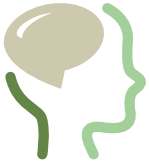


CHAPTER 7



Building Brain Words in Second Through Sixth Grade

With the practices we presented in the previous chapter in mind, let's explore how to build brain words beyond first grade: what's the same, what's different, and what adjustments are needed for utilizing a spell-to-read approach to reading instruction in second through sixth grades? Then with a good grounding in spell-to-read methodology, let's see how connecting building brain words to vocabulary, meaning, and oral language continues to support effective comprehension and meaning making with older readers and what the research says about efficient resources and techniques for building brain words. Chapter 7 ends with very specific effective learning techniques from cognitive psychology that apply directly to building brain words in second grade through sixth grade.

Remarkably, the process for adding brain words in second grade through sixth grade is the same as discussed in the previous chapters except that, typically, the brain's Word Form Area is already well established and ready to add more word spelling knowledge to the other components of word identity (sound and meaning) represented in the dictionary in the brain. There are no more “developmental stages” that change the brain's architecture, only many more words and concepts to add to the dictionary that already exists. In effect, orthography—that is to say, spelling—activates the child's language system and uses it for reading comprehension and fluent writing.

A Brief Review: All Children Must Go Through the Developmental Phases

We begin with a brief review of what has happened in kindergarten and first grade to get brain words in place and ready for success in second grade and beyond. As shown in Chapter 5, students are expected to progress through five developmental phases of spelling and reading and begin to show evidence of orthographic learning and the storage of brain words before entering or at the beginning of second grade. Ideally, students will arrive in the upper grades having successfully moved through the early developmental phases, but if they haven't, you will need to take a step back and meet them where they are with special intervention. Here's a recap of how second graders should have moved through five research-based developmental phases beginning in preschool.

In preschool, there was no dictionary in the brain for reading and writing (unless the child was a precocious early reader), that is to say, no neuroimaging evidence of an established Word Form Area to support reading (see Chapter 3). But as children move through the kindergarten and first-grade phases, the reading brain begins to develop its circuitry as children engage with reading and writing fostered by good teaching. In Phase 1, kindergarten children begin to visually perceive and process alphabet letters—they learn to write their names, identify some letters, and even recognize a few words based on environmental cues. With appropriate reading and writing instruction the kindergartner's brain begins to change some more.

The move to Phase 2 evokes further brain changes as alphabetic symbols (letters) start to be matched to stored representations for sounds and at the same time speech codes are being connected with pronunciations in the child's spoken language along with higher-order language skills for sentences and comprehension. In Phase 3, often in the first half of first grade, brain changes help children decode words with one-to-one letter-to-sound mapping and encode or spell words with sound-to-letter mapping as the sounding out route to reading develops.

Then the magic happens. In Phase 4 the developing Word Form Area begins to store phonics chunks and words for automatic retrieval. The chunks include high-frequency long and short vowel patterns, some affixes such as *-s* and *-ing*, at least five of the basic syllable types, and meaning-based word parts such as the *in* and *to* in *into*, the *can* and *not* in *cannot*. It's in this consolidated/automatic alphabetic Phase 4 that the Word Form Area begins to show up in neuroimaging and at the same time

self-teaching kicks in (and that's probably why it seems like “magic”), orthographic learning takes off, and the routes to reading become intertwined. So that by the end of first grade (for some kids early in second grade) the complex reading brain circuitry is basically in place with a dictionary of chunks of phonics patterns and words: for end-of-first graders perhaps three to four hundred brain words are stored in their lexicon—their internal dictionary in the brain—that can be retrieved automatically for reading and writing. Some were placed there in earlier phases as decodable words with frequent use and with self-teaching became automatically recognized brain words. Others were learned in spelling or word study lessons. The neurological reading circuit, which was not present at birth, is in evidence by the start of second grade, and it is connected to higher-order cognitive functioning such as feelings, language, and thought. Once children have passed through the five phases of early development, they are ready for building brain words in second through sixth grade.

Spell-to-Read Methodology in Second Through Sixth Grade

The Hear-It, Say-It, Write-It, Read-It, Use-It elements in the spell-to-read lesson sequence outlined in Chapter 6 are built into the process of specifically building brain words in second through sixth grade with the same systematic spelling method. But now our spell-to-read five-step sequence is compressed, and all steps are encapsulated within a spelling pretest on the first day of a weekly spelling unit.

- Step 1** Students initially engage in an auditory or listening *Hear-It* process as the teacher pronounces each word on a spelling pretest. Note that students hear the pretest word before seeing it. This is not a test of memorization.
- Step 2** Students *say it*, pronouncing the word out loud based on teacher modeling. Remember all of this is happening aurally. The students have not yet seen the pretest words in print. Be sure to give students an opportunity to connect each word to sound and meaning in their spoken language system by giving them pretest sentences; these sentences help students decide how they think the word is spelled in meaningful context. This enables the students to apply connecting the word to a word they use in speaking.

In the Classroom

Hear-It, Say-It, Write-It, Read-It, Use-It on the Pretest

Here's an example of a third-grade weekly lesson on single-syllable homophones that highlights our spell-to-read five-step sequence on a pretest: The teacher would first pronounce the pretest word *sell* so the students can *hear it*. Then the children repeat the word out loud, activating phonology as they *say it*. Next the teacher uses the word in a sentence such as "Mrs. Sands wants to *sell* her car." This helps the students connect the spelling pretest word to sound and meaning in their own spoken language system. Now they *write it* as they think the word should be spelled. Finally they self-correct their attempt as they *read it* from a model of the correctly spelled word. Beginning this day and for the remainder of the week students will practice the new word as they *use it* in various activities. This same five-step sequence would be used with the other words in this lesson such as the words *sail* (with a sentence such as "It is fun to *sail* a boat"), and *cell* (with a sentence such as "The robber was put in a prison *cell*"). By self-correcting each word after analyzing their attempted spelling against the correct model, students begin to *learn* the correct spelling and make the spelling-meaning connection within their own spoken language circuitry. (Lesson adapted from Gentry 2012.)

Step 3 The progression continues with a written attempt on the pretest as students try their best to spell each word as they hear it or see it in their mind associating this pretest word with what they already know. This is their initial attempt to *write it*.

Step 4 Word analysis begins with the next step where the children are shown the correct spelling for the first time and read the word from the correct model. This is the *Read-It* component, and as they read the word, they self-correct by comparing their own spelling with the correct model.

Step 5 Now students are ready to use the correct spelling in the *Use-It* component of the five-step sequence. After the pretest students are given strategic opportunities to use the spelling words meaningfully in speech, often working with peers to practice using them in sentences.

It's important to reiterate that the words second through sixth graders are learning to spell should be words in their own spoken language by the end of this first lesson. In other words, you want to make sure that this is a word they know and can use orally before expecting them to spell it correctly on a final test.

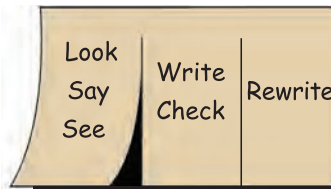
As the week continues, give students multiple opportunities to re-present the words in their brains based on the five-step building-a-brain-word sequence introduced in Chapter 6 and utilized on Day 1 during the pretest. Students continue throughout the week with mixed activities incorporating the Hear-It, Say-It, Write-It, Read-It, Use-It progression, though not always going through the full five-step sequence each day. Options for the remainder of the week might include multisensory activities such as a Look-Say-See-Write-Check “flip folder” multisensory word study technique (see the In the Classroom box), digital practice options for in school or home practice, meaningful workbook pages, online spelling games, and word-sorting options.

For the remainder of the week students actively engage with the words and make connections by

In the Classroom

The Flip Folder Multisensory Word Study Technique

The flip folder technique is used to study words *after* the words have been presented aurally on the pretest. This Look-Say-See-Write-Check-



Rewrite multisensory research-based procedure helps students study and learn words that were missed on the pretest.

- Have the student prepare a list of words to be studied by writing them in a column on the left-hand margin of a sheet of paper to be slipped under the flaps. Make sure all the words to be practiced are spelled correctly. The words to be studied will be under the Look—Say—See flap. The sheet under the other two flaps is blank, allowing the students to write their responses by lifting those flaps.
- The student opens the first flap and *looks* and *says* the first word. Then he closes the flap and visualizes the word in his mind's eye, trying to *see* it.
- Now the student lifts the second flap and attempts to *write* the word correctly from memory. The student then lifts the first flap to *check* his spelling.
- Finally, the student closes the first two flaps and lifts the third flap to *rewrite* the word again for additional practice, and then he *checks* it by lifting the first flap.

(Procedure adapted from Gentry 2016e)

using the words being studied in reading and writing. In doing so, students begin to add the spelling for the week's words to their own internal dictionary in the brain permanently. This methodology is very much in contrast to simply assigning a word list on Monday and having students memorize the spelling for the Friday test only to misspell the word later in their independent writing. What's different is that this process builds permanent brain words!

Note that words on the weekly spelling list should be organized by pattern or a spelling principle. The words should also be on the student's instructional spelling level, that is, the level where he or she can already spell about half of the pretest words correctly in a traditional twenty-word weekly list (Morris, Nelson, and Perney 1986). Some research-based programs present pattern- or rule-based lists with on-grade-level, above-grade-level, and below-grade-level designated words to assist teachers in individualization even when working with whole groups. Presenting a pattern list with some words that children can already spell helps them associate their unknown spellings (words misspelled on the pretest) with known words that have the same pattern or spelling principle—words they already know and spell correctly on the pretest. In effect, having some known spellings on the list helps learners build new knowledge onto what they already know. Finally, keep your lists brief. Learning twenty unknown words each week can be too challenging; learning ten or so new brain words each week, along with the principles that allow for transfer to other words that work the same way, is very doable.

After the first day's pretest (self-testing), which is the initial step for engaging the brain, you can spend the rest of the week revisiting the words through the research-based techniques that follow in this chapter. But, before we jump directly into that research, let's take a moment to explore the connection between building brain words and the expanding vocabulary of children in second through sixth grade.

Continue to Connect Building Brain Words to Vocabulary, Meaning, and Oral Language

As we look forward to how research supports building the dictionary in the brain specifically in second through sixth grades, it's important to remember that brain words should be developing in concert with children's spoken vocabulary. Earlier, we discussed how brain words map onto the meaning-based oral language and

vocabulary children developed both before entering school and as they move through kindergarten and first grade. By the time they hit second or third grade, children acquire an impressive oral vocabulary estimated to be tens of thousands of words, and this number is expected to continue to grow throughout elementary school. As we turn our focus to second through sixth grades, students fuse the process of developing brain words with their continually evolving oral language and vocabulary. In other words, brain words and vocabulary are interconnected, both working together to help students beyond first grade build on what they've learned to develop more fluent reading and deepen their comprehension. With these integral processes in mind, it's imperative that we give these older students ample opportunities to acquire a strong oral language and deeper vocabulary.

Though children acquire spoken vocabulary in various ways—by viewing and listening to media, by engaging interactively with academic instruction in school, and of course through social interaction—vocabulary growth through these methods is limited. The real secret to building students' vocabularies in second through sixth grades is motivating them to read more. Because children's books have more "rare" words than the conversations of most college graduates (Shaywitz 2003, 106), it turns out that the best way to develop an enormous vocabulary is by reading. In fact, students who read twenty minutes a day process a whopping 1.8 million words a year in the dictionary in their brains (Shaywitz 2003). In essence, every time students read a word, that word is *re-presented* in the dictionary

In the Classroom

Extending the Matthew Effect to All Students

When you consider that vocabulary is built from reading, and those with strong vocabulary tend to be strong readers, and stronger readers read more, then it reasons that a "rich-get-richer" situation is brewing. Children who are reading well have more brain words, they read more, learn more vocabulary and brain words, and hence read even better. The problem is that the opposite may be the case for students who struggle, resulting in a continuously widening gap between strong and struggling readers across the elementary school years. This has been dubbed the "Matthew Effect" (see Stanovich 2009). And this is precisely why intentional, scientifically based teaching is so key: by encouraging reading and delivering systematic spell-to-read instruction to develop brain words, we can help all students "get richer."

In the Classroom

Don't Forget About the Importance of Morphology!

It's important to include heavy doses of morphology (the study of word parts that carry meaning) in spell-to-read word study. Morphological study includes root words (the primary meaning part of a word such as the Latin root *cycl* in *cycle*, *bicycle*, *cyclone*, and *encyclopedia*), base words that stand on their own for receiving prefixes and suffixes, compound words, and contractions. Morphological study begins in kindergarten as students learn to make the base word *dog* plural by adding *s* or to add *ed* and *ing* suffixes to verbs. Kindergarten- and first-grade morphology may even include compound words such as *into* and contractions such as *don't*. As students advance through the grades, spell-to-read morphological study intensifies including new opportunities for building new vocabulary that can fascinate students especially with Greek and Latin forms. For example, a whole-class scavenger hunt with the Latin root *jud* can reap new words such as **adjudge**, **adjudicate**, **injudicious**, **judge**, **judicial**, **misjudge**, **prejudice**, and many more! Note how morphological spell-to-read study offers many opportunities to connect brain words to phonological awareness and pronunciation as in changing pronunciations of *jud* depending on its position in the word.

in their brains, so the more they read, the more their vocabulary grows, optimizing their comprehension by igniting their connections between oral vocabulary and brain words. Consequently, as children engage in high volumes of reading, they continue to build their vocabulary: they store sound and meaning and have opportunities to store the spelling patterns of read words as well, through self-teaching and orthographic learning as outlined in prior chapters. Time spent reading both in and out of school is important.

Recall that lexical representations—stored word knowledge—consist of sound, meaning, and spelling. As presented throughout this book, systematic spelling practice throughout the elementary grades provides further opportunities to install meaningful word representations to each student's growing internal dictionary or lexicon of sound and meaning. In other words, in the spell-to-read method, you are not only teaching brain words in a way that connects to the spoken language system, you are also completing the learning of new vocabulary by linking sound, meaning, and spelling. For example, students learn *sail*, *cell*, *great*, *grate*, and *sole* and *soul* not only as spelling words but as new vocabulary. Reading success is about activating

the reading circuitry and using brain words to connect to a large vocabulary of stored words for comprehension. Systematic spelling practice both activates and completes these stored representations in the brain. The result? Fully specified brain words for subsequent use in reading and writing.

Spelling Instruction: The Missing Piece

Thus far we have outlined how our five-step spell-to-read sequence can be utilized to introduce a weekly spelling unit in second grade and beyond and how important it is to connect spelling to students' oral language systems. The overall message here is clear: intentional and organized spelling instruction can be the missing piece in literacy teaching. Spelling instruction promotes continued growth of reading and writing skills through the elementary school grades, by establishing fully specified lexical representations of sound, meaning, and spelling—the very brain words at the heart of this book. For the remainder of this chapter, we will consider some specifics of spelling instruction.

Utilize a Research-Based Spelling Curriculum

Do you know which students in your classroom are spelling at or above grade level and which ones are below? Do you know what specific word pattern features or spelling principles each student needs to be taught? Systematic stand-alone research-based spelling instruction based on an intentional curriculum ensures that reading circuitry is ignited with phonological knowledge, deep phonics knowledge, morphological knowledge, and vocabulary knowledge necessary for grade-level reading fluency.

In addition to giving you an instructional blueprint so you can begin the year with a plan appropriate for your grade level from Day 1, a grade-by-grade spelling curriculum helps you identify students who haven't learned or aren't learning to spell as expected both within and across grade levels and offers a way for you to monitor each student's spelling progress from one grade to the next.

Weekly spelling pretests based in a specific course of study help you see how each child fares in your grade-level curriculum and can function as an elementary or upper-level spelling inventory, allowing you to identify word pattern features or grade-specific spelling principles that your students know or do not know. The pretest helps you group for teaching spelling and make decisions regarding time spent and focus on particular word or pattern features. Beyond that, a grade-by-grade curriculum brings continuity to the curriculum across grade levels, and

in struggling schools where there is often high teacher turnover—as many as three teachers per year in some classrooms—this consistency is imperative.

Unfortunately, as we mentioned in Chapter 4, many schools today lack a research-based spelling curriculum, and teachers are often left their own devices when making one. Because you may not have the expertise (or time!) to create a research-based curriculum on your own and most districts leave spelling instruction so open ended, we highly encourage you to consider research-based spelling books. These books are often the best delivery system for spelling curriculum and instruction, because they're based on developmental theory and research-based principles. You can identify the spelling curriculum of any grade level by just looking at the book's table of contents and save yourself the guesswork around what needs to be taught at a particular grade. Because the word lists are research based, they present the right words at the right time so you can monitor growth and detect difficulties early. These lists often come with options for differentiating the weekly list with on-, above-, or below-grade-level words based on your students' progress. And, because research-based books focus on encoding—which requires deeper learning than phonics or decoding—their curriculum fits well with any reading program.

Failing to provide a grade-by-grade spelling curriculum and explicit spelling instruction with a stand-alone program for upper-grade students—especially those in high-poverty, low-performing schools, or schools with many English language learners—is often a missing piece of literacy instruction and a major reason why so many of our students have difficulty with reading. But remember, this isn't just about spelling. Good spellers tend to be good readers, and many students are poor readers because they can't spell.



Research in Action

A Case for Spelling Books

1. *Spelling books can be used with a spell-to-read methodology as a safety net.* Regardless of which reading or writing curriculum is being used, brain science shows that spelling is foundational for reading (Willingham 2015) and spelling books are research supported above and beyond other delivery systems for teaching spelling (Gentry 2004; Wallace 2006).
2. *A spelling curriculum makes early detection and intervention of reading difficulties more likely.* Noticing an abnormality in a child's spelling development as they move through the curriculum in a spelling book is one of the best indicators for early intervention, which is a key for overcoming dyslexia (Gentry 2006; Texas Education Agency 2014).

3. *Spelling books enable teachers to monitor each student's spelling growth.* Too many schools aren't tracking individual spelling growth because they don't have a grade-by-grade spelling curriculum. Spelling books offer continuity across grade levels for monitoring each student's progress and when needed for providing intervention.
4. *Research-based spelling books go hand in hand with improving reading scores.* Poor reading and poor spelling are directly connected (Adams 1990, 1998; Gentry and Graham 2010; Moats 2005/2006; Reed 2012), and as reported by Wallace (2006) spelling books continue to find support in twenty-first-century research, showing that the skills presented in a research-based spelling book curriculum also promote reading (Graham and Santangelo 2014; Ouellette and Sénéchal 2008; Ouellette, Sénéchal, and Haley 2013; Ouellette, Martin-Chang, and Rossi 2017; Ouellette and Sénéchal 2017).
5. *Spelling books focus on encoding.* Both decoding and orthographic pathways must be engaged for reading, but ultimately words that children learn to decode should become correctly spelled brain words that can be retrieved automatically. Spelling books often help children take words they can read to the deeper level of encoding. Remember, *encoding* (spelling correctly) requires more precision than using phonics alone for decoding and reading (Carreker 2011; Foorman and Francis 1994).

Practice Effective Learning Techniques for Transfer

Effective learning techniques for word permanency in the brain along with transfer into automatic processing for reading and writing is accomplished by following techniques supported by research. Spelling is a highly researched subject area in literacy education, yet practices continue to ignore many

TERMINOLOGY TACKLED:

What Is Word Permanency?

We refer to complete and correct mental representations of words that may be retrieved for both reading and writing as the condition of *word permanency* in the brain. It contrasts with students memorizing a word list for a Friday spelling test but later being unable to retrieve the correctly spelled word when writing. Word permanency combats an age-old problem of a lack of transfer where words were memorized for a spelling test but the same words were later misspelled in writing.

Correct mental representations of spelling, or word permanency, help free the brain during the reading process for making connections leading to fluency and comprehension.

effective learning techniques for word permanency and transfer supported by these studies. Next, we explore both traditional practices and newly discovered evidence-based spell-to-read approaches to support second- through sixth-grade learners in building brain words and word permanency.

In a 2006 review of the research titled “Characteristics of Effective Spelling Instruction,” Randall Wallace reported the following traditional spelling instructional practices supported by research (Wallace 2006, 276):

- Giving weekly spelling lists and administering weekly tests, as the difficulty of the words is adjusted to the instructional level of the speller.
- Administering words in a pretest-teach-posttest format with students self-correcting the tests as much as possible.
- Including words originating from other subjects and from students’ own reading and writing in conjunction with the commercially prepared word lists.
- Keeping records, such as a log, that notes misspelled words offers the student, parent, and teacher a way to isolate and practice words that are personally difficult for a student to spell.
- Teaching strategies and procedures that assist students to learn new words.

To date, there have been no studies refuting the use of these traditional practices for teaching spelling explicitly even though many schools neither have a grade-by-grade spelling curriculum nor follow these traditional practices supported by twenty-first-century research.

Teaching the Six Syllable Types

One of the more recent research-based practices to help students learn new words and transfer those words for automatic reading and writing is focused instruction on six commonly used syllable types in English (Moats 2009; Weakland 2017). Mark Weakland points out that including the typical research-based spelling scope and sequence with focus on the broad six syllable-type categories makes it easier for students to connect what they already know to new learning (Weakland 2017). Including six syllable types in the curriculum makes spelling easier to learn and easier to teach because it challenges the false notion that spelling patterns are always based on overwhelming minute details rather than big picture patterns under broad

categories. Recognizing the six syllable types helps children read and spell new words (Moats 2009, Weakland 2017). Here, we specifically name for students and call their attention to the six syllable types—or chunks—that are highly reliable and are used both within and across grade levels: open syllables, closed syllables, vowel-consonant-*e* (C*Ve*), vowel-*r* syllables, vowel team (including diphthongs), and consonant-*le* (C-*le*) syllables. These easy-to-understand overarching chunking categories appear in students' growing vocabulary of polysyllabic words beginning in first grade and extend into adulthood. The six syllable types were highlighted by Louisa Moats in 2009 but interestingly can also be found in Webster's introduction of spell-to-read methodology in *The American Spelling Book* popularly known as the "Blue-Backed Speller" from 1789!

Five More Teaching Techniques for Word Permanency

Teachers often ask: "What's the best way for my students to learn and retain words from the weekly spelling list? How do I get them beyond simply memorizing words for a Friday spelling test only to forget how to spell the word the next time it pops up in writing?" John Dunlosky and his colleagues (2013) present learning strategies derived from research in cognitive and educational psychology that fit with our spell-to-read approach to teaching. Each of these five strategies (as adapted from Gentry 2016b) helps create brain words.

In the Classroom

The Six Syllable Types Found Within and Across Grade Levels

Open syllables (V, CV, CCV): *me, she, he, no, so, go, to-tal, ri-val, mo-tor*

Closed syllables (VC, CVC, CCV): (about 50 percent in running text) *in, pet, stuff, com-mon, but-ter*

Vowel-consonant-e (V*Ce*): *make, while, poke, puke, ape* (called "e-marker" or "silent e")

Vowel team syllables (teams may be two, three, or four letters and can represent a long, short, or diphthong vowel sounds): *thief, boil, hay, boat, straw, hey, boy, bough, taught, night*

Vowel-r syllables (numerous, hard to master; they require continuous review): *fir, fur, perform, ardor, mirror, further, wart*

Consonant-le syllables (C-*le*) (*stable final syllable*, C-*le* combinations): *puzzle, riddle, quadruple* (Note: there is no doubled consonant as in CC-*le*. Doubling is caused by combining C-*le* with a closed syllable.)

1. **Take a self-test.** Begin study of a weekly unit with a pretest, which is a self-test for spelling. Giving a pretest, followed by a week of various activities for closely examining words that culminate in a posttest, is research-proven best practice (Allal 1997; Wallace 2006). Dunlosky et al. (2013) found self-testing to be one of the most effective learning strategies. It is efficient because it enables the learner to focus on those words that are unknown. And, as discussed earlier, the pretest is also an excellent time to provide a listening-first auditory stimulation and opportunity to link hearing and speech to spelling (our Hear-It, Say-It, Read-It, Write-It, Use-It steps—all in one!).
2. **Self-correct the pretest, focusing on each misspelled word, and have the learner ask “how questions.”** Asking “how questions” such as “*How* does the correct spelling relate to information I already know or what I am learning in this lesson?” is what Dunlosky et al. (2013) call “self-explanation.” Often, self-explanation comes into play in lessons that teach spelling rules. In a research-based spelling book, for example, a third grader will learn a few good rules that explain *how* spelling works: “If a word ends in a consonant followed by *y*, the *y* changes to *i* to add any suffix except *-ing* as in *mystery*, *mysteries*; *carry*, *carried*; *hurry*, *hurrying*. If a word ends in a vowel followed by *y*, the base word is unchanged as in *delay*, *delayed*, *delays*, and *delaying*” (Gentry 2016e).
3. **Have the student question herself and explain “why” she chose a particular spelling.** Dunlosky et al. (2013) call asking these kinds of questions “Elaborative Interrogation.” After a lesson on homophones, a third grader who learns to spell word pairs such as *great* and *grate*, *roll* and *role*, or *scent* and *cent* would know them as homophones—two or more words having the same pronunciation but different meanings, origins, and spellings. After the lesson, the student would be able to explain “why” she spelled the homophones to match the meaning. Using terminology such as *homophone*, as in this Elaborative Interrogation example, increases metalinguistic awareness; as established in the previous chapter, metalinguistics play a causal role in literacy learning. Through these first three listed strategies, the students integrate our Hear-It, Say-It, Read-It, Write-It, Use-It steps in a meaningful and engaging manner.

Proficient reading—reading with fluency and comprehension—foremost depends upon the ability to read words. And the ability to read words is enhanced through orthographic learning that integrates the routes to reading and completes the reading circuitry in the brain. The result is the activation of the brain’s Word Form Area and the establishment of brain words. And spelling instruction is very much the missing link in establishing brain words in the upper elementary grades. If we don’t explicitly teach children to spell, their reading brain may not be optimized to its fullest potential. They may suffer in this era of rigorous standards and frequent testing. Dyslexia referrals and the high costs of remediation may increase, and the struggles of English language learners may be further exacerbated. Research-based resources and techniques, used in conjunction with our general spell-to-read principles and five-step sequence, can help students continue to add brain words throughout the elementary school years and beyond.