GLOBAL EDITION

Words Their Way®

Word Study for Phonics, Vocabulary and Spelling Instruction

SEVENTH EDITION

Donald R. Bear • Marcia Invernizzi
Shane Templeton • Francine Johnston

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This book is dedicated to
the memory of our teacher,
Edmund H. Henderson.

Donald R. Bear
Marcia Invernizzi
Shane Templeton
Francine Johnston

Letter from the Authors

Dear Educator,

It is an honour for the authors of ***Words Their Way:® Word Study for Phonics, Vocabulary and Spelling Instruction*** to present the seventh edition of this seminal text on word study. Accompanying this edition is PDToolkit, an online resource containing interactive digital sorts and printable games across the five stages. Additionally, it features classroom videos and a wealth of printable resources for the classroom all in one place. These tools will help you to effectively implement word study instruction.

Here the authors highlight a few key ideas presented in *Words Their Way*.

Donald

Words Their Way presents a developmental approach that makes word study more efficient and students more responsive. This approach to word study integrates phonics, spelling and vocabulary because of the reciprocal nature of literacy: what students learn in spelling transfers to reading, and what they learn in reading transfers to spelling and vocabulary. These are not, therefore, three separate and unrelated areas of instruction. Integrating phonics, vocabulary and spelling instruction with a developmental approach contributes, we hope, to deep and rewarding learning and teaching.

Marcia

Words Their Way has gotten teachers to think about phonics, spelling and vocabulary instruction from a completely different point of view. Teachers welcome our student-centred, minds-on, active approach that considers word study not only as an integral part of literacy development, but also as an integral vehicle for fostering critical thinking. Effective word study lessons pose questions and involve students in solving problems through careful analysis, reflection and discussion. The questions teachers pose during words study—such as, "Why do some words end in a silent *e*?"—encourage an investigative mindset and give purpose for engaging in word study activities such as word sorts. The language we use when we talk with students about words has a powerful influence on their self-efficacy as learners. This is in sharp contrast to most phonics and spelling programs that merely ask students to memorise relationships, rules and words.

Shane

Words Their Way helps teachers provide their students with the breadth and depth of exploration necessary to construct knowledge about words over time—from individual letters to sound, from groups of letters to sound and from groups of letters to meaning. The awareness and appreciation of how children construct this knowledge empowers and emboldens many teachers to advocate for developmental instruction—in word study specifically and in literacy more generally. This understanding is now being applied to instruction in vocabulary—in particular, *generative* instruction

based on an understanding of how morphology works to generate most of the words in the English language, as well as general academic vocabulary and domain-specific vocabulary.

Francine

Students learn best when they are working with content that is in their "zone of proximal development" or window of opportunity. *Words Their Way* offers an assessment-driven developmental guide for word study that helps teachers differentiate instruction to meet students' needs and provides the resources to do so.

Bring your colleagues and come join us in the most active edition of *Words Their Way*® yet. We wish you happy sorting with your students!

Sincerely,

Donald R. Bear Marcia Invernizzi Shane Templeton Francine Johnston

About the Authors

Donald R. Bear is Professor Emeritus in Literacy Studies at Iowa State University and University of Nevada, Reno where he directed reading centres and taught at all levels. He is a former classroom teacher, and an author and co-author of numerous articles, chapters and 17 books. He is involved in innovative professional development activities, and his work in assessment and word study is used widely. Donald is involved in studies that examine literacy learning, particularly studies of orthographic development in different and second languages.

Marcia Invernizzi is the Henderson Professor Emerita of Reading Education at the University of Virginia. As a founder of *Book Buddies*, a nationally recognised reading tutorial for struggling readers, and *PALS*, a literacy screening and diagnostic tool, Marcia's research interests continue to revolve around evidence-based practices for the prevention of reading and writing difficulties. A former English and reading teacher, Marcia continues to collaborate with school districts and organisations seeking progressive change.

Shane Templeton is Foundation Professor Emeritus of Literacy Studies in the College of Education at the University of Nevada, Reno. A former classroom teacher at the primary and secondary levels, his research focuses on the development of orthographic and vocabulary knowledge. He has written several books on the teaching and learning of reading and language arts and is a member of the Usage Panel of the *American Heritage Dictionary*.

Francine Johnston is a former first-grade teacher and school reading specialist. She retired from the School of Education at the University of North Carolina at Greensboro, where she coordinated the reading master's program and directed a reading clinic for struggling readers.

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Preface

I see and I forget. I hear and I remember. I do and I understand.

—Confucius

Word study involves "doing" things with words—examining, manipulating, comparing and categorising—and offers students the opportunity to make their own discoveries about how words work. When teachers use this practical, hands-on way to study words with students, they create tasks that focus students' attention on critical features of words: sound, pattern and meaning.

Words Their Way is a developmental approach to phonics, vocabulary and spelling instruction. Guided by an informed interpretation of spelling errors and other literacy behaviours, *Words Their Way* offers a systematic, teacher-directed, child-centred plan for the study of words from Kindergarten to high school. Step by step, the chapters explain exactly how to provide effective word study instruction. The keys to this research-based approach are knowing your students' literacy progress, organising for instruction and implementing word study.

PDToolkit for *Words Their Way*®

PDToolkit is the digital tool accompanying *Words Their Way*, seventh edition. Together with the text, this resource provides the tools you need to understand and carry out word study instruction that will motivate and engage your students and help them succeed in literacy learning.

PDToolkit provides students and teachers the opportunity to engage in interactive word study. Features include:

- **Spelling inventories** provide downloadable inventories and feature guides along with classroom composites to help track students' progress throughout the year.
- **Interactive online sorts** span all five developmental stages. Sorts are also available in a printable PDF format for in-class or take-home use. Users can also create their own printable picture and word sorts.
- **Word study games and templates** in a printable PDF format are available for all five developmental stages.
- **Data reporting and administrator oversight** allows literacy coaches or specialists to view and track student progress across multiple teachers' classrooms. Student assessment data can viewed at the whole class and individual student level.

- **Video examples** feature real teachers and students using *Words Their Way* in the classroom.
- **Additional Resources** are links to PDFs that include directions for various assessments and activities to be used as part of word study instruction.

Note: Access code for PDToolkit is included inside the front cover of this book.

New to This Edition

This edition incorporates the following updates:

- Chapter 3 has been revised to focus on the word study lesson, teacher-student interactions and follow-up activities whereas a new Chapter 9 addresses the larger issues involved in organising word study in the classroom.
- Sample lesson plans are included in each chapter to demonstrate how teachers guide thoughtful discussions about words. For example, Chapter 5 provides three lesson plans, including one to introduce word families in picture sorts.
- "Ten Indicators of Effective Word Study Classrooms" in Chapter 9 have been added to guide evaluation and professional development.
- Activities have been added, and many have been revised in Chapters 3–8. In Chapter 8, for example, vocabulary activities are categorised according to being *generative* and *word-specific*, and additional activities such as *Operation Examination* and *Word Challenge: Words from Myths and Legends* are provided.
- Progress-monitoring and goal-setting materials are available in Appendix B.
- A new term, *focused contrasts*, is introduced to highlight the importance of comparing and contrasting letters and spelling patterns related to speech sounds and meaning units or morphemes.
- References throughout the book with the latest research pertaining to word study have been updated.
- English learner callouts provide more information about comparisons between English and other languages.
- Visually enhanced, full-colour design breaks the content into more manageable sections that highlight Teacher Tips and boxed text supplements in the main text.

Knowing Your Students

Chapter 1 provides foundational information on word study and the research in orthography and literacy development that led to this word study approach. Chapter 2 presents assessment and evaluation tools, walking you step by step through the process of determining your students' instructional level and focusing your word study instruction appropriately. After you administer one of the spelling inventories, you will be able to compile a feature guide for each of your students that will help you identify the stage and the word study features they are ready to master. The classroom composite will identify which students have similar instructional needs, allowing you to plan wisely and effectively for word study grouping.

Organising for Instruction

Chapter 3 describes key activities for small groups, partners and individuals that can be incorporated into weekly routines We also describe a continuum of support that will help you plan and implement lessons to maximise classroom time. Tips are provided to help guide discussions about words. Chapter 9 will help you establish a word study routine and manage leveled groups at all year levels. It also introduces ten indicators of effective word study classrooms as a guide to professional development.

Implementing Word Study

After you have assessed your students, created leveled groups and developed routines for word study, the information and materials in Chapters 4 through 8 and the Appendices will guide your instruction. Chapters 4 through 8 explore the characteristics of each particular stage, from the emergent learner through to the advanced reader and writer in the derivational relations stage of spelling development. Each of these chapters covers the research and teaching principles that drive instruction and details an appropriate scope and sequence of word study skills. Suggestions are offered for differentiated instructional pacing.

Activities described in each chapter include concept sorts, word sorts, games and activities that will help you focus instruction where it is needed to move students into the next stage of development. These word study activities promise to engage your students, motivate them and improve their literacy skills. The activities sections have shaded tabs for your convenience, creating a handy classroom resource. This edition extends our emphasis on vocabulary strategies and activities for each developmental level.

Importantly, as you work to address the English Language Arts standards for which you are responsible, you will see how *Words Their Way* supports the reading foundational skills and language standards across all the year levels. The depth and breadth of word knowledge developed through *Words Their Way* also supports most standards' emphasis on students reading and exploring more complex literary and informational texts.

The Appendices at the back of the book contain most of the assessment instruments described in Chapter 2, as well as sound boards, word sorts, word lists and game templates you will need to get your own word study instruction under way.

Companion Volumes

Since the last edition of this book, the stage-specific companion volumes have been revised and updated with expanded step-by-step directions for each lesson. These companion volumes provide you with a complete curriculum of reproducible sorts:

- *Words Their Way:® Letter and Picture Sorts for Emergent Spellers* (3rd ed.), by Donald R. Bear, Marcia Invernizzi, Francine Johnston, and Shane Templeton
- *Words Their Way:® Word Sorts for Letter Name–Alphabetic Spellers* (3rd ed.), by Francine Johnston, Donald R. Bear, Marcia Invernizzi, and Shane Templeton
- *Words Their Way:® Word Sorts for Within Word Pattern Spellers* (3rd ed.), by Marcia Invernizzi, Francine Johnston, Donald R. Bear, and Shane Templeton
- *Words Their Way:® Word Sorts for Syllables and Affixes Spellers* (3rd ed.), by Francine Johnston, Marcia Invernizzi, Donald R. Bear, and Shane Templeton
- *Words Their Way:® Word Sorts for Derivational Relations Spellers* (3rd ed.), by Shane Templeton, Francine Johnston, Donald R. Bear, and Marcia Invernizzi

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chapter 1

Developmental Word Knowledge

For students of all ages and language backgrounds, the key to literacy is knowing how their written language represents the language they speak. Central to this knowledge is understanding how written words represent sound and meaning. The *Words Their Way* approach to developing this knowledge supports students' thinking, problem solving and making sense of words.

How Children Learn about Words

During the preschool years, most children:

- Acquire word knowledge aurally, from the language that surrounds them within their everyday experiences.
- Develop a speaking vocabulary through listening to and talking about everyday events, life experiences and stories.
- Begin to make sense of their world as they have opportunities to use language to describe it and negotiate it.
- Begin to experiment with pen and paper when they have opportunities to observe parents, siblings and caregivers writing for many purposes. They gradually come to understand the forms and functions of written language.
- Learn their first written words, usually their own names, followed by those of significant others. Words such as *Mum*, *cat* and *dog* and phrases like *I love you* represent people, animals and ideas dear to their lives.

As students grow as readers and writers:

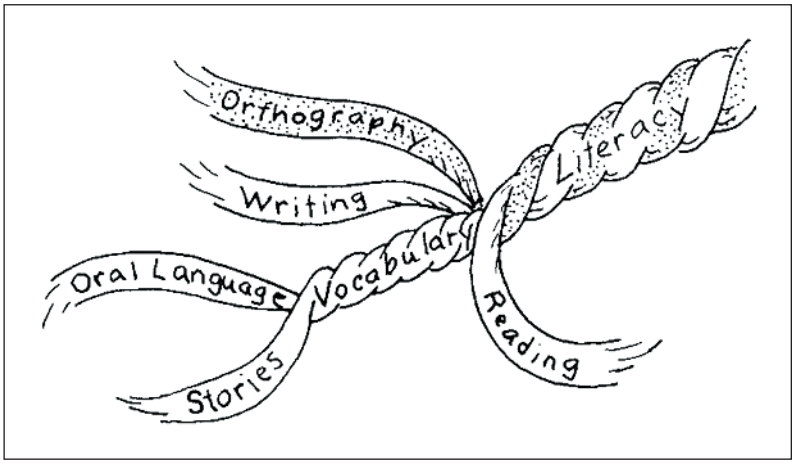
- The language of books and print becomes a critical component to furthering their literacy development.
- Vocabulary is learned when purposeful reading, writing, listening and speaking take place.
- Even more words can be learned when children explicitly examine printed words to discover consistencies among them, and come to understand how these consistent patterns relate to oral language—to speech sounds and to meaning.

The Braid of Literacy

Literacy is like a braid, beginning with the intertwining threads of oral language and stories that are read to children (Bear, Invernizzi & Templeton, 1996). As children experiment with putting ideas on paper, a writing thread is entwined. All along the way, vocabulary is acquired. Then, as children move into reading, the threads of literacy begin to bond. Students' growing knowledge of spelling or **orthography**—the ways in which letters and letter patterns in words represent sound and meaning—strengthens that bonding. The size of the threads and the braid itself become thicker as this orthographic knowledge grows (see Figure 1.1).

A major aim of this book is to demonstrate how word study can lead to the lengthening

FIGURE 1.1 Braid of Literacy



and strengthening of the literacy braid. Teachers' understanding of the ways in which these threads intertwine to create this bond will empower them to direct children's attention to words *their* way.

Children's Spellings: A Window into Developing Word Knowledge

In the early 1970s, Charles Read (1971, 1975) and Carol Chomsky (1971) took a serious look at preschoolers' attempts to spell. Their work introduced the world of literacy to the notion of "invented spelling" and the idea that children could write before they had formal reading instruction. Through linguistic analyses, Read explained how young children's attempts were not just random collections of letters but instead provided a window into their developing word knowledge. These inventions revealed a systematic logic to the way some preschoolers selected letters to represent speech sounds.

At about the same time, Edmund Henderson and his colleagues at the University of Virginia had begun to look for similar logic in students' spellings across ages and year levels (Beers & Henderson, 1977; Henderson & Beers, 1980). Read's findings provided these researchers with the tools they needed to interpret the errors they were studying. Building on Read's discoveries, Henderson discerned an underlying logic to students' errors that changed over time, moving from the spelling of single letters and letter groups or patterns to the spelling of meaning units such as suffixes and Latin roots. The Virginia spelling studies corroborated and extended Read's findings upward through the year levels and resulted in a comprehensive model of developmental word knowledge (Henderson, 1990; Henderson & Templeton, 1986; Templeton & Bear, 1992). Subsequent studies confirmed this developmental model across many groups of students, from preschoolers (Ouellette & Sénéchal, 2008) through adults (Massengill, 2006; Worthy & Viise, 1996), as well as across socioeconomic levels, dialects and other alphabetic languages. The power of this model lies in the diagnostic information contained in students' spelling inventions that reveal their current understanding of written words (Bahr, Silliman & Berninger, 2009; Treiman, Stothard & Snowling, 2013).

Conceptual Development Grows through Categorising

There are similarities in the ways learners of all ages expand their concepts and their knowledge of the world. It seems that humans have a natural interest in finding order and patterns, comparing and contrasting and paying attention to what remains the same despite minor variations. For example, infants learn to recognise Daddy as the same Daddy with or without glasses, with or without a hat or whiskers. Through such daily interactions, all learners categorise their surroundings. Similarly, our students expand their vocabularies by comparing and contrasting one concept with another. Gradually, the number of concepts they analyse increases, but the process is still one of comparing and contrasting. Young children may first call anything with four legs "doggie" until they attend to the features that distinguish dogs, cats and cows, and later terriers, Labrador retrievers, border collies and greyhounds. In the process, they learn the vocabulary to label the categories.

Word Knowledge Grows through Categorising and Reflecting

Word study, as described in this book, occurs in hands-on sorting and matching activities that reflect basic cognitive learning processes: categorising, comparing and contrasting words by different word features and talking about and reflecting on what they notice. For example, when teachers engage students in **focused contrasts** such as categorising words according to whether or not they end in a "silent" *e*, students can discover a consistent spelling pattern: words ending with a "silent" *e* usually have a long vowel sound (ā as in *cake*) whereas those without a final *e* have a short vowel sound (ă as in *cat*). When students examine, categorise, discuss

and think about words under the guidance of a knowledgeable teacher, the logic of the spelling system is revealed.

Emma sorting words—silent *e* versus no silent *e*

Why Is Word Study Important?

Becoming fully literate depends on the quality of the mental representations of words in an individual's **lexicon** or "dictionary in the head" that every individual constructs in his or her mind. For each word, **lexical quality** (Invernizzi, 2017; Perfetti, 2007) includes knowledge of pronunciation (**phonology**), meaning (**semantics**) and use (**syntax**). When this information in each word's mental representation is merged with the word's spelling, its orthography, this supports

- The immediate, accurate recognition of words in texts that facilitates comprehension in reading
- The immediate, accurate production of words in writing that allows writers to focus their attention on making meaning

Henderson and his colleagues used the term **word study** to refer to the teaching of spelling and how it merges with pronunciation, meaning and use. They also showed how, through an informed analysis of students' spelling attempts, teachers can differentiate and provide timely instruction in phonics, spelling and vocabulary—instruction that is essential to move students forward in reading and writing.

Planning and implementing a word study curriculum that explicitly teaches students necessary skills, and that engages their interest and motivation to learn about words, is a vital aspect of any literacy programme. However, some approaches to phonics, spelling and vocabulary do not engage and motivate: they primarily involve repeated practice involving drill, memorisation and an emphasis on teaching rules. Students have little opportunity to discover spelling patterns, manipulate word concepts or apply critical thinking skills.

Word study should be embedded within purposeful reading and writing. In that context, effective, engaging and motivating word study provides:

- A systematic, developmentally based scope and sequence
- Multiple hands-on opportunities to manipulate words and features in ways that allow students to look at and analyse words, generalising beyond individual words to entire groups or families of words
- Opportunities for active, critical thinking about words that lead to an ever-deepening understanding of how spelling works

What Is the Purpose of Word Study?

Word study helps students:

- Actively explore and understand the nature of the spelling system, developing a **general** knowledge of the regularities, patterns and conventions needed to read and spell
- Develop **specific** knowledge of the spellings, meanings and uses of individual words

General word knowledge is what we use when we encounter a new word, when we do not know how to spell a word or when we do not know the meaning of a specific word. The better our general knowledge of the system, the better we are at decoding unfamiliar words, spelling correctly or guessing the meanings of words. For example, primary students who have general knowledge about short vowels and consonants would have no trouble attempting the word *brash*

for **English learners**

Phonics: Analytic vs Synthetic? Both!

There is an ongoing debate in literacy teaching between *analytic* and *synthetic* phonics. Actually, research settled the debate a long time ago—both are needed (International Reading Association, 2018; National Reading Panel, 2000). In *analytic phonics*, students break known words down to analyse the individual sounds and letters within them; in *synthetic phonics*, students build words up by blending the individual sounds and letters. The problem with relying on synthetic approaches exclusively is that students may not recognise the word as one they know even after they blend all the individual sounds correctly. This is particularly true of English learners and even native speakers with limited vocabularies. Analytic phonics instruction helps children learn how to use the spelling patterns in known words to then figure out unknown words that have similar spelling patterns. Most children need *both* types of instruction—when, how and how much depend on where they are developmentally. For example, a child who is just on the cusp but not yet beginning to read would have difficulty trying to blend all the consonants and vowels within a word because full segmentation of all the sounds within a word is a more advanced skill; very beginners are solidifying their knowledge of beginning and ending consonants. Nevertheless, even beginners *synthesise* sounds as they write: Listening for sounds in what they want to write and trying to match letters to those sounds is a great application of synthetic phonics.

even if they have never seen or written it before. The spelling is straightforward, like so many single-syllable short vowel words. For intermediate students who have general knowledge that words that are similar in spelling are related in meaning, such as *compete* and *competition*, would be more likely to understand the meaning of an unfamiliar word like *competitively*. Additional clues offered by context also increase the chances of reading and understanding a word correctly.

Specific word knowledge enables us to remember the correct spelling and meaning of individual words. For example, the word *rain* might be spelled *rane*, *rain* or *rayne*; all three spellings are theoretically plausible. However, only specific knowledge helps us spell it correctly. Likewise, only specific knowledge of the spelling of *which* and *witch* makes it possible to know which is which! The relationship between specific knowledge and general knowledge of the system is *reciprocal*—each supports the other—as is their application in reading and spelling. Conrad (2008) expressed this idea in noting that "the transfer between reading and spelling occurs in both directions" (p. 898) and that "the orthographic representations established through practice can be used for both reading and spelling" (p. 891).

Alphabet, Pattern and Meaning: The Basis for Developmental Word Study

Word study evolves from decades of research exploring developmental aspects of word knowledge with children and adults. This research has documented specific kinds of spelling errors that tend to occur in clusters at different points throughout development and which reflect students' uncertainty over certain spellings or orthographic conventions. These "clusters" have been described in terms of

- errors dealing with the **alphabetic** match of letters and sounds (FES for *fish*)
- errors dealing with **letter patterns** (SNAIK for *snake*) and **syllable patterns** (POPING for *popping*)
- errors dealing with words related in **meaning** (INVUTATION for *invitation*; a lack of knowledge that *invite* provides the clue to the correct spelling of the second vowel in *invitation*)

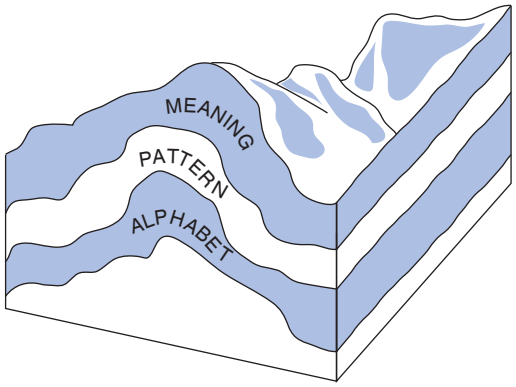
The same cluster types of errors have been observed among:

- Students with learning disabilities and dyslexia (Bear, Negrete & Cathey, 2012; Sawyer, Lipa-Wade, Kim, Ritenour & Knight, 1997; Templeton & Ives, 2007; Worthy & Invernizzi, 1989)
- Students who speak a variant dialect (Cantrell, 2001; Dixon, Zhao & Joshi, 2012; Stever, 1980)
- Students who are learning to read in different alphabetic languages (Helman, 2004; Helman et al., 2012; Ford, Invernizzi & Huang, 2018)

Longitudinal and cross-year-level research has shown that essentially the same developmental progression occurs for all learners of written English, varying only in the rate of acquisition (Invernizzi & Hayes, 2004; Templeton & Bear, 2018; Treiman, Stothard & Snowling, 2013).

Word study also builds on the history of English spelling. Developmental spelling researchers have examined the three layers of English orthography in the historical evolution of English spelling and compared this evolution to students' developmental progression from *alphabet* to *pattern* to *meaning* layers. Figure 1.2 illustrates how each of the three layers of the English spelling system is built on the one before: to the straightforward alphabetic base of Old English was added the more abstract letter patterns in Middle English, and to that layer were added the Greek and Latin meaning units such as prefixes, suffixes and roots in early Modern English. From the intermediate year levels and up, word study includes students' examining the interactions among these three layers.

FIGURE 1.2 Developmental Word Study Instruction



Alphabet

The **alphabetic layer** in English spelling is the first layer of information at work. Our spelling system is alphabetic because it represents the relationship between letters and sounds. In the word *sat*, each sound is represented by a single letter; we blend the sounds for *s*, *a* and *t* to read the word *sat*. In the word *chin*, we still hear three sounds, even though there are four letters, because the first two letters, *ch*, function like a single letter, representing a single sound. So we can match letters—sometimes singly, sometimes in pairs—to sounds from left to right and create words.

The alphabetic layer of English orthography was established during the time of Old English, the language spoken and written by the Anglo-Saxons in England between the Germanic invasions of the fifth century C.E. and the conquest of England by William of Normandy in 1066 (Lerer, 2007). Old English was remarkably consistent in letter–sound correspondence and used the alphabet to systematically represent speech sounds. The long vowels were pronounced close to the way they are in modern Romance languages today, such as Spanish, French and Italian; for example, *e* is pronounced as long A as in *tres*; *i* is pronounced as long E as in *Rio*.

The history of the alphabetic layer reflected in the story of Old English is relevant to teachers today because beginners spell like "little Saxons" as they begin to read and write (Henderson, 1981). Armed with only a rudimentary knowledge of the alphabet and letter sounds, beginning spellers of all backgrounds use their alphabet knowledge quite literally. They rely on the sound embedded in the names of the letters to represent the sounds they are trying to represent (Invernizzi, 1992; Read, 1971; Young, 2007). This strategy works quite well for consonants when the names do, in fact, contain the correct corresponding speech sounds; for example *Bee*, *Dee*, *eF*, *eS* and so forth. It works less well for letters that have more than one sound: (*C:/s/* and */k/*), and it does not work at all for consonants with names that do not contain their corresponding speech sounds (*W*: *double you; Y*: *wie* and *H*: *aitch*). Short vowel sounds are particularly problematic for young spellers because there is no single letter that "says" the short vowel sound. As a result, beginning readers choose a letter whose name, when pronounced, sounds and feels closest to the targeted short vowel sound (Beers & Henderson, 1977; Read, 1975). For example, beginning readers often spell the short *e* sound in *bed* with the letter *a* (BAD) and the short *i* sound in *rip* with the letter *e* (REP).

Pattern

Why don't we spell all words in English "the way they sound"—at the alphabetic level, in other words? If we did, words like *cape*, *bead* and *light* would look like *cap*, *bed* and *lit*—but these spellings, of course, already represent other words. Therefore, the **pattern layer** overlays the alphabetic layer. Because there are 42 to 44 sounds in English and only 26 letters in the alphabet, single sounds are sometimes spelled with more than one letter or are affected by other letters that do not stand for any sounds themselves. When we look beyond single letter–sound match-ups and search for **patterns** that guide the groupings of letters, however, we find surprising consistency (Hanna, Hanna, Hodges & Rudorf, 1966; Venezky, 1999). For example, consider the *ain* in *rain*: We say that the silent *i* is a **vowel marker**, indicating that the preceding vowel letter, *a*, stands for a long vowel sound. The *i* does not stand for a sound itself, but "marks" the vowel before it as long. The *ai* group of letters follows a pattern: When you have a pair of vowels in a single syllable, this letter grouping forms a pattern that often indicates a long vowel. We refer to this as the "AI pattern" or as the consonant-vowel-vowel-consonant (CVVC) pattern—one of several high-frequency long-vowel patterns. Overall, knowledge about orthographic patterns within words is considerably valuable to students in both their reading and their spelling.

Where did these patterns originate? The simple letter–sound consistency of Old English was overlaid by a massive influx of French words after the Norman Conquest in 1066. Because these words entered the existing language through bilingual Anglo-Norman speakers and writers, some of the French pronunciations and spelling conventions were adopted, too. Old English was thus overlaid with the vocabulary and spelling traditions of the ruling class, the Norman French. This complex interaction of pronunciation change on top of the intermingling of French and English spellings led to a proliferation of different vowel sounds represented by different vowel patterns. The extensive repertoire of vowel patterns today is attributable to this period of history, such as the various pronunciations of the *ea* pattern in words like *bread* and *thread*, *great* and *break*, *meat* and *clean*. It is uncanny that students in this pattern stage of spelling spell like "little Anglo-Normans" when they write *taste* as TAIST or *leave* as LEEVE.

Students sort by the patterns of long *a*

Meaning

The third layer of English orthography is the **meaning layer**. When students learn that groups of letters can represent meaning directly, they will be much less puzzled when encountering unusual spellings. Examples of these units or groups of letters are prefixes, suffixes and Greek and Latin roots. These units of meaning are called **morphemes**—the smallest units of meaning in a language.

One example of how meaning functions in the spelling system is the prefix *re-*: Whether we hear it pronounced "ree" as in *rethink* or "ruh" as in *remove*, the morpheme spelling stays the same because it directly represents meaning. Why is *sign* spelled with a silent *g*?