1 Setting the Stage

Background

Reading and writing are complex processes that involve, among other things, knowledge of letters, sounds, and meaning units; vocabulary; strategies for monitoring for understanding; background knowledge; and motivation. Knowledge of the sounds, patterns, and meaning units of the English spelling system, or *orthographic knowledge,* falls along a continuum that is often summarized in five stages or phases—*emergent, letter name* or *letter name alphabetic, within word pattern, syllable juncture* or *syllables and affixes,* and *derivational constancy or derivational relations* (e.g., Bear, Templeton, Invernizzi, & Johnston, 2016; Ganske, 2014). Although students at a certain grade may tend to be at a particular stage of development, there is much variation across any given class.

This book focuses on instruction at the final two stages of development; *Word Sorts and More: Sound, Pattern, and Meaning Explorations K–3, Second Edition* (Ganske, 2018), attends to instruction at the first three stages. As students progress along the continuum, their attention to words shifts from a focus on sound, to patterns, and finally to meaning. Skilled writers and readers, aided by their orthographic knowledge, easily spell and recognize words, freeing up their cognitive energy for meaning making (e.g., Carlisle, 2010; Graham, 2013; Snow, Griffin, & Burns, 2005). And they not only have well-developed orthographic knowledge; they also have well-developed vocabularies, an attribute deemed critical for success in reading and school, as well as college readiness (e.g., National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010; National Reading Panel, 2000b). Although meaning plays a role in earlier phases of orthographic knowledge development, such as plural and inflectional endings and *homophones,* at the derivational constancy stage, meaning becomes the key factor. During this phase, students engage in morphological studies with prefixes, suffixes, word roots, and base words, knowledge of which can make word learning more efficient.

Vocabulary knowledge is critical for reading comprehension and can fuel a cycle of success. Knowing words makes it easier to comprehend text; in turn, better comprehension of text makes it easier to acquire new words (e.g., Nagy, 2005; Stanovich, 1986). However, it's more than that proficient readers acquire new word meanings more easily; they also learn the words better by developing understandings of their sounds and spellings (Perfetti, 2007). Furthermore, their knowledge of the phonic, graphic, semantic, and syntactic representations of words facilitates their retrieval of the words. This scenario contrasts with that of students whose connections for words are not so developed, and who therefore may require cuing (Perfetti & Hart, 2002). We might best consider the importance of vocabulary knowledge by bearing in mind that words, along with oral language, are the tools that enable children to think (Bruner, Goodnow, & Austin, 1986).

While vocabulary knowledge in general plays a key role in the cycle of success experienced by

proficient readers, knowledge of academic vocabulary in particular is crucial. *Academic vocabulary* is the sophisticated vocabulary used in schools and found in school texts. Students need to know this type of vocabulary in order to understand the content (e.g., Nagy & Townsend, 2012), and it might be argued, to understand learning-related talk in the classroom. Two types of academic vocabulary are often distinguished—*general academic vocabulary* and *domain-specific academic vocabulary* (see Figure 1.1). The former type includes words such as *analyze, synthesize,* and *factor,* which tend to cross content areas. We can *analyze* story elements, or a math problem, or the make-up of a liquid solution in science. Similarly, there are *factors* that contribute to a character's actions; 6 and 56 are *factors* in the math problem $56 \times 6 = 336$; and there were certain *factors* that led to the Revolutionary War. By contrast, domain-specific academic vocabulary words (*photosynthesis, equation, genre, prepositions, mercenary,* etc.) are situated in particular content areas—science, math, language arts, social studies. The two types relate to the Tier Two and Tier Three words, respectively, described by Beck, McKeown, and Kucan (2013).

Academic vocabulary can be particularly challenging, because the words often have numerous affixes. This sometimes occurs through the addition of suffixes, as with *analyze: analyzed, analyzer, analyzing, analyzes, analysis, analyses, analyst, analytic, analytical,* and *analytically.* However, sometimes the formation route is more complex and the results more abstract. This is the case with *nominalization,* the process of forming a noun from another part of speech. *Nominalization* is itself an example of a nominalization; it is formed from word elements meaning "the process of making into a noun." *Democratization* is another example (from *democracy*), meaning "the process of becoming or making a democracy," as is *destabilization* (from *de-* [opposite of] + *stable* + *-ize* [to cause to be/become] + *-tion* [state or condition]). As you can tell, you can understand nominalizations by using morphology, that is, the meanings of the separate chunks (prefixes, suffixes, base word, root) that make up these words—*if* you know how to use morphology. However, nominalizations are very long (13–15 letters in my two previous examples), the meaning abstract, the tone impersonal, and the language very dense.

FIGURE 1.1. Two types of academic vocabulary.

Remember, nominalizations pack entire phrases into a single word! The result? Readers may be intimidated and give up trying to figure out the word, or they may lose the thread of meaning of what they were reading. In grades 3–8, nominalizations are more prevalent in science than in narratives or spoken language (Fang, Lamme, & Pringle, 2010). For science writing, abstraction and impersonalizing are desirable (Baratta, 2010), and few publishers are likely to argue against the space-saving attribute of the conciseness of nominalizations. A recent study of nominalizations in science texts in elementary and middle school revealed that nominalizations were present already in the primary grades; by upper elementary, they made up about 4–4.5% of the vocabulary, and by middle school 5.5% (Mueller, 2015).

It would be great if all students experienced the kind of cycle of success that proficient readers experience. As suggested above, they do not. Children from economically disadvantaged backgrounds and language minority students often lack the kind of academic vocabulary knowledge just described (August, Carlo, Dressler, & Snow, 2005; Graves, August, & Mancilla-Martinez, 2013; Hart & Risley, 1995). They face vocabulary demands in school that can present barriers to their learning. Similar types of challenges can confront those who have had difficulty learning to read. The difficulties of these students tend to increase over time. The end result? They seldom catch up to their peers (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996; Torgesen & Burgess, 1998). Recent results from the National Assessment of Educational Progress (NAEP; National Center for Education Statistics, 2015) show that only about a third of the students in grades 4 and 8 achieved proficient ratings for reading, with the performance of Black and Hispanic populations about half that of Whites. Data disaggregated by status of free/reduced price lunch (FRPL) are also troubling: Fewer than half as many students receiving FRPL met or exceeded standards for proficient reading, compared to those not on the National School Lunch Program. Because these students may have few opportunities outside of school to advance their understandings of academic vocabulary (Schleppegrell, 2004), vocabulary instruction in school is critical. Yet, despite the need, research for over 40 years has documented inadequate or ineffective vocabulary instruction across the grades (Durkin, 1978; Lawrence, White, & Snow, 2010; Nelson, Dole, Hosp, & Hosp, 2015; Scott, Jamieson-Noel, & Asselin, 2003; Spear-Swerling & Zibulsky, 2014; Watts, 1995; Wright & Neuman, 2014).

Although the value of spelling instruction for young children is well established (National Reading Panel, 2000a; Snow, Burns, & Griffin, 1998), there has been less evidence related to instruction for older students. A meta-analysis of some 53 studies involving over 6,000 students from kindergarten through 12th grade helps to fill this gap: The synthesis confirms the benefits of spelling instruction across the grades and literacy levels (Graham & Santangelo, 2014), revealing persistent gains in spelling performance across time, with carry-over to writing and advances in phonological awareness and reading ability. The very nature of the English spelling system provides further evidence for the potential of upper-level word study instruction to significantly support students' vocabulary and spelling development and to increase their ability to use the words that are studied (Adams, 2004; Ehri & Rosenthal, 2007; Moats, 2005–2006).

Whereas word study in the primary grades focuses on consonant- and vowel-pattern associations in single-syllable words (see Ganske, 2018), the more advanced word study of this text explores pattern–sound relationships in the context of polysyllabic words and through open and closed syllables, doubling, and syllable stress. The role of meaning becomes prominent as students examine pattern–meaning connections among families of related words, such as *inspire/inspiration* or *discuss/discussion* (Templeton, 1983), and as they delve into the meanings of prefixes, suffixes, and roots and how they combine.

To aid students' understanding of word meanings and to pique their curiosity and appreciation for words, this volume also provides suggestions for developing students' *word consciousness*—their awareness and interest in word learning (Anderson & Nagy, 1992). These suggestions include discussions of word origins; talk about the development of English as a language; and use of word plays, such

as idioms and puns (see, e.g., the visual puns at *catchymemes.com/tagged/koalition*). Igniting interest in words is especially important for English language learners, who must devote much energy to learning words (Graves et al., 2013).

Word histories are easy to find online, as well as in some print dictionaries and other word-related resources. As an example of a word history, upper elementary and middle school students typically are surprised to discover that *school* originally meant "leisure" and wonder about the connection, which stems from the fact that at one time, only those with leisure time got to be schooled. Some word histories reveal meanings today that are the opposite of those originally associated with them. This is the case with *egregious,* which means "offensive" but once meant "outstanding," and *nice,* which originally meant "ignorant." The marvel of other words sometimes lies in the meanings of their word parts. *Disaster* quite literally means "bad star" (*dis/aster*), so called because ancient Greeks attributed catastrophes to how the planets were aligned; *malaria*—"bad air" (*mal/aria*)—is so named because Romans thought the disease was caused by the air of the marshes near Rome, not the mosquitoes that bred in this type of environment. Examination of word histories can add a whole new dimension to students' perception of just what words are. They are ever so much more than letters on a page or meanings, and thus can ignite an abiding love for words and language.

Despite the potential benefits of upper-level word study, in my work with teachers I frequently hear concerns expressed by those who teach students at the upper stages of spelling development—syllable juncture and derivational constancy. Some question whether they know enough to teach others about the nature and structure of the English spelling system at these levels. Others worry about lack of time or materials. Curricular demands can indeed fill the school day, making time a precious resource. This is especially true in middle school, where the language arts block may be only 60–75 minutes. Being able to allocate time for word study and other critical elements, such as read-alouds and independent reading, in the middle grades can require creative problem solving, but it is well worth the effort. It necessitates a can-do mindset that reflects the view "This is really important; let's find a way to make time."

My hopes in writing this book are twofold: to provide materials to make upper-level word study instruction easier for teachers, and to cultivate students' and teachers' interest and curiosity in learning about words. Words are central to our everyday lives: We read words, we write words, we talk with words, we listen to words, and we think with words. Words can open doors of opportunity or keep them closed. As philosopher Ludwig Wittgenstein put it, "The limits of my language mean the limits of my world." Clearly, we have every reason to help students become mindful of words.

The Context: What Is Word Study?

Despite widespread use of the term *word study* (a recent Google search generated some 5,000,000 results!), interpretation varies. When someone says, "We just finished word study," it is impossible to know what the person really means, other than that instruction related to some type of word learning occurred. In this text, *word study* refers to the active exploration of the sound, pattern and meaning connections of words through categorizations (word sorts) and collaboration/discussion, with students' orthographic knowledge used as the basis for determining timely instruction. I have long used the mnemonic "THAT'S Word Study" (Ganske, 2006, 2014, 2018) to describe what I believe to be the elements of effective word study:

T = Thinking
H = Humor
A = Appropriate instruction

T = Talk
S = Systematic approach and some sorting

Thinking

There are various ideas as to what *thinking* means. In the context of this text, it is the mental activity of problem solving, of cognitive engagement. *Cognitive engagement* is characterized by effort and persistence to understand or figure out something (Rotgans & Schmidt, 2011). Cognitive engagement, along with behavioral and emotional engagement, can predict academic achievement (Gunuc, 2014), and effective teachers know how to engage students cognitively (Knapp & Associates, 1995; Taylor, Pearson, Peterson, & Rodriguez, 2003). In fact, what teachers do to maximize students' cognitive engagement in literacy activities is just as consequential as what they cover in their instruction (Taylor et al., 2003).

During word study, students actively engage in thinking and questioning as they increase their awareness of word meanings and spellings. They use inquiry to identify common characteristics among words, so that they can generalize their understandings to other words and be efficient in their word learning. Although estimates vary, depending on whether they include proper nouns and count the various forms of a word as a single word or multiple words, during their schooling, students are exposed to some 88,000–180,000 words (Nagy & Anderson, 1984; Anderson & Nagy, 1992)! Clearly, being able to generalize understandings across words is critical.

In word study, *non-examples* (words that do not fit the pattern, sound, or meaning focus) can play an important role in categorizations, because they encourage thinking; they also alert teachers to students who are not thinking, but instead are simply taking their cues from one aspect of the word while ignoring others. This "automatic-pilot" approach causes students difficulties with words like *relish,* which might appear to have a prefix (*re-*) but does not, or *dem-,* a root meaning "people" in *democracy, demographic,* and *democratic* but not in *demonstrate*.

Teachers can encourage students' thinking through the kind of support and guidance they provide. In fact, teachers' interactions with students are crucial to their engagement. Students need situations in which they can have a "developmentally calibrated sense of control, autonomy, choice, and mastery" (Pianta, Hamre, & Allen, 2012, p. 370). If this is lacking, or if a teacher's approach is overly top-down or overly passive (leading to teacher over- or underinvolvement), the likelihood of engaging students is little to none (Pianta et al., 2012). With too much teacher direction and too little incentive to problem-solve, students are likely to become disengaged; with too little guidance, they may become frustrated or go off task. When the amount of support is appropriate, students are likely to be actively involved and conjecturing about the words.

Part Three (Chapters 4 and 5) of *Mindful of Words* includes special sections to aid teachers in appropriately supporting students as they engage in the syllable juncture and derivational constancy categorizations. The introduction of each new word feature includes discussion of "What Is Known" and "What Is New." The information presented alerts teachers to what students are assumed to know already and to what they will be learning. If teachers believe it unlikely that the students will have these understandings, they will need to develop this background knowledge. Additionally, for each categorization activity, "Considerations" and "Talking Points" are explained. Details of the latter are included in the Talk portion of this THAT'S Word Study discussion. The "Considerations" sections provide teaching suggestions for the sort. The recommendations are just starting points and may need to be adjusted in terms of teacher involvement, depending on student engagement and motivation. For example, one group of students may require considerable teacher support to scaffold their understandings, so the teacher guides them through the activity by modeling the placement of several word cards and by thinking aloud to reveal the category traits. By contrast, another group may need little

guidance to categorize the words, so the teacher simply shows students the key words as guides and prompts them to sort, asking them to take into consideration certain sound, pattern, and/or meaning criteria as they sort, and then follows up with discussion of what they did. Careful observation and talk and listening with students will aid in the determination of how much support a group needs.

Humor

Wit can be a powerful tool in the classroom. Relevant and respectful humor can defuse tensions, build students' confidence and willingness for risk taking, capture their attention and thinking, ignite curiosity, and foster a sense of camaraderie between students and teachers (Cary, 2000; Herbert, 1991; Jeder, 2015). Recent brain research reveals that humor actually activates more of the brain (McNeely, n.d.). It may come as little surprise, then, that one of the characteristics of effective teachers is a sense of humor (Block & Mangieri, 2003; McDermott & Rothenberg, 1999). Humor is a natural partner for word study, because English has given rise to many plays on words—idioms, puns, oxymora (phrases that use contradictory words), and other forms of ludic (playful) language that tend to surprise and amuse us, as in these examples:

How do turtles talk to each other? By using shell phones. (pun)
Why did the spider go to the computer? To check her website. (pun)
What do we call an alligator in a vest? An investigator. (pun)
Dad said that it's going to be a working vacation. (oxymoron)
That was clearly misunderstood. (oxymoron)
The movie is going to cost us an arm and a leg. (idiom)
It's getting quite late, so I'm going to hit the hay. (idiom)

More puns and idioms may be found at the following websites:

- Pun of the Day—*www.punoftheday.com*
- LaffGaff—*http://laffgaff.com*
- Education First: English Idioms—*www.ef.edu/english-resources/english-idioms*

Although use of figurative language can add levity to the daily routine, twists of phrases such as those just described can be confusing, especially to students who are learning English; thus it is important to discuss both the literal and nonliteral senses of the expressions. To incorporate word play and support students in learning figurative language, each of the word studies in Chapter 4 includes an "Integrating Idioms" section, in which an idiom is presented and discussed; this feature is gradually phased out in Chapter 5.

Appropriate Instruction

Spelling knowledge develops from straightforward letter–sound correspondences (*mat*) to increasingly abstract pattern–sound relationships (*break, soil, focus, severe*) and eventually to complex interactions involving sounds, patterns, and meaning (*design, designate*; *corpse, corporation, corpulent*; and *inspire, inspiration*), as well as relationships involving combinations of meaning elements (*demographics, octogenarian, uncooperative*). Because the sophistication of students' spelling knowledge is likely to differ from student to student within a given class, observation and informal assessments such as the Developmental Spelling Analysis (DSA; Ganske, 2014) are used to determine appropriate instruction. Although syllable juncture spellers tend to be students in grades 4–6, some students at these grade levels may still

be grappling with issues from earlier stages (within word pattern or even letter name), whereas others may be ready to take on the challenges of the final stage, derivational constancy (Ganske, 1999). The same is true for students in grades 7 and 8; although most are likely ready to explore issues at the derivational constancy stage, some may still be solidifying understandings from an earlier stage. Likewise, certain students in earlier grades may be ready for some of the more sophisticated upper-level word studies. Assessment helps to ensure that word study instruction is timely.

Talk

The ease or difficulty with which children and adolescents navigate the challenges of learning depends to a considerable extent on their language abilities, which in turn depend on their opportunities to use language. Effective teachers share the classroom talking space: They intentionally encourage students' language use, including meaningful student-to-student interactions (Pianta et al., 2012). During word study, middle-grade learners discuss how categories of words are alike and different, as they share their thinking about how words work and ponder the meanings and origins of words and idioms. Talk becomes a vehicle for them to clarify and expand their ideas, and the interacting with and learning from peers can be motivating (Oldfather, 1995). Student exchanges also create opportunities for attentive teachers to gain insights about the students' understandings—insights that can make it easier to meet the instructional needs of individual students. With the exception of the word studies focused on Greek and Latin roots, each word exploration in this book includes the previously mentioned "Talking Points." These bulleted points highlight spelling generalizations and other information relevant to the features studied. In essence, they are the lesson take-aways. As students discuss their understandings, they may generate similar or other talking points. Any listed generalization that students do not mention during their discussion, teachers may note before the session ends. Attention to talking points is important, as this will help to solidify students' new learning and will bring meaningful closure to each lesson (Ganske, 2017).

Systematic Approach and Some Sorting

In this book, *systematic* refers to instruction that builds on what students already know and that is preplanned and purposeful. Assessment data and ongoing observations of students' performance, rather than lockstep decision making, guide instruction. Teachers focus instruction on features that students need to understand, rather than feeling obligated to have students complete all of the word studies. The previously mentioned "What Is Known" and "What Is New" sections related to teaching word features are there to assist teachers' decision making. Students who have previously engaged in developmentally appropriate word study are likely to have the background indicated. When this is not the case, or when the sorts are used in a different order, scaffolding may be needed to prevent problems from gaps in understanding.

Sorting activities play a strong role in *Mindful of Words*. Categorizing is one of our most basic cognitive abilities (Bruner, Goodnow, & Austin, 1956). We use it to develop concepts and to order the world in which we live. In fact, as we begin to think about it, there is very little we do not categorize; we categorize animals, plants, rocks, books, architectural styles, furniture types, clothing makers and styles, automobiles, foods, age groups of people, hair types . . . and the list goes on. Categorizing helps us to make sense of new information by comparing the new to the known, and to retrieve the information in an efficient manner. As we consider the role of categorizing in learning about words, we need to consider that English is a complex language, with borrowings from many other languages. By categorizing words according to their features, students are able to notice similarities and differences within and across categories that can help them to formulate generalizations about how the words work.

A Word about History

Many of the complexities involved in English spelling are the result of the influences of other languages, primarily Anglo-Saxon English (also known as Old English); an older form of French; and Greek and Latin. For example, consider the letter *c* and the /k/ sound: The hard *c* in *cat* is of Old English origin, whereas the soft *c,* as in *cent,* is from Old French (though the French got the word from Latin). The French gave us /k/ spelled as *que,* as in the final position in *antique* and *boutique,* and from the Greeks we got /k/ spelled with *ch,* as in *chorus* and *chronicle*.

Old English was the language of England from the 6th century to the middle of the 11th. The letter–sound correspondences of Old English are remarkably regular. In fact, young children who tend to rely on sound when spelling words have been said to spell like the Saxons of England (Henderson, 1981), as in *wif* for *wife* and *hus* for *house*. Old English gave us many of our most common words. In fact, the 100 most frequently occurring words in English all have an Anglo-Saxon origin (Moats, 2005–2006).

With the Norman Conquest in 1066 came a tremendous influx of French words into the language. Over time, Old English and Norman French merged into what is now Middle English. New spelling complexities in the form of patterns resulted from the amalgamation of the languages—among them, the existence of:

- Both hard and soft *c* and *g* (*cat, come, cup* but *cent, city cycle*; and *game, got, gut* but *gentle, gym,* and *magic*).
- Many long-vowel patterns, such as the *ea* vowel team with its long and short variations (*reach* and *measure*).
- Abstract vowels, such as the *ou* and *oy* in *country* and *royal*.

During the Renaissance of the 16th century, as interest in the classics revived and explorations and discoveries were made that led to a need for naming, many words of Greek and Latin origin were added to the English language. Because a lot of these borrowings and newly coined words included roots, prefixes, and suffixes, today we have many families of words that relate in spelling and meaning. This spelling–meaning connection can help students to spell words that on the surface level of pronunciation appear unrelated, such as *sign, signature,* and *resignation*. Moreover, awareness of morphological relationships may enable students to infer meanings of new words, as, for example, deducing what *telepathy* means from an understanding of ***tele****graph* and *sym****pathy*** (Adams, 2004). The benefit of morphological knowledge—being able to recognize and understand prefixes, suffixes, and roots—for developing students' vocabulary knowledge is widely recognized (e.g., Baumann et al., 2002; Bowers, Kirby, & Deacon, 2010; Goodwin & Ahn, 2010). This includes benefits for English learners and struggling readers (e.g., Goodwin & Ahn, 2013; Harris, Schumaker, & Deshler, 2011; Silverman et al., 2013).

Since the Renaissance, English has continued to borrow words from other languages. Table 1.1 shows numerous examples of these borrowings. With some initial guidance in interpreting the etymological information that is part of a word's entry in an unabridged dictionary, students can easily identify additional words from other languages. For example, here is the etymology for *stomach* from the online version of *The American Heritage College Dictionary* (2020): "Middle English, from Old French *stomaque, estomac,* from Latin *stomachus,* from Greek *stomakhos,* gullet, from *stoma,* mouth."

We can interpret the information as follows: The word is most recently derived from Middle English, which borrowed the word from the Old French words *stomaque* and *estomac*. These had been borrowed from the Latin word *stomachus,* which in turn came from the Greek word *stomakhos,* meaning "gullet," and referring to the throat. This word had evolved from another Greek word, *stoma,* meaning "mouth." Although exploring etymologies in hard-copy dictionaries can be a little more challenging—the languages or origin are often abbreviated, and the symbol < is used for "derived

TABLE 1.1. Word Borrowings from Other Languages

Origin	Words	Origin	Words
Aboriginal Australian	*boomerang, kangaroo*	Hawaiian	*hula, ukulele*
American Indian	*chocolate, tepee*	Hebrew	*kosher, schwa*
Arabic	*coffee, monsoon*	Italian	*piano, spaghetti*
Celtic	*heather, plaid*	Japanese	*haiku, emoji*
Chinese	*ketchup, tea*	Russian	*mammoth, parka*
Dutch	*boss, coleslaw*	Sanskrit	*cheetah, yoga*
French	*à la mode, garage*	Scandinavian	*ski, hug*
German	*hamburger, kindergarten*	Spanish	*patio, ranch*
Greek	*chaos, dialogue*	West Africa, Congo	*banana, chimpanzee*

from"—with a couple of walk-throughs and knowledge of where to find the list of language abbreviations, the process is actually quite easy. You can often skim most of the history and get to the origin of the word, which for the preceding example is *stoma,* meaning "mouth." Students might then speculate how a word meaning "mouth" came to be associated with the place where food is digested. Here are several good online sites for learning about other etymologies, including the origins of first names:

- Online Etymology Dictionary—*www.etymonline.com*
- Oxford English Dictionary (OED)—*www.oed.com*
- Wiktionary (choice of 10 languages)—*www.wiktionary.org*
- Google Books Ngram Viewer (graphs of frequency of words in literature across time)—*www.books.google.com/ngrams*
- Wordorigins.org (list of some 400 words/phrases, chosen because of their interesting etymologies)—*www.wordorigins.org/index.php/big_list*
- Inklyo: 20 English Idioms with Surprising Origins—*www.inklyo.com/english-idioms-origins*
- Behind the Name: The Etymology and History of First Names—*www.behindthename.com*

As students explore the etymologies of words, you might also ask them to consider just what *language* is, and to think about or research its beginnings. To learn more about the history of the English language, check out one of the many resources listed at The History of English website (*www.thehistoryofenglish.com/sources.html*).

In an effort to encourage students' interest in word learning and their appreciation for language, each of the word studies in Chapters 4 and 5 includes a "Did You Know?" section in which the story of a word or its history is presented. These sections are written with a student audience in mind, so that they may be read aloud to students if desired. Besides arousing interest, this type of activity provides rich instruction for fostering vocabulary knowledge—instruction that goes beyond definitions and encourages students to think about words and to form connections with them (Beck et al., 2013).

Teaching Considerations

Word Sorts

Categorization activities play a key role in this text. Teachers can conduct the sorts in a variety of ways and with varying support. For instance, students might sort words under exemplars or key words according to common sounds, patterns, or meaning units, with greater or lesser teacher guidance; or

they might sort them according to their own ideas, without the benefit of key words. They might also categorize the words as listening sorts, with partners reading the words and making their placement decisions without looking at the words. This last type of activity works well when there are contrasting sounds in the sort and obvious visual patterns, such as with open and closed syllables (*meter* and *matter* or *hoping* and *hopping*). It is not a good choice when a sound has multiple patterns in the sort that represent it. When appropriate, the listening sort format encourages students to think about sound as well as pattern, and it affords opportunity for students to sort the words in multiple ways, such as by sound, by pattern, or with both sound and pattern in mind. Because groups of words can be sorted in multiple ways, answer keys in *Mindful of Words* are labeled to show what type of sort each one is, such as "Sorting by Sound and Pattern" or "Sorting by Pattern and Meaning."

Practice activities, such as those described next, are important for reinforcing student learning.

Speed sorts encourage automatic recall of patterns being studied. Students categorize the words consecutive times, striving to increase their sorting speed while also increasing or maintaining their accuracy. Some teachers like to use a partner format for this activity and may even provide a stopwatch to aid students in tracking their progress. Sometimes students set personal goals and graph their results.

Word hunts are another type of upper-level word study activity. Here, students apply new understandings by searching through texts for sort words and other words with the features they are studying. They complete word hunts after they have considerable familiarity with the patterns, not on the first day they learn about a feature. Many of the word studies in Chapter 4, and some of those in Chapter 5, lend themselves to word hunting because the patterns are common to many words. When related words are the focus of study, as in consonant alternations (*disrupt/disruption* or *discuss/discussion*), teachers encourage students to find *one* of each pair and then generate the related word. This same approach works well for word hunts involving homophones. For some studies, word hunting may not be feasible. For instance, explorations with Greek and Latin roots may involve low-frequency roots, which would make the task of finding multiple words with the same roots nearly impossible. Instead, groups of students might try to brainstorm other words with the roots or to search in dictionaries for further examples.

Many other activities are possible. Students can record the results of their speed sorts and word hunts in a journal, along with personal reflections or other information, as described in the "Teacher to Teacher" tips in Chapter 3 of this book. In small groups, or with partners, students also might generate synonyms or antonyms for some of the words, explore etymologies and word meanings with an unabridged dictionary or online, and record questions and talking points that arise from their explorations of words. As they study roots, they might coin new words with the roots, as described in *Word Journeys* (Ganske, 2014, Chapter 8).

Scheduling

Typically, students work with a set of words for about a week, although scheduling and students' ease in grasping the features can affect this. Teachers are directly involved when introducing a set of words to students, so they can monitor students' understandings, adjust instruction and troubleshoot problems, and perhaps actually guide students through a sort. This type of small-group, focused instruction usually targets specific student needs revealed through assessment data, such as that gathered from the DSA (Ganske, 2014) or other dictated word inventory. Within a given classroom, students' orthographic knowledge will vary. By working regularly with small groups on targeted features, teachers help to ensure that all students build foundational knowledge about how the English orthographic system works. Without such focused instructional attention, some students may end up with a mishmash of knowledge that can negatively affect their reading and writing of words.

For each set of words, groups typically meet once a week with the teacher for explicit instruction and then follow up with 3–4 days of independent, partner, or small-group practice that includes teacher monitoring (but generally not direct teacher involvement). Sometimes teachers build the small-group explicit instruction into the reading block, working with a group of students while others complete independent reading or other meaningful reading-related activities. Other teachers pull students aside for the instruction during a portion of writing workshop. Some are fortunate in having a dedicated word study time. Upper elementary and middle school teachers may teach small groups about affixes and Greek and Latin roots, or they may do this by developing a whole-class routine that includes a 5- to 10-minute mini-lesson on affixes or word roots two to three times a week. Then they pull focus groups for targeted small-group instruction on the other days. They may work with different groups on different days (15–20 minutes each in the upper elementary grades and 10–15 minutes each in middle school), or they may choose to schedule small-group word study instruction all in one day. This may sound like a squeeze on the schedule, but students need to have the necessary orthographic knowledge to read the words and to be able to build on that knowledge in the future to develop understandings that are more sophisticated. While vocabulary instruction and word-reading ability cannot ensure reading success, shortfalls in either promise reading failure (Biemiller, 2005, p. 223). So the key point to bear in mind when faced with the challenge of scheduling is this: *Teachers make time for this instruction because they realize its importance for students' reading and writing.*

When addressing affixes and Greek and Latin roots through whole-class mini-lessons, teachers should start with the most common prefixes and suffixes, and those with transparent meaning. For example, when teaching the *in-* prefix, meaning "not," they should use examples such as ***in****correct* and ***in****capable,* rather than ***il****legible,* ***im****possible,* ***im****mobile,* or ***in****cognito,* all of which also include the prefix but are not transparent (due to absorption of the *n* by the following consonant, or attachment of the prefix to a root rather than a base word). The students gradually work on those of lower frequency and of less transparency. The same approach is followed with the study of Greek and Latin roots: Teachers begin with the most common and those whose meanings are the most transparent, then move on to roots with less transparency. Generally, Greek roots are more transparent than those of Latin origin. Teachers should monitor the challenge level presented by the transparency of the root and the prefixes or suffixes added to it. For example, the root *aud* and its meaning "to hear" are quite transparent in *audible, auditorium,* and *audience,* but in *status, station, state,* and *statue,* despite the frequency of the root *stat,* the meaning "to stand" is much less obvious.

Teachers gauge students' performance with a set of words through (1) observing and listening to the students' discussions about the words and anecdotal notes; (2) reading students' word study journals or notebook work, including reflections; and (3) conducting informal assessments over 10–15 of the words. Informal assessments may be teacher-dictated, partner-completed, or carried out at listening stations with prerecorded quiz words. Two popular quiz formats include a traditional dictation and a dictation that requires students to categorize, as well as spell, the words (in other words, a listening written sort). Teachers sometimes incorporate a sentence dictation that includes review words.

Teachers and others often ask me about the use of *transfer words* in quiz dictations. Transfer words—words that have not been studied but that include the pattern—are fine to include, with a caveat. Many words have alternate spelling patterns for the same sound; if a student does not have prior knowledge of the word, an alternative spelling that is legitimate though incorrect may be used, as, for instance, the spelling of *remoat* for *remote*. Some credit should be allowed in such cases, or else transfer words should not be used when a sound can be spelled several ways, unless meaning makes clear the correct spelling, as in *helthy* for *healthy* (the *ea* must be used because it reveals the word's relationship to the meaning "heal"). For convenience in keeping track of students' performance and completion of sorts, Performance Records are included in Appendix A.

Vocabulary Knowledge

As students work with words, they not only examine the sound, pattern, and meaning relationships of their spellings, but they come to understand and use the words. This is important, considering the advantage well-developed vocabulary knowledge affords students in comprehending what they read (Stanovich, 2000). For instance, try comprehending the following well-known piece of literature in its "weighty-word" format:

> Two juvenescent members of the *Homo sapiens* species hied to the apex of a well-defined natural mass, which deviated considerably from the horizontal. Their categorical intention was to acquire an aqueous substance for a cylindrical vessel in their possession. However, the juvenescent male precipitously pitched to a supine position with a consequent cranial fissure, and an ensuing vertiginous plummet by the juvenescent female conveyed her to a state of proximity.

Words like *juvenescent, Homo sapiens, hied, apex, precipitously, supine, cranial,* and *vertiginous,* though perhaps previously heard by students, may not be well enough known to assist readers in identifying the passage as the "Jack and Jill" Mother Goose rhyme: *Jack and Jill went up a hill to fetch a pail of water; Jack fell down and broke his crown, and Jill came tumbling after.* Thinking of known words that derive from the same root as some in the passage, such as *juvenile, aquarium, precipice, cranium,* and *vertigo,* can provide clues to the meanings of words in the passage and thus aid students in deciphering the gist of the paragraph. The passage also illustrates the importance of providing students with texts that do not contain too many unfamiliar words. Eight likely unfamiliar words/phrases out of 70 accounts for about 11–12% of the total words, making the passage far more challenging than if it contained just two or three unfamiliar words (3–4% of the text).

As students move through the upper grades, they are likely to encounter many unfamiliar words. As previously noted, morphology is an important avenue for helping students to develop understanding of unfamiliar words, and thus their vocabulary knowledge. How important? Consider the following estimate: About 60% of the unfamiliar words that students encounter in their reading can be analyzed into parts—base words, roots, prefixes, and suffixes—to help figure out their meanings (Nagy & Scott, 2000). A limited number of prefixes and suffixes (see Table 1.2) make up 76% of all prefixed words and 80% of all suffixed words (White, Sowell, & Yanagihara, 1989). Similarly, a set of just 14 roots (those shown in Table 1.3 are primarily of Latin origin), used in conjunction with other morphemes, can unlock the meanings of some 100,000 words (Brown, 1947)! But caution is in order: Some of these roots are quite obscure, and therefore not the ones with which to begin a study of word roots.

TABLE 1.2. "Gotta-Know" Prefixes and Suffixes

Prefixes	Suffixes
un- (not, opposite of)	*-s, -es*
re- (back, again)	*-ed*
in- (not) [also as *im-, il-, ir*]	*-ing*
dis- (opposite of)	*-ly*
en- (put into) [also as *em-*]	*-er, -or* (agent)
non- (not)	*-ion, -tion, -ation, -ition*
in- (in, into) [also as *im-, il-, ir*]	
over- (too much)-	
mis- (badly, wrongly)	

TABLE 1.3. Power-Packed Word Roots: 14 Roots That Can Unlock 100,000 Words

Roots	Definitions	Word examples
tain, tent, ten, tin	to have, hold	*obtain, contain, maintain*
mit, miss, mitt	to send	*transmit, admission*
cap, capt, cip, cept	to take, seize	*capital, captain*
fer	to bear, carry	*transfer, conifer*
sta, stat, sist	to stand	*stand, statue*
graph, gram	to write	*autograph, telegram*
log, ology	to speak, study of	*prologue, geology*
spect	to look, see	*spectator, inspection*
plic, plex, ply	to fold, bend	*plywood, complex*
tens, tend, tent	to stretch	*tendril, extension*
duc, duct	to lead, make	*conduct, production*
pos, pon	to put, place	*position, composure*
fac, fic, fact	to do, make	*factory, facsimile*
scribe, script	to write	*postscript, describe*

Reflective of the importance of morphology in understanding and using words, Chapters 4 and 5 of this book include over 60 word studies focused on prefixes, suffixes, and/or roots.

In addition to the emphasis on morphology, each of the word sorts provides an opportunity to expand students' vocabulary knowledge through discussion of the meanings of some of the less familiar sort words. Words that lend themselves to focused talk include those whose meanings are unknown to students; words that students may confuse with other words; and words with multiple meanings, some of which students may know and others they may not. For many of the word sorts, suggestions of words to consider are offered, but not with the expectation that all be highlighted. In fact, students might benefit from discussion of words other than those targeted. Discussion might include talk about word meanings; generation of sentences with the words; brainstorming antonyms or synonyms for the words; creating word webs; developing "Would You?" riddles, as described in Chapter 4, Sorts 60 and 62; and so forth. Follow-up questions can provide teachers with insights about the depth of students' understandings and extend students' learning about the words. The following three short excerpts from discussions about word meanings by small groups of upper elementary students provide examples. (Note that in each excerpt, the teacher's query follows students' identification of the word. Also, despite the label "Student" used below, multiple students are involved in each interaction.)

TEACHER: What's an *athlete*?

STUDENT: It's somebody that does a sport; they play a sport like tennis or football.

TEACHER: Are you an athlete?

STUDENT: Yes.

TEACHER: Okay. Some people are professional athletes, and some are amateurs.

* * *

TEACHER: What does *possess* mean?

STUDENT: You own it.

TEACHER: What do you possess?

STUDENT: Clothes.

TEACHER: Do you possess a Mercedes-Benz?

STUDENT: No, I don't.

TEACHER: Do you possess a pencil?

STUDENT: Yes.

TEACHER: Do you possess a pair of pump tennis shoes?

STUDENT: Yes.

TEACHER: Okay, good. Do you think you have to own it?

STUDENT: No, but you might have it. But it's not quite yours.

TEACHER: It's in your possession. It's with you right then. . . . Good ideas.

* * *

TEACHER: How about *expert*?

STUDENT: It's like to be real good at something. Perfect or been doing it for a while.

STUDENTS: Not perfect; you're just great at it. Like writing.

TEACHER: Okay, are you an expert at writing?

STUDENT: No.

TEACHER: Trying to be an expert at writing?

STUDENT: Yes.

For some of the Greek and Latin root sorts in Chapter 5, as well as other word sorts that include several unfamiliar words, you might introduce the words by asking students to evaluate how well they know them. To accomplish this, provide students with 8.5- × 11-inch sheets of paper, and ask them to fold them in half along the width and then repeat the process, so that unfolding the paper will reveal four rectangular boxes. Next, ask the students to label each box as shown below (adapted from Blachowicz, 1986; Dale, 1965; Allen, 1999). Then ask them to categorize the sort words according to their level of understanding by writing each word in an appropriate box. As an alternative, provide students with category header cards labeled as each box title, and ask them to categorize their word cards in the appropriate column. Discuss the results. This same process can be used to check understanding after the words have been explored; as an addition, students might be asked to provide an oral or written sentence for some of the words listed under *Could use or define the word*.

Don't know it	Have seen or heard but don't know meaning
Think I know the meaning	Could use or define the word

Certain unfamiliar words from word study or from classroom conversations, read-alouds, or content-area reading (such as those from Appendices B–D) may be deemed worthy of students' *owning*; in other words, they understand the words but also are able to use them. This generally requires 7–10 meaningful encounters with the words. A *teacher's word wall* (Ganske, 2018) can help to make this happen. The word wall reminds busy teachers of the need to bring targeted words into classroom conversation and activities. A few words of interest (10 is a good maximum to ensure prominent visibility) are posted on a wall facing a common teaching location within the classroom. The words are written on sentence strips or large note cards, so they can be seen from anywhere in the classroom. As students begin using the words, teachers replace them with new words.

SAIL: A Word Study Framework

Since the first edition of *Mindful of Words* was published, I've observed and researched the word study practices of many teachers, and have talked to them extensively about these. While it's been great to see word study happening in so many classrooms, too often the small-group meetings have been hurried times with limited cognitive engagement and student talk. In middle school settings, word study instruction was often absent altogether. With these contexts in mind, the concerns often expressed by teachers about a lack of carry-over to writing are not surprising. The need for a structure to better guide teachers in effective word study instruction seemed important. SAIL is my response. I've explored the SAIL framework in classrooms the past several years, and I'm excited about its potential.

The SAIL small-group meeting framework includes four components—*survey, analyze, interpret,* and *link*. Rather than simply telling students how a sound, pattern, or meaning feature works, SAIL involves questioning, talk, and a focus on cognitive engagement. In these ways, students expand their understandings of English orthography and vocabulary more effectively than through the types of word study sorts that often become routinized and mechanical. SAIL also includes a whole-class mini-lesson prior to the small-group meetings to teach a general academic vocabulary word. Once the word is taught, teachers integrate it, along with any previously taught academic vocabulary words, into the talk of the small-group meetings and other parts of the school day. A discussion of the whole-class mini-lesson and the four small-group components follows.

Academic Vocabulary Mini-Lesson

Teaching of the academic vocabulary word is carried out primarily through inquiry and discussion, which are brief (about 5 minutes). There are various lists of academic vocabulary words; the Coxhead (2000) Academic Word List (AWL) is one of the most well known. The AWL includes 570 families of words that are common in academic texts, excluding the 2,000 most frequently occurring words. Table 1.4 includes a sampling of frequently occurring words that teachers might consider for academic vocabulary mini-lessons in upper-level word study. The words are categorized by the component where opportunity to apply the words during small-group word study might be greatest. However, teachers may adjust both the categorization and the selection of words to fit specific classroom needs. Table 1.5 also includes a sampling of easier academic words for mini-lessons.[1] Although teachers have used the words with children in the early grades (see Figure 1.2), they are still appropriate for upper-level word study, if the learners do not already know them. If students do know them, teachers still integrate them into the word study and classroom talk. A mini-lesson should:

[1]See additional Coxhead AWL words at *http://wgtn.ac.nz/lals/resources/academicwordlist/publications/AWLmostfreqsublists.pdf*. Appendix K of this book provides Spanish translations of the words in Tables 1.4 and 1.5.

TABLE 1.4. Academic Vocabulary Relevant to Specific SAIL Components—More Difficult

Survey	Analyze	Interpret	Link
academic	*adjacent*	*abstract*	*compiled*
analogous	*alter*	*acknowledged*	*differentiation*
approach	*analysis*	*adequate*	*facilitate*
aspects	*apparent*	*affect*	*generated*
collapse	*assume*	*alternative*	*integration*
complex	*coincide*	*ambiguous*	*link*
components	*comprise*	*arbitrary*	*option*
contribution	*confirmed*	*attributed*	*relevant*
definite	*consistent*	*clarity*	*response*
denote	*convinced*	*conceived*	*substitution*
derived	*criteria*	*contrary*	*sufficient*
distinction	*detected*	*conversely*	*ultimately*
elements	*deviation*	*deduction*	
explicit	*eliminate*	*encountered*	
indicate	*excluded*	*factors*	
monitoring	*incompatible*	*impact*	
notion	*incorporated*	*isolated*	
precise	*modified*	*implications*	
previous	*predominantly*	*implies*	
prior	*presumption*	*inclination*	
scenario	*stress*	*interpretation*	
specified		*justification*	
survey		*nonetheless*	
		notwithstanding	
		perceived	
		perspective	
		preliminary	
		primary	
		principle	
		process	
		rejected	
		solely	
		straightforward	
		theory	
		thereby	
		underlying	

TABLE 1.5. A Sampling of Academic Vocabulary Relevant to Specific SAIL Components—Easier

Survey	Analyze	Interpret	Link
definitely	*accurate*	*alters*	*apply*
definition	*agree*	*appropriate*	*challenge*
describes	*agreement*	*clarify*	*compare*
descriptive	*analyze*	*common*	*context*
different	*categories*	*consider*	*decide*
differs	*column*	*consult*	*demonstrate*
disagree	*confer*	*evidence*	*difficult*
discussion	*correspond*	*highlight*	*discovered*
exactly	*definitely*	*insights*	*expression*
explain	*detect*	*interpret*	*focus*
identify	*detectives*	*justify*	*imagine*
illustrate	*determine*	*observations*	*reasoning*
interruption	*examine*	*overlaps*	*record*
obvious	*features*	*understanding*	*strategies*
provide	*located*		*transfer*
refer	*refine*		
specifics			
survey			

1. Engage students in thinking, discussing, and sharing.
2. Uncover and clarify misconceptions and deepen understandings.
3. Connect the word to what students know.
4. Provide numerous examples of the word's use.
5. Leave students with a beginning working understanding of the word's meaning.
6. Integrate previously taught academic vocabulary, as appropriate.
7. Respect and encourage participation.

SAIL Small-Group Lesson

Below is a small-group SAIL lesson, conducted with three grade 5 students (B, J, and R) who lag behind their peers in literacy learning. This 15-minute lesson focusing on prefixes is the students' first experience with word sorting. B and J are language minority students. All attend a school where nearly all of the students are from economically disadvantaged backgrounds. (For examples from the early grades, see Ganske, 2018.) The first academic vocabulary word—*definitely*—has been introduced the day before.

Survey (and Sort)

During the first component, the teacher checks to see that the students can identify and understand the words they are working with. Developing vocabulary knowledge is just as important as developing orthographic knowledge. Part of this process is guiding students to categorize the words—in this case, by prefix *un-*, by prefix *re-*, or as *oddball.* The teacher begins by setting the purpose of the lesson, so that the students clearly understand why they are doing the activity.

MS. PHASIO: When something is *accurate,* it is free of errors, mistakes. What do you think I mean by that? *Accurate.* Turn and talk with your buddies around you.

STUDENTS: (*Talking among themselves; some of their conversation is inaudible*) That means it's right. . . . If it's right, it's accurate. . . . I think *accurate* means that you accidentally make a mistake. . . . If somebody says it's not accurate, that means it's not right. . . . You make a mistake with a phone, and you can't erase it. . . .

MS. PHASIO: Okay. Let's come back to the center. So what are our ideas about the word *accurate?* I heard making mistakes, something about friends and being kind to friends. I heard all these great ideas about what we think *accurate* means, what we think being free of errors means. So let's talk it out a little bit. Kelsey, what are you thinking?

KELSEY: I think *accurate* means, like, free to make a mistake.

MS. PHASIO: Free to make a mistake? Say a little more about that.

KELSEY: I did something and accidentally made a mistake. Like, if it's a marker and I accidentally called it a pen.

MS. PHASIO: So it's okay to make that little mistake. Using your example, what if I said, "You know what, Kelsey, be more accurate. What is this? Is it a marker or a pen?"

KELSEY: I'd say a marker.

MS. PHASIO: Okay, thinking about that, class, what do we think that *accurate* means? "Okay, Kelsey, be more *accurate.* It's not a pen; it's a marker." Tell us more about that, Justin.

JUSTIN: I think what *accurate* means is if someone makes a mistake, it's not right. Like, if you don't get it right, you would say that it's not accurate.

MS. PHASIO: Kind of like what Kelsey was saying. If you don't get it right, it's not accurate. Okay. (*To the class*) Say more. We're on the right track.

REID: If the answer is right. If someone said, "How do you spell *because?*", and I said, "*B-e-c-a-u-s-e,*" that would be accurate.

MS. PHASIO: We're getting it. That was really good. Who can repeat what Reid was saying to us? Go for it, Izzy.

IZZY: If he's trying to spell, and he says, "*b-e-c-a-u-s-e,*" that was accurate.

MS. PHASIO: What if I said, "The accurate way to spell *cat* is *c-o-t*"?

STUDENTS: (*Rejecting the answer*) Not *c-o-t! C-a-t!*

MS. PHASIO: Why do you disagree? Evie?

EVIE: Because *cat* should be *c-a-t.*

MS. PHASIO: So was I accurate? Justin, say more.

JUSTIN: You're not accurate, because *c-o-t* would be *cot.*

MS. PHASIO: I was *not* accurate. Say that again.

STUDENTS: (*Together*) I was not accurate.

JUSTIN: It's *cat,* not *cot.*

MS. PHASIO: What is the accurate spelling of *cat?*

JUSTIN: *C-a-t.*

MS. PHASIO: What is the accurate way of spelling *cat,* Ariana?

ARIANA: *C-a-t.*

MS. PHASIO: What is the accurate way of spelling *bat,* Evie?

EVIE: *B-a-t.*

MS. PHASIO: What if I said to you 2 + 3 = 6?

GRAYSON: That is not accurate.

FIGURE 1.2. A first-grade teacher's academic vocabulary mini-lesson with the word *accurate.*

MS. PHASIO: Say more, Grayson.

GRAYSON: That is not accurate, because I think *accurate* means right, and you were not right, because 2 + 3 = 5, because the hundreds chart shows it.

MS. PHASIO: You want to go prove it on the hundreds chart? Let's look for evidence? He's going to go show us some evidence. (*Grayson goes to hundreds chart.*)

GRAYSON: (*Pointing to numbers on the chart*) 1, 2, 3.

MS. PHASIO: Could you justify your answer a little bit more? So explain your idea. Justify it a little bit more.

GRAYSON: So I'm at 2, and I jump 2 more, and I landed on 5.

MS. PHASIO: So what should the equation be, Grayson?

GRAYSON: 2 + 3 = 5.

MS. PHASIO: (*To the class*) Is Grayson accurate?

STUDENTS: Yes. (*One student qualifies this.*) Not all the time. (*Laughter*)

MS. PHASIO: No, just now. We're never accurate all the time, any of us. We all make mistakes. But was Grayson accurate right now?

STUDENTS: Yes.

MS. PHASIO: I noticed that Grayson didn't just say 2 + 3 = 5. He actually proved it. He found evidence, and he justified his answer. So today and every day when you're doing word study, I'm going to ask you to be accurate. I'm going to ask you to find evidence about which word should be in which category. I'm going to ask you to justify your answers. (*Lesson ends.*)

TEACHER: Today we're going to talk about prefixes, and we're going to try to think about using our new academic vocabulary word. Who remembers what word that is?

STUDENTS: *Definitely!*

TEACHER: Great! To start our lesson, I want you to think about what a prefix is. (*B raises his hand.*) B, what do you think a prefix is?

B: I think a prefix is a word that gives the meaning of a root word.

TEACHER: Okay. So we kind of have a little bit of an idea about it, but not quite, right. It will be good to figure it out. Everyone, tell me, what's this word? (*Holds up a word card and pans it for everyone to see.*)

STUDENTS: *Unwrap.*

TEACHER: So I'm going to put the card there. (*Places it on the table in front of the children at the top of what will become a column of words with the same prefix.*) What's this word?

S: *Rebuild.*

TEACHER: All right. I'm going to put *rebuild* here, because *rebuild* has a different prefix from *unwrap*. Okay? (*Students nod approval.*) If we think a word doesn't have *this* prefix (*points to the* un- *in* unwrap), and we think it doesn't have *this* prefix (*points to the* re- *in* rebuild), we're going to put it over here (*points to the* oddball *card*). Have you done any categorizing? Have you done this sort of thing? Have you worked with little strips and sorted words?

STUDENTS: (*Shaking their heads no*) Unh-unh.

TEACHER: So what we are going to do is we're going to sort these by prefix. I'm going to start. Watch and listen. When you think you know where a word should go—if you think it should go here under—what is this word . . . ?

STUDENTS: *Unwrap.*

TEACHER: . . . under *unwrap* or under *rebuild,* we're going to place the card there. Otherwise, we're going to put it over here (*points to the* oddball *card*). After we sort the cards, we're going to talk about where we placed them and see if we can figure out more about prefixes, so that you leave today knowing more about prefixes than you do right now. Does that sound good? (*Students nod.*) Okay?

STUDENTS: (*Looking at each other*) Definitely!

TEACHER: If I put a card where you think it shouldn't go, say to me, "No, don't put it there." Okay?

STUDENTS: (*Smiling and showing thumbs up*) Okay.

TEACHER: So what's this word?

STUDENTS: *Unable.*

TEACHER: *Unable.* We know what that means. *Unable.* Okay, let's see . . . I think *unable* goes with *unwrap*. So I'm going to put the word there, not under *rebuild*. And what's this word?

STUDENTS: *Recycle*.

TEACHER: Tell me about *recycle.* What is *recycle?* Who wants to tell us what that means? J? Excellent. Tell us about *recycle*.

J: It's like when you recycle . . . like when you drink a can of soda, and then you have a recycle bin and you throw the can inside.

TEACHER: Okay, here's something I'm going to ask you as we talk about the words. I'm going to ask you to use other words, not the word on the card. That's harder, but it will help us to use language. So I want you to tell me about it, but I don't want you to use *recycle*. Do you want to try again, or do you want someone to help you out, 'cause I just changed the rules of the game, didn't I? You want to try again? Tell us about *recycle.* What do you think about *recycle?*

J: You can do it with aluminum foil, plastic, or cans.

TEACHER: And what do we do with the foil, plastic, or cans when we recycle? R?

R: You use it again, to make something new.

TEACHER: Okay. Let's imagine this: If I take a piece of paper, and I write a letter on it, and then I decide to make a paper airplane out of it. Would that be recycling?

STUDENTS: Kind of. No. Unh-unh. Uh-huh.

TEACHER: What do you think, B?

B: I definitely think yes, because you're using it again and again.

TEACHER: Is that the kind of meaning we usually think of with *recycling?* Or do we think of it a little bit differently? (*Pause*) Thinking is hard work, isn't it? I can just feel your thinking. Do you recycle at home . . . ? Does that mean that you take papers and make paper airplanes out of them, or do you do something different when you recycle?

R: We do something different.

TEACHER: Okay, and it's like what J was telling us, right, where you sort maybe—this is metal, or these are cans and these are glass containers, and we sort them, and then they get remade oftentimes into something different or remade into those same products. All right, *recycle* . . . I don't think I'm going to put it under *unwrap*. I think I'm going to put it under *rebuild*. So if you disagree, let me know. (*Places the card.*) What's this word?

STUDENTS: *Unusual.*

TEACHER: Does anybody think they know where it goes? Who wants to try? (*Hands go up.*) You want to try, B? Tell us where you're putting it.

B: Under *unwrap* and *unable*.

TEACHER: Okay, so we've got *unusual, unwrap* and *unable*. (*To J and R*) Do you agree with that, or do you disagree?

J AND R: Agree.

TEACHER: All right; what's this word?

STUDENTS: *Unhappy*.

TEACHER: Okay, who thinks they know where *unhappy* goes? J, do you want to do that one? Tell us each time which word you're putting it under.

J: I'm putting it under *unwrap, unable, unusual*.

TEACHER: Are we okay with that?

B AND R: Definitely okay.

TEACHER: Okay? What's this word?

STUDENTS: *Reread.*

TEACHER: Okay. What do you want to do with that one?

R: I'm putting it under *rebuild* and *recycle*.

TEACHER: All right. What do you think? (*Looks at B and J*) Okay?

B AND J: Yes.

TEACHER: What's this word?

STUDENTS: *Reel-ect.*

TEACHER: What is it?

STUDENTS: *Reelect.*

TEACHER: *Reelect*. What does that mean? What does *reelect* mean?

R: It means to elect again. Like the president. He has to be reelected again.

TEACHER: Okay, so can we use other words besides *reelect* or *elect* to talk about that? J?

J: He was voted again.

TEACHER: Oh, I love it! Because when we elect somebody, we vote for them, right? So he was voted in again. Who was doing that? (*To R*) Were you doing that one?

R: Yes.

TEACHER: Tell us where you think that one should go?

R: Under *recycle, rebuild,* and *reread*.

TEACHER: What do we think about that? Is that a good choice? (*Students nod yes.*) Okay, how about this one? What's this word?

STUDENTS: *Unsure*.

TEACHER: Who knows a synonym for *unsure*? Raise your hand. (*Pause*) J?

J: Not reasonable.

TEACHER: Not reasonable. If we're unsure about something . . .

B: Not positive.

TEACHER: "Not positive"; we're just not quite sure, right. We're uncertain; we could say we're uncertain. And we might use this word—*tentative*. Have you ever heard of *tentative*? *Tentative* means we're unsure. I want you to tuck that word away, because I might ask you about that word before we're finished. *Tentative.* And where should we put *unsure*?

STUDENTS: Under *unwrap.*

TEACHER: Okay. How about this one?

STUDENTS: *Review.*

TEACHER: *Review.* What does *review* mean? B?

B: Like seeing it again and again.

TEACHER: Oh! I love the way he used the *view* part, which means "to see," and then the *re-* part means "again," so we're seeing it again and maybe again. So where does *review* go?

STUDENTS: Under *rebuild.*

TEACHER: (*Continues in like manner with* remove *and* reorder, *and then takes the remaining cards.*) I'm going to divide these up and give you each two, maybe even three cards. . . . Let's take a look at them, and I want you to pick one that you're ready to tell us where it goes. Be prepared to tell us what it means, if I ask you. Who's going to start? J? What's your word?

J: *Unite*.

TEACHER: *Unite.* And where are you putting it?

J: Under the question mark.

TEACHER: Okay. What do we think of that?

R: I think no.

TEACHER: You think no?

R: Because it has the prefix *un-,* and we have a category for *un-.*

TEACHER: Uh-huh? What do you think, B?

B: I think yes. Because this looks like a root word.

TEACHER: You think the whole thing is just a word, that it doesn't have a prefix? (*To J*) Is that what you were thinking? (*J nods her head yes. Then to R*) But you're not sure yet, right? Okay. How about if we leave it here, but we're going to talk about it before we're finished. Does that sound like a deal? Okay?

STUDENTS: Uh-huh.

TEACHER: So who did that one? J? (*J raises her hand.*) Who's next? B?

B: *Unkind.*

TEACHER: *Unkind* goes under . . . ?

B: *Unwrap.*

TEACHER: Okay. (*To R*) Next one is yours.

R: My word is *replace,* and I'm putting it under *rebuild*.

TEACHER: All right, and what does *replace* mean? But don't use the word, though.

R: It's like when I'm changing a light bulb.

TEACHER: All right. J?

J: *Unfair.* (*She places* unfair.) Are we okay with where these are being put? (*Students nod their approval.*) If you had to give a synonym for *unfair,* what would that be?

J: It's like when another person gets something, and then you get mad and you say, "That's not fair."

TEACHER: All right, but can you tell me what that means without using *fair* and with just one word? If something is unfair, is there another way to say that?

B: Unequally.

TEACHER: If something was unequal, it would make us feel like it was unfair. Right? If one of your friends or somebody else in your family got this much of a candy bar (*shows a large amount with her hands*), and you got this much of the candy bar (*shows a much smaller amount*), would you feel like that was unfair? (*Students vigorously nod their heads.*) Okay, unless you didn't like chocolate, you probably would. (*Children chuckle.*) Whose turn? (*B raises his hand.*) Okay, go for it, B.

B: *Rewind.*

TEACHER: Okay, and what does that mean? *Rewind*. (*Long pause; R raises her hand. To R*) Okay, and I appreciate that. Help him out.

R: It means to like "to return to something" or "to go back."

TEACHER: Hmm, like what might we rewind? J? (*Students respond enthusiastically.*)

J: A power cord before we put it away.

TEACHER: We might do that. (*To B*) You thought of something?

B: A clock.

TEACHER: We might rewind a clock.

R: A movie.

TEACHER: Excellent. All of those are good examples. (*To R*) Is it your turn?

R: Uh-huh. My word is *unclean*. And I'm putting it with *unwrap.*

TEACHER: And we know what that word means, right? (*Students nod yes.*) Good.

J: My word is *uneven,* and I'm putting it under *unwrap*.

TEACHER: And I think we all know what that word means. B?

B: *Return*. I'm putting it with *unwrap*; I mean *rebuild*.

TEACHER: Okay. And *return,* I think you know what that means. Last one.

R: *Relish,* and I'm putting it here.

TEACHER: You're placing *relish* under the question mark. Sometimes we call the words under the question mark "oddballs." Good.

Analyze

The teacher guiding this sort has already integrated some analysis into the talk by asking students whether they agree or disagree with various word placements, and also through the brief discussion of *unite,* to which she plans to return. Typically, during the analyze component, students consider the placement of their word cards and whether they need to move any words to a different category. They might discuss this in pairs and then share their ideas with the whole group. The small-group interaction here has stronger teacher guidance, due to its being the first time for students and due to their varying language proficiency. Knowing students enables teachers to optimally meet their instructional needs. Further analyzing follows:

TEACHER: (*Points to the two oddball placements.*) So let's talk about these. (*To B and J*) How do you two feel about *relish* going here?

B AND J: Good. (*Looking at each other, then smiling*) We definitely feel good about that.

TEACHER: First of all, what is *relish?*

R: It's like something people like to put on a hot dog.

TEACHER: Okay. Do you know what's in relish?

R: Pickles.

TEACHER: Pickles, for one thing. Uh-huh. Sometimes there are other things. Sometimes relish can be made out of peppers. It can be made out of different things. There's another meaning for it, too. I can say, "I don't relish having to take out the trash." What do I mean by that, if I say, "I don't relish having to do that"?

R: You don't like taking the trash out.

TEACHER: Yes, so maybe I really like relish on my hot dog, and maybe that's why the word is sometimes used that way. Because I love relish on my hot dog, I can say I relish it; I don't have the same feelings for taking the trash out that I do have when I eat my hot dog. Why do we put this here? Why do we think *relish* goes under the oddballs? (*Pause*) What do you think? You can jump in; just don't talk over each other.

J: Because it does not have a prefix.

TEACHER: And how do you know it doesn't have a prefix?

J: It doesn't say *un-* or *re-.*

TEACHER: Okay. But it has *r-e.*

B: It's actually just one word.

TEACHER: Oooh! It's just one word by itself? So even though it has the letters *re-*, they're not acting like a prefix? What does the prefix *re-* mean in all of these—*rebuild, recycle, reread, reelect, review, remove, reorder, rewrite, replace, rewind,* and *return?* Anybody?

B: You're doing it again.

TEACHER: "Doing it again." Or sometimes it means "back" as in *return*—"return the book," or turn the book back to where you got it. Right? But *relish* is not *re-* something, is it? Excellent observation. Okay, let's return to this word (*points to* unite), because J, you and B thought *unite* belonged here with the oddballs, but R, you thought it didn't.

R: I think it does now.

TEACHER: R, you're changing your mind?

R: Yes.

TEACHER: So why do you think *unite* belongs here?

R: I think it belongs there because *unite* is like when something comes together.

TEACHER: Like we might unite for a cause, right? And we can think of the *United* States, which is a pretty good phrase to describe our country, right—*United* States? So why does *unite* belong over here with the oddballs?

R: It definitely belongs right there because it's like one word together.

TEACHER: All right. It's just an intact word. It's an intact root word, or we can call it an intact *base word,* also. So when we add a prefix, we want to add it to an actual word.

Interpret and Link

During the interpret component, the teacher guides students to understandings from their sorting activity that will help them in their reading and writing. The link component is the portion of SAIL when that learning is applied through authentic reading or writing. The interpret and link components are sometimes integrated, as in the discussion that follows. At other times, teachers use link as a separate component to bring closure to the lesson. What is important is that students come away with new understandings that can help them with reading and/or writing of words, and that they have opportunity to apply understandings through contextual reading or writing.

TEACHER: Now let's consider a tricky word (*passes out a whiteboard and pencil to each student and herself*). The word doesn't have either of our prefixes, but does have a prefix that is found in a lot of words. It's *mis-, m-i-s*. Can you think of some words that have *m-i-s*? Let's see if we can all think of one, where the *m-i-s* is a prefix. (*To R*) What do you have?

R: *Misunderstood?*

TEACHER: Definitely! (*To J*) Do you have one? (*Long pause*) Sometimes it's hard to just think of one. Let me come back. B?

B: *Misplaced.*

TEACHER: *Misplaced.* Good one. Sometimes you can think of a word by adding a new prefix onto the base word of a word with a different prefix, such as *replace*. (*To J, who has raised her hand*) You have one now, J?

J: *Misread.*

TEACHER: *Misread!* Excellent! Now the reason I brought up *mis-* is because *misspell* is a word that gets incorrectly written a lot—*misspell*.

B: I was just thinking of that word!

TEACHER: Were you?!

B: (*Smiling*) Definitely!

TEACHER: Okay, I'd like us all to write this sentence on our whiteboards: *I sometimes misspell a word in my paper and have to fix it.* (*Pauses while the students write the sentence, then continues.*) Okay, let's talk about what you wrote. How is *misspell* spelled?

B: *M-i-s-p-e-l-l . . .*

TEACHER: *M-i-s-p-e-l-l,* is that what you said?

B: *M-i-s-p-e-l-l-e-d,* I think?

TEACHER: For *misspelled?* But is that right? *M-i-s-p-e-l-l-e-d.* Is that how we spell it?

R: I think no. Because *mis-* is *m-i-s,* and then he missed the *s* for *spell*.

T: Ooooh! I think that is an excellent observation. So what's our prefix? (*Writes on her whiteboard and then turns it around.*)

STUDENTS: *M-i-s.*

TEACHER: *M-i-s.* Right? And what are we adding it onto?

STUDENTS: *Spell.*

TEACHER: *S-p-e-l-l.* (*Adds* spell *to* mis- *and then turns the board around to show the students.*) So we

have to have that (*points to* mis-), plus we have to have that (*points to* spell), all of it. Because that gives us *m-i-s-s-p-e-l-l.* Does that look kind of strange? Those two *s*'s there?

STUDENTS: Yes.

TEACHER: Right. Kind of strange. Look back at what you wrote, and fix the spelling if you need to. (*Pause*) Is there a word here in our sort that also looks a little strange because of how the prefix joins? (*Points to the categories in the sort. B points to* reelect.) Yes. Look at the word *reelect.* It kind of looks like its *reel-ect,* doesn't it? Like it's *r-e-e-l.* You have to be on the lookout for letter groups that look like prefixes but really are not. That can mislead you. You need to make sure that you've included the prefix *and* you've included the actual base word that's part of it. Even though *reelect* or *misspell* may look kind of strange with the double letters, you have to have both meaning parts there to make up the whole word. Now let's cycle back to what B said earlier about *misspelled*. If I add *-ed* onto *misspell* (*writes* misspelled *and points to the* -ed), is the *-ed* also a prefix?

STUDENTS: (*Varied answers*)

TEACHER: It's not a prefix; it's a suffix. We have prefixes, but we also have suffixes (*writes the words*). An easy way to remember which meaning unit is a prefix and which is a suffix is to think about this: Did you go to preschool? Preschool isn't *after* you start school. Preschool is school that you go to *before* you start regular school. *Pre-* means "before." So prefixes all come before the base word. Suffixes come at the end, after the base word. So *-ed* is a suffix. Do you know any other suffixes?

J: *-Es.*

T: *-Es* is an excellent example of a suffix.

B: *-S.*

TEACHER: *-S* is another excellent example. *-Ing* and *-ly* are also suffixes. Okay, we need to wrap up. Tell me something you learned today; let's just go around the group.

R: I learned that prefixes are at the beginning of words and suffixes are at the end.

J: I learned that all prefixes start at the beginning.

B: I learned how to put prefixes and suffixes in order, and I learned how to remind myself if I forget about how they go with the rest of the word.

TEACHER: Okay. In other words, you learned that you have to have the whole part of the prefix, plus the word that it is attaching to, right? Knowing this can help you to read and write and understand words that have prefixes or suffixes, or that look as though they have a prefix or suffix. (*Pause*) Now . . . what was that word I was going to ask you about at the end? Do you remember it? It means "unsure." (*Pause*) It's *tentative*. I'm going to show you what that word looks like, because if you're like me, I remember better if I see it. (*Writes the word on the whiteboard.*) What's this word?

STUDENTS: *Tentative.*

TEACHER: That's a big word. It's sort of a "$100 word." We call big words like *tentative* $100 words. *Tentative*. And what does it mean?

STUDENTS: That you're unsure.

TEACHER: Yes. So if someone asks you to go to the movies, you can say, "Tentatively, yes," meaning you're not quite sure. Wow! Excellent work today!

A Small-Group Discussion of the Word Root *Scope,* with Four Middle School Students

The following is an excerpt from a focus lesson with four middle school students (M, J, L, and N) who are meeting with their teacher to learn about Greek and Latin roots. Here they discuss *scope* words in one of the categories they have created after being asked by their teacher to sort words by their meaning units.

TEACHER: Do you know where we got these words?

STUDENTS: Where?

TEACHER: We got these words from a Latin—have you ever heard of Latin?

STUDENTS: Yup. Yes.

TEACHER: These words have a Latin background. This word has a Greek background. What is this word?

STUDENTS: *Kaleidoscope.*

TEACHER: What is that? What is a *ka-lei-do-scope?* (*Pause*) Do you know, L, what it is? (*L shakes her head no.*) Well, you're going to love this, then.

M: I know what it is.

TEACHER: Do you know what it is?

M: Yes, I do.

TEACHER: Okay, M, tell us. What is it?

M: A kaleidoscope is like a bunch of pieces of paper stapled to a small tube, and when you roll it, it changes the pictures.

J: Like a video.

TEACHER: They use other things in there, too. This is a kaleidoscope.

STUDENTS: Oh, yeah! All right! I forgot! That's what I was talking about!

TEACHER: It has a little hole here, and you put it up to your eye and see this thing down here? There's like a glass or plastic piece on the end. And I turn this end, and do you know what it does? (*Demonstrates*) It makes things like this happen, and the next time it might make it look like that, and the next time it might make it look like that. Kaleidoscopes are really cool!

M: (*Pointing to one of the images*) That's a rainbow . . . I think that's a pentagon shape.

TEACHER: Yeah. So let's look at the word *kaleidoscope*. Okay? So *scope* means what?

N: Like "something you see."

TEACHER: So we had *vis,* meaning "to see." But that came to us from the Latin. This comes to us from the Greek, and *scope* means "to see." So let's look at our *scope* words. Okay. So we're seeing colors with a kaleidoscope. Now let's try another word. What is a *stethoscope?* What are we seeing?

M: We're not seeing . . .

TEACHER: Well, in a way we are. But not exactly; that's right. J?

J: I think it's like videos.

TEACHER: No, that is not a stethoscope. But good try. What is a stethoscope?

M: A stethoscope is like two pieces of metal where you put it up to someone's chest to listen to their heart.

N: Oh, yeah!

TEACHER: You've been to the doctor, and he puts those two things in his ears that are connected to it, and he listens. (*Students nod.*) All right; that's a stethoscope. And this (*points to* scope) means "seeing," and *stetho* means "chest." So it's the way he's able to see sort of what's happening in your chest.

J: It tells if it's blocked up, like if you have an infection. Do you know what my little brother did? He actually yelled into one end.

TEACHER: All right; how about this one? What is this word?

N: Oh, I've heard of that before! I just can't remember what it is.

TEACHER: What is this word?

N: Oh! *Periscope.*

TEACHER: Yes. What's a periscope? I should probably have gotten a picture.

J: It's kind of like a telescope?

TEACHER: How is it different from a *telescope*?

J: It sees even farther.

TEACHER: Where do you find a periscope?

N: At the mall.

TEACHER: No, not at the mall. But good try.

L: At the Visual Arts?

TEACHER: No.

M: Like in an astronomy lab.

TEACHER: No, probably not. On a submarine, a periscope extends up.

STUDENTS: Oh, yeah! It has a mirror; it has mirrors inside of it.

TEACHER: Because *peri* means "around," so it means "looking around." That's what a periscope does.

Through upper-level word study discussions, students can learn much about vocabulary as well as orthographic features such as word roots, but teachers can also gain insights about the students' understandings that can inform their teaching and questioning to deepen and advance student learning. In Part Two of this book, researchers (Chapter 2) and teachers (Chapter 3) from fourth grade through middle school present more ideas for effectively engaging upper elementary and middle school students about vocabulary and how words work. Also, because administrators are crucial for effective teaching and learning (Branch, Hanushek, & Rivkin, 2013; Copland, 2004; Cotton, 2003; Sebastian, Allensworth, & Huang, 2016)—second only to teachers as factors that contribute to learning and "catalysts" for school turnaround (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004, p. 7)—Chapter 3 ends with a retired principal's vignette about how word study started in her school.

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