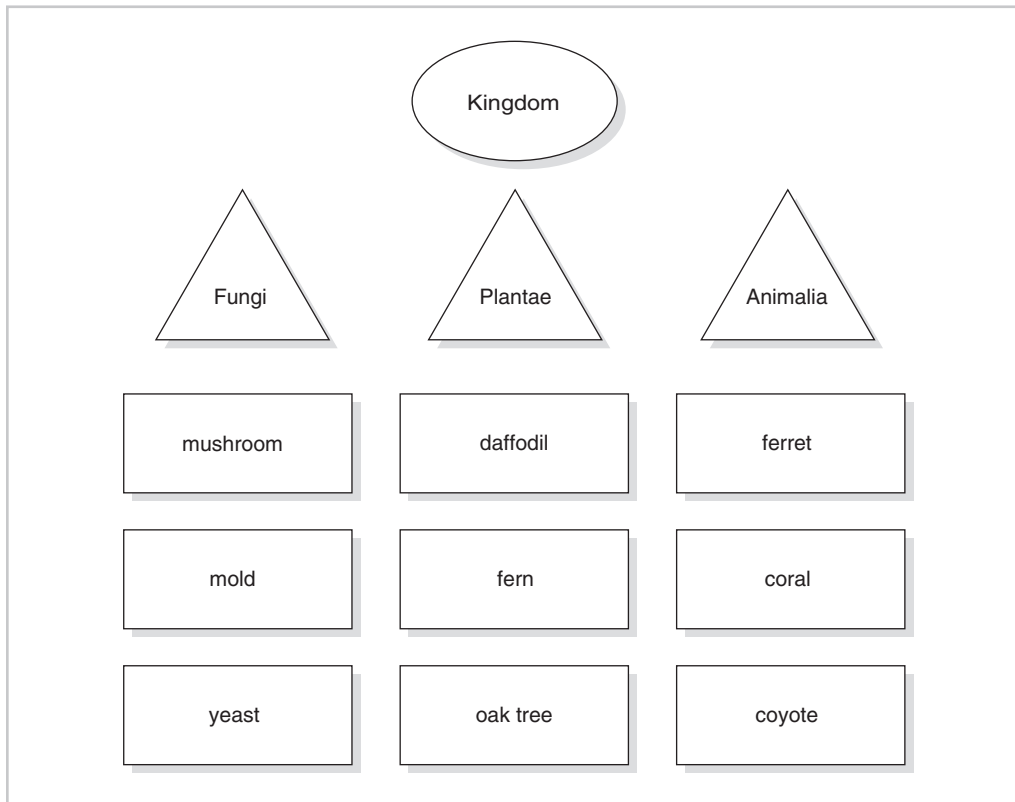


FIGURE 2.10 Power Map: Biology

4. Circulate around the room during the support session to guide student discussion.
5. Depending on your content, students may come up with a different placement of terms than you have planned and be able to justify their categorization. Such results reveal the need for clarification and, at other times, demonstrate the essence of critical thinking.
6. Have groups share with the whole class at the end of the sort.
7. Have students record their Power Maps in their Vocabulary Notebooks.

As with word sorts and concept sorts revisiting and rearranging these sorts and maps during a unit of study helps students reflect on and confirm their understanding.

Activity 2.27 Semantic Feature Analysis

Purpose

To explicitly highlight similarities and differences between key words/concepts and help students identify what they know, what they don't know, and what they may only have a partial understanding of.

You may first construct a semantic feature analysis to present to your class. But as your students understand how this type of graphic organizer works, they may become involved in constructing them and sharing. Figure 2.11 presents a semantic feature analysis that supports comparison and contrast of three types of government.

Procedures

1. Write the target words—the three types of government—across the top and the specific features down the left-hand side.
2. Display the feature analysis grid on a transparency or interactive whiteboard and discuss the first term with the class. Writing either *yes* or a plus sign indicates the feature is a characteristic of the government; writing either *no* or a minus sign indicates a feature is not a characteristic. A question mark indicates uncertainty—further investigation is necessary.
3. As the students move through a unit, additional characteristics and words/terms may be added to the grid.

VAU 6-8: 4.b, 4.c, 4.d

VAU 9-12: 4.b, 4.c, 4.d, 5.a,
5.b, 6

FIGURE 2.11 Semantic Feature Analysis: Comparing and Contrasting Three Types of Government

	Dictatorship	Direct Democracy	Representative Democracy
Citizens have voting rights			
Citizens elect leaders			
Limit to leaders' term of office			
Representatives are elected by citizens			
All decisions voted on by people			
Decisions can be made quickly			

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Online Resources about Words

In addition to the resource books for word study that are referenced throughout this text, there are a number of online resources that are invaluable. At the time of this writing, there are literally hundreds of sites available, and most are interesting. Depending on your purposes—basic dictionary information, word histories, translations of specific words, or finding cognates in other languages for English words—you should find the sites listed below very helpful. As is the case in general, more websites seem to appear almost daily. Those we have included here are sites we have found to be very helpful in our teaching and in our research and that have enjoyed a fairly long life online:

- *onelook*—A comprehensive dictionary website. Most of the major, well-respected dictionaries are available; the link to the *American Heritage Dictionary* also includes an additional link to a dictionary of Indo-European Roots, which greatly simplifies etymological searches for you and your students. The *onelook* site also features excellent search capabilities that allow you to search for words that contain specific roots and affixes, spelling patterns, words as they occur in specific phrases (very helpful for English learners), and words that relate to a particular concept.
- The *Corpus of Contemporary American English*, created by Mark Davies, is an invaluable online resource for locating related words in English. It requires that you register, but registration is free. It may be used to search for the occurrence of words in different contexts—for example, spoken language, magazines, fiction, and academic texts.
- The *Online Etymology Dictionary*—Very useful for exploring word histories, this site includes much of the etymological information you would find in the *Oxford English Dictionary*.
- *Kernerman English Multilingual Dictionary*—This site provides, for any word in English, words in a number of other languages that have the same or similar meaning. It is an excellent resource for finding cognates (see Chapter 4).
- *Wordsmith*—You may subscribe online for free and receive a new word in your inbox every day. Words follow a theme each week, and categories of words—for example, *toponyms*, *eponyms*, *sesquipedalian*, and more—will be represented.
- Richard Lederer's *Verbivore*—An especially good site for word play and word consciousness with innumerable links to excellent and informative language and word sites.

You will find the following websites helpful in supporting your selection and teaching of key vocabulary terms. Just paste your text, and a list will be generated:

- Visual Thesaurus’s *VocabGrabber*—Frequency and relevance of target words are provided, as well as the content area in which they most frequently occur.
- *Web Vocabulary Profiler*—This site identifies the most frequent academic vocabulary words and specifies whether they appear on the Academic Word List (Coxhead, 2000).

The following sites provide definitions and express relationships between the target word and other words and concepts:

- Think Map’s Visual Thesaurus and VisuWords Online—Both of these sites offer significant potential for students’ explorations. After you type in a word, the word will be presented in a “think-map” web that visually displays meaning relationships for the target word. Clicking on any word in the web provides definitions and examples in context, as well as a new web of relationships with that word in the center of the web.
- Vocabulary.com—This very comprehensive website is one that is continually growing. It provides straightforward, accessible, and understandable language for learners at all levels. It customizes vocabulary instruction for users, and can also serve as an excellent digital platform for students’ Vocabulary Notebooks. It also clearly addresses issues of grammar and usage.
- Quizlet—This online vocabulary practice site has hundreds of sets of words and definitions for every content area and grade level, all created and uploaded by other teachers. This is an excellent practice site for students, but materials can also be printed out to be used in classrooms by teachers for a number of vocabulary activities.

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Games

The primary importance of word games is to reinforce word-specific and generative vocabulary learning as well as word consciousness in general. Games are still a valuable way to review words, not only for a test, but also over time. The PDToolkit provides a number of games that accomplish these objectives. Students may also create many games themselves based on popular favorites such as Concentration, Rummy, War, Slap Jack, Uno, and Trivial Pursuit. For examples of how to ensure student involvement and engagement in game activities, refer to the discussion in Chapter 6 (pp. 176–177), about 100/100 Review Games.

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SUMMARY

This chapter has presented guidelines and effective strategies and activities for learning *about* academic language and vocabulary, and learning *specific* vocabulary terms that are important in your discipline. We have shared the criteria for selecting the target vocabulary on which you should focus, keeping in mind the abilities and background knowledge of your students.

We have demonstrated how you may guide your students to an awareness, understanding, and application of *generative morphological knowledge*—a critical foundation for figuring out, learning, and remembering new words. This begins with “the basics”: the processes and results of combining base words with affixes. Exploring “beyond the basics” empowers students in learning and understanding the pervasive use of Greek and Latin roots and affixes across all subject matter areas.

Your students’ learning of academic language and subject area vocabulary will be facilitated, and made more engaging and effective, through the knowledgeable selection from the range of activities presented in this chapter. Select and key your activities to your specific instructional goals.