

Words THEIR WAY™

Seventh Edition

Word Study for Phonics, Vocabulary,
and Spelling Instruction



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

Words Their Way®

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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 honor 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 a new online resource, *Words Their Way*® *Digital* featuring a student input assessment that automatically scores and suggests word study groups. *WTW Digital* also contains more than 130 interactive digital sorts and printable games across the five stages.

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-centered, 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 memorize 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 children’s 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 centers 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 recognized 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 organizations 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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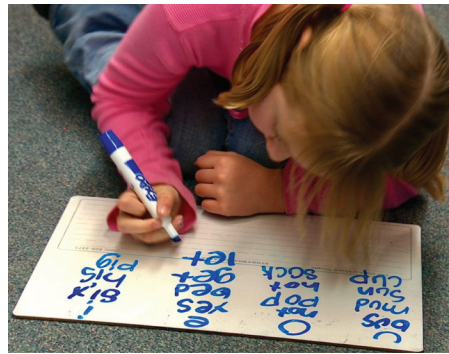
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Preface

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 categorizing—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 behaviors, *Words Their Way* offers a systematic, teacher-directed, child-centered 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, organizing for instruction, and implementing word study.

New to This Edition

Two new digital tools accompany *Words Their Way*, seventh edition. Together with the text, these resources provide 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.

Words Their Way[®] *Digital* provides students and teachers the opportunity to engage in interactive word study. Features include:

- **Automatically scored spelling inventories** generate student word study groups based on inventory results. Students can input spellings directly into the website, or the teacher may choose to key in students’ spellings from an assessment administered on paper.
- **130+ 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 interactive or printable picture and word sorts.
- **40+ 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.

Key Content Changes

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 organizing 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 categorized 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 goalsetting 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-color design breaks the content into more manageable sections that highlight Teacher Tips and boxed text supplements in the main text. The design facilitates easy interaction between the printed text and the eText.

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.

Organizing 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 maximize 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 grade 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 grades. 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 supplements 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

Other related volumes are designed to meet the needs of English learners and students across all grade levels:

- *Words Their Way*® *for PreK–K*, by Francine Johnston, Marcia Invernizzi, Lori Helman, Donald R. Bear, and Shane Templeton
- *Words Their Way*® *with English Learners: Word Study for Phonics, Vocabulary, and Spelling* (2nd ed.), by Lori Helman, Donald R. Bear, Shane Templeton, Marcia Invernizzi, and Francine Johnston
- *Words Their Way*® *Emergent Sorts for Spanish-Speaking English Learners*, by Lori Helman, Donald R. Bear, Marcia Invernizzi, Shane Templeton, and Francine Johnston
- *Words Their Way*® *Letter Name–Alphabetic Sorts for Spanish-Speaking English Learners*, by Lori Helman, Donald R. Bear, Marcia Invernizzi, Shane Templeton, and Francine Johnston
- *Words Their Way*® *Within Word Pattern Sorts for Spanish-Speaking English Learners*, by Lori Helman, Donald R. Bear, Marcia Invernizzi, Shane Templeton, and Francine Johnston
- *Words Their Way: Vocabulary for Middle and Secondary Students* (2nd ed.), by Shane Templeton, Donald R. Bear, Marcia Invernizzi, Francine Johnston, Kevin Flanigan, Dianna Townsend, Lori Helman, and Tisha Hayes
- *Words Their Way*® *with Struggling Readers: Word Study for Reading, Vocabulary, and Spelling Instruction, Grades 4–12*, by Kevin Flanigan, Latisha Hayes, Shane Templeton, Donald R. Bear, Marcia Invernizzi, and Francine Johnston
- *Words Their Way*® *for Parents, Tutors, and School Volunteers*, by Michele Picard, Alison Meadows, Marcia Invernizzi, Francine Johnston and Donald Bear.

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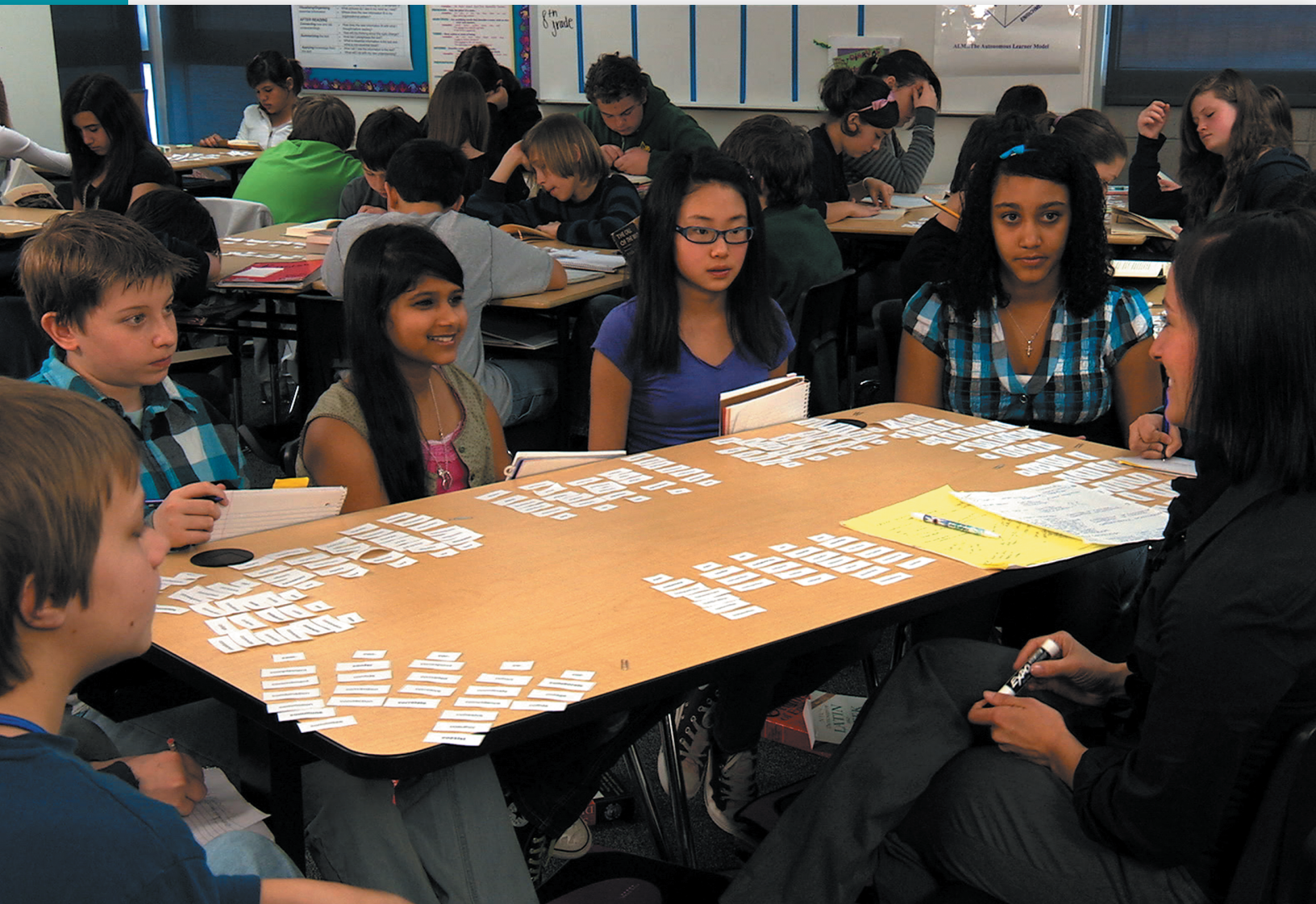
We would like to thank the many reviewers who, over the years, have helped to make each edition of *Words Their Way* grow and continue to be responsive to teachers' needs and expectations. Colleagues and friends are too numerous to mention here, but those who have in recent years worked with and taught us include Kelly Bruskotter, Sharon Cathey, Shari Dunn, Kevin Flanigan, Michelle Flores, Kristin Gehsmann, Ashley Gotta, Amanda Grotting, Tisha Hayes, Lori Helman, Ryan Ichanberry, Darl Kiernan, Sandra Madura, Alison Meadows, Kara Moloney, Sarah Negrete, Molly Ness, Ann Noel, Michelle Picard, Leta Rabenstein, Kelly Rubero, Alisa Simeral, David Smith, Regina Smith, Kris Stosic, Dianna Townsend, and Alyson Wilson. We would like to thank the video production team from the University of Nevada, Reno, for their excellent work on the videos accompanying this book, as well as many photos in the book. The team includes Mark Gandolfo, Theresa Danna-Douglas, Maryan Tooker, and Shawn Sariti. We would also like to thank Michelle Murray and Kristen Braatz for a number of videos and photos that appear in Chapter 8, and Ann Marie Howard for the photo that appears in Chapter 9.

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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 *Mom*, *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:

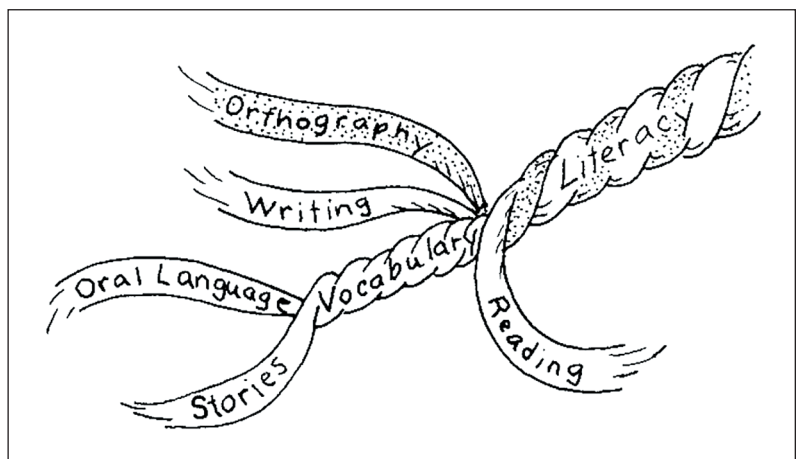
- The language of books and print becomes a critical component to furthering their literacy development.
- Vocabulary is learned when purposeful reading, writing, listening, and speaking take place.
- Even more words can be learned when children explicitly examine printed words to discover consistencies 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 grade 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 grades 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 (Ouellete & 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 Categorizing

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 recognize Daddy as the same Daddy with or without glasses, with or without a hat or whiskers. Through such daily interactions, all learners categorize their surroundings. Similarly, our students expand their vocabularies by comparing and contrasting one concept with another. Gradually, the number of concepts they analyze 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 Categorizing and Reflecting

Word study, as described in this book, occurs in hands-on sorting and matching activities that reflect basic cognitive learning processes: categorizing, 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 categorizing 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, categorize, discuss,

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

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



Emma sorting words—silent e versus no silent e

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 program. However, some approaches to phonics, spelling, and vocabulary do not engage and motivate: They primarily involve repeated practice involving drill, memorization, 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 analyze words, generalizing 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*

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 analyze 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 recognize 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 *synthesize* 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. 876) and that “the orthographic representations established through practice can be used for both reading and spelling” (p. 869).

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*)

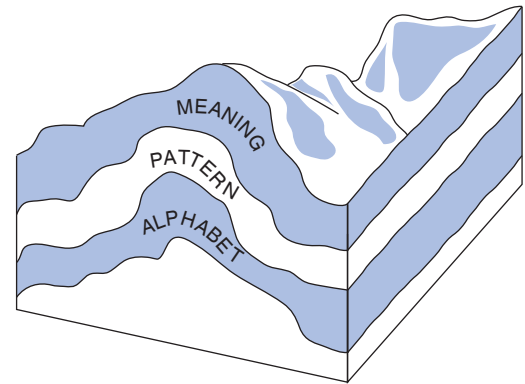
The same cluster types of errors have been observed among:

- 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-grade-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 grades 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*?

Because it is related in meaning to *signature*, in which the *g* is pronounced. The letters *s-i-g-n* remain in both words to visually preserve the meaning relationships that these words share. Likewise, the letter sequence *photo* in *photograph*, *photographer*, and *photographic* signals spelling–meaning connections among these words, despite the changes in sounds that the letter *o* represents.

The explosion of knowledge and culture during the Renaissance required a new, expanded vocabulary to accommodate the growth in learning that occurred during this time. Greek and Latin were used by educated people throughout Europe, so new words could be built out of elements that came from classical Greek and Latin: for example, Greek roots *auto* + *graph*; *bio* + *sphere*; Latin roots, prefixes, and suffixes (*inspect*, *spectator*, and *respectable*). So, a third layer of meaning was added to the orthographic record of English (Upward & Davidson, 2011).

The spelling–meaning relations among words brought into English during the Renaissance have important implications for vocabulary instruction today as students move through the intermediate grades and beyond (Templeton 2011/2012, 2012). When students explore how spelling visually preserves meaning relationships among words with the same derivations (for example, note the second *b* in *bomb* and *bombard*), they see how closely related spelling is to meaning and vocabulary. The seemingly arbitrary spelling of some words—in which silent letters occur or vowel spellings seem irrational—is in reality central to understanding the meanings of related words. For example, the silent *c* in *muscle* is “sounded” in the related words *muscular* and *musculature*—all of which come from the Latin *musculus*, literally a little mouse. (The rippling of a muscle reminded the Romans of the movements of a mouse!) Such words, through their spellings, carry their history and meaning with them (Venezky, 1999; Templeton et al., 2015).

How History Speaks to Instruction

Organizing the phonics, spelling, and vocabulary curriculum according to historical layers of alphabet, pattern, and meaning provides a systematic guide for instruction. It places the types of words to be studied in an evolutionary progression that mirrors the development of the orthographic system itself. Anglo-Saxon words, the oldest words in English, are among the easiest to read and the most familiar. Words like *sun*, *moon*, *day*, and *night* are high-frequency “earthy” words that populate easy reading materials in the primary grades. Anglo-Saxon words survive in high-frequency prepositions, pronouns, conjunctions, and auxiliary verbs (for example, *have*, *was*, *does*) although the pronunciation is now quite different. More difficult Norman French words like *chance*, *chamber*, *royal*, *guard*, and *conquer* frequently appear in books suitable for the elementary grades. The less frequent, more academic vocabulary of English—words like *atonement*, *epigraph*, *antecedent*, *immunology*, *disingenuous*, and *rectilinear*—are Latin or Greek in origin and appear most often in student reading selections beginning in the upper elementary grades and beyond.

Alphabet, pattern, and meaning represent three broad principles of written English and form the layered record of orthographic history. As students learn to read and write, they appear to reinvent the system as it was itself invented. As shown in Table 1.1, beginners invent the spellings of simple words phonetically, just as the Anglo-Saxons did more than a thousand years ago. As students become independent readers, they add a second layer by using patterns, much as the Norman French did. Notice in Table 1.1 the overuse of the silent *e* vowel marker at the ends of all of Antonie’s words, much like Geoffrey Chaucer’s! Intermediate and advanced readers invent conventions for joining syllables and units of meaning, as was done during the Renaissance when English incorporated a large classical Greek and Latin vocabulary (Henderson, 1990; Templeton, Bear, Invernizzi, & Johnston, 2010). As Table 1.1 shows, both Julian, age 14, and Queen Elizabeth I in 1600 had to deal with issues of consonant doubling in the middle of words.