# 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®

*This page intentionally left blank*

# Words Their Way®

## Word Study for Phonics, Vocabulary, and Spelling Instruction

SEVENTH EDITION


**Donald R. Bear**
*Iowa State University & University of Nevada, Reno*
*Professor Emeritus of Literacy Studies and Literacy Center Director*

**Marcia Invernizzi**
*University of Virginia*
*Edmund H. Henderson Professor Emerita of Education*

**Shane Templeton**
*University of Nevada, Reno*
*Foundation Professor Emeritus of Literacy Studies*

**Francine Johnston**
*University of North Carolina, Greensboro*
*Associate Professor Emerita*



Pearson

*Director and Publisher:* Kevin Davis
*Portfolio Manager:* Drew Bennett
*Managing Content Producer:* Megan Moffo
*Content Producer:* Yagnesh Jani
*Portfolio Management Assistant:* Maria Feliberty
*Managing Digital Producer:* Autumn Benson
*Digital Studio Producer:* Lauren Carlson
*Development Editor:* Carolyn Schweitzer
*Executive Product Marketing Manager:* Krista Clark
*Procurement Specialist:* Deidra Headlee
*Cover Design:* Pearson CSC, Jerilyn Bockorick
*Cover Art:* Jim Atherton
*Full Service Vendor:* Pearson CSC
*Full Service Project Management:* Pearson CSC,
*Editorial Project Manager:* Pearson CSC, Heather Winter
*Printer-Binder:* Menasha
*Cover Printer:* Phoenix
*Text Font:* PalatinoLTPro-Roman

Credits and acknowledgments borrowed from other sources and reproduced, with permission, in this textbook appear on appropriate page within text.



**Library of Congress Cataloging-in-Publication Data**
Bear, Donald R.
Words their way: word study for phonics, vocabulary, and spelling instruction/Donald R. Bear, Iowa State University, Marcia Invernizzi, University of Virginia, Shane Templeton, University of Nevada, Reno, Francine Johnston, University of North Carolina at Greensboro. —Seventh Edition.
pages cm
Rev. ed. of: Words their way / Donald R. Bear … [et al.]
Includes bibliographical references and index.
ISBN 978-0-13-520491-7—ISBN 0-13-520491-7 1. Word recognition. 2. Reading—Phonetic method. 3. English language—Orthography and spelling. I. Invernizzi, Marcia. II. Templeton, Shane. III. Johnston, Francine R. IV. Bear, Donald R. Words their way. V. Title.
LB1050.44.B43 2015
372.46'2—dc23

2015008892

10 9 8 7 6 5 4 3 2 1

ISBN-10: 0-13-520491-7
ISBN-13: 978-0-13-520491-7

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*.

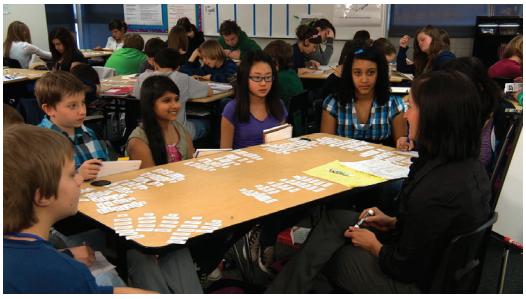
**Francine Johnston** is a former first-grade teacher and school reading specialist. She retired from the School of Education at the University of North Carolina at Greensboro, where she coordinated the reading master's program and directed a reading clinic for struggling readers.

# Brief Contents

# Contents







# Activities

## **ACTIVITIES** for The Syllables and Affixes Stage 283



## **ACTIVITIES** for the Derivational Relations Stage 323

# 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.

## Acknowledgments

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.

Special thanks to the following teachers for their classroom-tested activities: Cindy Aldrete-Frazer, Tamara Baren, Margery Beatty, Telia Blackard, Cindy Booth, Karen Broaddus, Wendy Brown, Janet Brown Watts, Karen Carpenter, Carol Caserta-Henry, Jeradi Cohen, Fran de Maio, Nicole Doner, Allison Dwier-Seldon, Marilyn Edwards, Monica Everson, Ann Fordham, Mary Fowler, Elizabeth Harrison, Esther Heatley, Lisbeth Kling, Pat Love, Rita Loyacono, Barry Mahanes, Carolyn Melchiorre, Colleen Muldoon, Liana Napier, Katherine Preston, Brenda Riebel, Leslie Robertson, Geraldine Robinson, Elizabeth Shuett, Lauren Sloop, Jennifer Sudduth, Charlotte Tucker and Krista Wieser.

Finally, a very special "thank you" to the following individuals: Drew Bennett, who joined us in this new edition to navigate new terrains and ways of presenting word study; and content producer Yagnesh Jani.

*This page intentionally left blank*

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 *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:

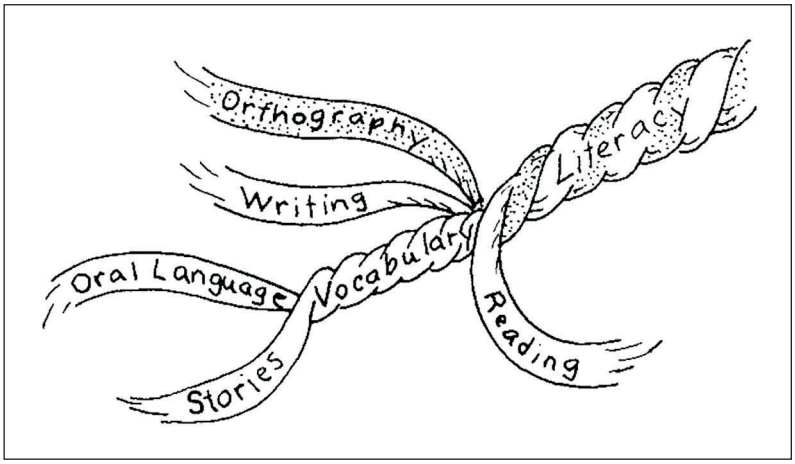
- The language of books and print becomes a critical component to furthering their literacy development.
- Vocabulary is learned when purposeful reading, writing, listening, and speaking take place.
- Even more words can be learned when children explicitly examine printed words to discover consistencies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

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 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*)

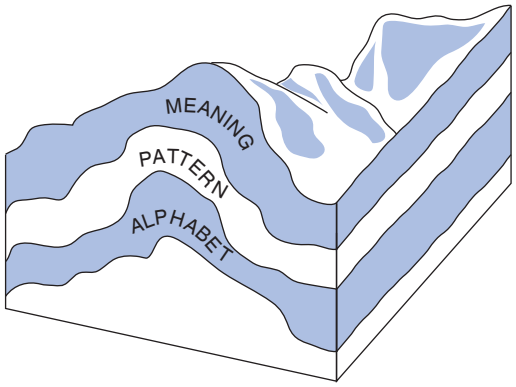
The same cluster types of errors have been observed among:

- 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.

**TABLE 1.1** Comparison of Historical and Students' Development across Three Layers of English Orthography: Alphabet, Pattern, and Meaning

| | | |
|---|---|---|
| ***Alphabet*** | **Historical Spelling<br>Anglo-Saxon<br>(Lord's Prayer, 1000)**<br>WIF (wife)<br>TODAEG (today)<br>HEAFONUM (heaven) | **Students' Spelling-by-Stage<br>Letter Name–Alphabetic<br>(Tawanda, age 6)**<br>WIF (wife)<br>TUDAE (today)<br>HAFAN (heaven) |
| ***Pattern*** | **Norman French<br>(Chaucer, 1440)**<br>YONGE (young)<br>SWETE (sweet)<br>ROOTE (root)<br>CROPPE (crop) | **Within Word Patterns<br>(Antonie, age 8)**<br>YUNGE (young)<br>SWETE (sweet)<br>ROOTE (root)<br>CROPPE (crop) |
| ***Meaning*** | **Renaissance<br>(Elizabeth I, 1600)**<br>DISSCORD (discord)<br>FOLOWE (follow)<br>MUSSIKE (music) | **Syllables & Meaning<br>(Julian, age 14)**<br>DISSCORD (discord)<br>FOLOWE (follow)<br>MUSSIC (music) |

*Source:* Adapted from "Using Students' Invented Spellings as a Guide for Spelling Instruction That Emphasizes Word Study" by M. Invernizzi, M. Abouzeid, & T. Gill, 1994, *Elementary School Journal, 95(2),* p. 158. Reprinted by permission of The University of Chicago Press.

TEACHING TIPS

### Learning and Integrating the Layers of English Orthography

Word knowledge advances as students develop orthographic understandings at the alphabetic, pattern, and meaning levels. This happens when they read and write purposefully and are also provided with explicit, systematic word study instruction by knowledgeable teachers. How can word study give students the experiences they need to progress through and integrate these layers of information? The following examples illustrate the emphasis at each layer:

- For students who are experimenting with the alphabetic match of letters and sounds, teachers can focus on contrasting aspects of the writing system that relate directly to the representation of sound. For example, words spelled with short *e* (*bed, leg, net, neck, mess*) are contrasted with words spelled with short *o* (*hot, rock, top, log, pond*).
- For students experimenting with pattern, teachers can contrast patterns as they relate to vowels. For example, words spelled with *ay* (*play, day, tray, way*) are compared to words spelled with *ai (wait*, *rain*, *chain, maid*).
- For students experimenting with conventions of syllables, affixes (prefixes and suffixes), and other meaning units, teachers can help students see that words with similar meanings are often spelled the same, despite changes in pronunciation. For example, *admiration* is spelled with an *i* in the second syllable because it comes from the word *admire.*

## The Development of Orthographic Knowledge

When we say word study is developmental, we mean that the study of specific word features must match the level of the learner's word knowledge. Word study is not a one-size-fits-all program of instruction that begins in the same place for all students within a grade level. Rather, it is an approach that uniquely emphasizes the critical role of differentiating instruction for different levels of word knowledge.

Word study instruction must match the needs of the child. This construct, called **instructional level**, is a powerful determinant of what may be learned. Simply put, we must teach within each child's zone of understanding (Harré & Moghaddam, 2003; Vygotsky, 1962). To do otherwise results in frustration or boredom and little learning in either case. Just as in learning to play the piano—when students must work through book A, then book B, and then book C—learning to read and spell is a gradual and cumulative process. Word study begins with finding out what each child already knows and starting instruction there.

One of the easiest and most informative ways to know what students need to learn is to look at the way they spell words. Recall that students' efforts to spell provide a direct window into how they think the spelling system works. By interpreting what students do, educators can target a specific student's instructional level and plan word study instruction that this student is ready to learn. Furthermore, by applying basic principles of child development, educators have learned how to engage students in learning about word features in a child-centered, developmentally appropriate way.

When students are instructed within their own zone of understanding or **zone of proximal development (ZPD)**—studying words *their* way—they are able to build on what they already know, to learn what they need to know next, and to move forward. Zone of proximal development was first described by Vygotsky (1962): The "zone" refers to the span between what a learner knows and is able to do independently, and what she is able to do with support and guidance. With explicit instruction and ample experience reading, writing, and examining words, spelling features that were previously omitted or confused become incorporated into an ever-increasing reading and writing vocabulary.

## Stages of Spelling Development

As we have described, students move from easier one-to-one correspondences between letters and sounds, to more abstract relationships between letter patterns and sounds, to even more sophisticated relationships between meaning units as they relate to sound and pattern. Developmental spelling research describes this growth as a continuum or a series of chronologically ordered *stages* or phases of word knowledge: Emergent, Letter Name-Alphabetic, Within Word Pattern, Syllables and Affixes, and Derivational Relations (Henderson, 1990; Ehri, 2005; Nunes & Bryant, 2009).

Stages are marked by broad, qualitative shifts in the types of spelling errors students make as well as changes in the way they read words. The names of the stages or phases represent the predominant type of orthographic information—alphabetic, pattern, meaning—used by learners in the spelling and reading of words (Berninger, Abbott, Nagy, & Carlisle, 2009; Bryant, Nunes, & Bindman, 1997; Ehri, 1997, 2006; Templeton, 2003).

In this book we use the word *stage* as a metaphor to inform instruction. In reality, as students grow in their general knowledge of the three layers of information in English and in their specific knowledge of word features, some overlap exists in the layers and features students understand and use. In fact, as students grow in their understanding of how spelling represents both sound and meaning, they become more flexible in their application of spelling strategies. For example, in figuring out an unfamiliar word they are able to do more than just "sound it out"—they may use analogies to other words with similar sounds, patterns, or meanings, or use spelling–meaning connections. There is a range of grades during which most students pass through these stages, and these are presented in Table 1.2.

**TABLE 1.2** Spelling and Reading Stages, Grade Levels, and Corresponding Instructional Chapters

***Alphabet*** → ***Pattern*** → ***Meaning***

***Emergent Stage***
**Emergent Reading**
*PreK to K*
*Chapter 4*

***Letter Name–Alphabetic Stage***
**Beginning Reading**
*K to Grade 2*
*Chapter 5*

***Within Word Pattern Stage***
**Transitional Reading**
*Grades 1 to 4*
*Chapter 6*

***Syllables and Affixes Stage***
**Intermediate Reading**
*Grades 2 to 6*
*Chapter 7*

***Derivational Relations***
**Advanced Reading**
*Grades 5 and up*
*Chapter 8*

Because word study is based on each student's stage of spelling, the word study activities presented in this book are arranged by stages of spelling development. This chapter presents a brief overview of these stages. As shown in Table 1.2, Chapters 4 through 8 explore each of these stages in depth. By conducting assessments throughout the year, as described in Chapter 2, teachers can determine the spelling stages of their students and monitor students' progress and development (Gehsmann, Spichtig, & Tousley, 2018).

For each stage, students' orthographic knowledge is defined by three functional levels that are useful guides for knowing when to teach what (Invernizzi et al., 1994):

- What students *know and use correctly*—an independent or easy level
- What students *use but confuse*—an instructional level or zone of proximal development at which instruction is most helpful
- What is *absent* in students' spelling—a frustration level in which spelling concepts are too difficult

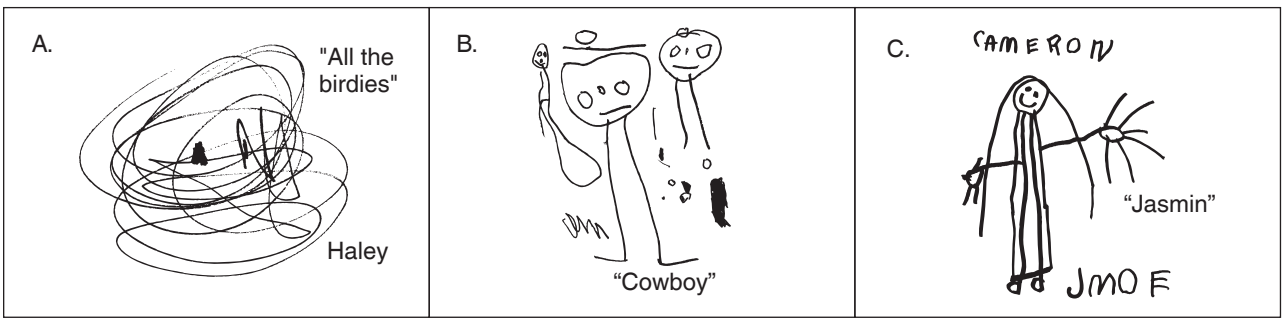
What students "use but confuse" helps to define each spelling stage.

**EMERGENT STAGE.** The **emergent stage** encompasses the writing efforts of children who are not yet reading conventionally and in most cases have not been exposed to formal reading instruction. Emergent writers typically range in age from 2 to 5 years, although anyone not yet reading conventionally is in this stage of development. Emergent writing may range from random marks to legitimate letters that bear some relationship to sound. However, most of the emergent stage is decidedly **prephonetic**, which means there is little if any direct relationship between a character on the page and an individual speech sound.

As we explore in Chapter 4, emergent writing may be divided into a series of steps or landmarks. Children move from producing large scribbles indecipherable from an accompanying drawing (as illustrated in Figure 1.3A, Haley's picture of birdies), to using something that looks like scribbles separate from the picture (see Figure 1.3B where the child labeled his drawing to the left as "cowboy"), and on to using letters to represent some sounds in words (Figure 1.3C where "Jasmin" has been written as JMOE). In between, emergent learners are learning and experimenting with various symbols such as numbers and letter-like forms (Cabell, Tortorelli, & Gerde, 2013). Moving from this stage to the next stage hinges on learning the **alphabetic principle**: understanding that speech can be divided into individual units of sound and matched to letters in a systematic way (Liberman, Shankweiler, & Liberman, 1989).

**LETTER NAME–ALPHABETIC STAGE.** The letter name–alphabetic spelling stage encompasses that period during which students are first formally taught to read, typically during kindergarten and early first grade. Most letter name–alphabetic spellers are between the ages of 4 and 7 years, although a beginning reader at age 55 also can be a letter name–alphabetic speller (Bear, 1989; Massengill, 2006; Viise, 1996). Early in this stage, "letter name" is students' predominant approach to spelling; that is, they use the *names* of the letters as cues to the sounds

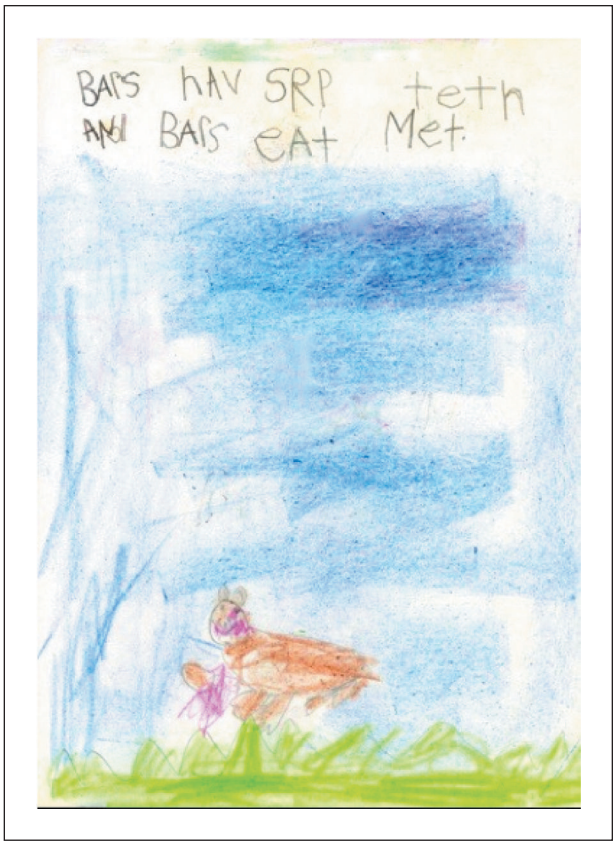
**FIGURE 1.3 Emergent Writing**




*Source:* From dissertation by Janet Bloodgood (1996). Adapted with permission.

**FIGURE 1.4 Early Letter Name–Alphabetic Spelling: Ellie's Note to Her Sister, Meg—"When Are You Coming?"**


**FIGURE 1.5 Late Letter Name–Alphabetic Spelling: Matt's Informational Writing about "Bears"**



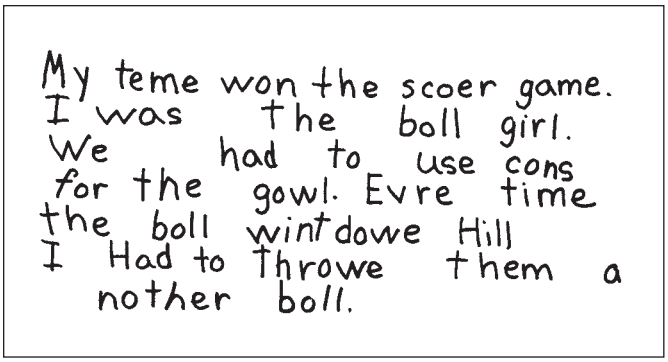

they want to represent (Read, 1975). In Ellie's early letter name–alphabetic spelling shown in Figure 1.4, she wrote YNRUKM: She used the letter *Y* to represent the /w/ sound at the beginning of the word *when*, because the first sound in the pronounced letter name *Y* ("wie") matches the first sound in the word *when*. The letter name for *N* includes the "en" sound to finish off the word *when*. Ellie used *R* and *U* to represent the entire words *are* and *you*, another early letter name strategy.

As students move through this stage, they learn to segment the individual speech sounds or **phonemes** within words and to match an appropriate letter or letter pairs to those sounds. Students in the later part of the letter name–alphabetic stage spell much like the sample in Figure 1.5. Matt, a class cut-up in his writing as well as in his behavior, shows mastery of most beginning and ending consonants. What clearly separates his spelling from Ellie's early letter name spelling is his consistent use of vowels. Long vowels, which "say their name," appear in TETH for *teeth* and MET for *meat*, but silent letters are not represented. He has spelled the high-frequency word *eat* correctly. *R*-influenced vowels in *bears* and *sharp* are challenging, but Matt has made a good effort to represent these sounds.

**WITHIN WORD PATTERN STAGE.** Students entering the within word pattern spelling stage can read and spell many words correctly because of their automatic knowledge of letter sounds and short-vowel patterns. This level of orthographic knowledge typically begins as children transition to independent reading toward the end of first grade. It expands for most students throughout second and third grade and into fourth. Although most within word pattern spellers typically range in age from 6 to 9 years, many low-skilled adult readers remain in this stage. Regardless, this period of orthographic development lasts longer than the letter name–alphabetic stage because the vowel pattern system of English orthography is quite extensive.

The within word pattern stage begins when students move away from the linear, sound-by-sound approach of the letter name–alphabetic spellers and begin to include patterns or chunks of letter sequences and silent vowel markers like final *e*. Within word pattern spellers can think about words in more than one dimension; they study words by sound and pattern simultaneously. As the name of this stage suggests, within word pattern spellers take a closer look at vowel patterns within single-syllable words (Henderson, 1990).

**FIGURE 1.6 Early Within Word Pattern Spelling: Kim's Soccer Game**



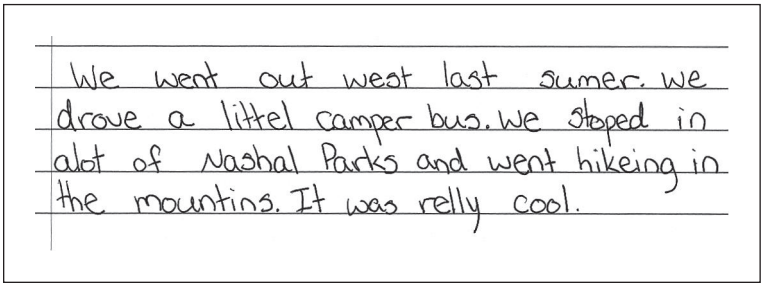

Kim's writing in Figure 1.6 is that of an early within word pattern speller. She spells many short-vowel and high-frequency words correctly, such as *hill*, *had*, *them*, *girl*, and *won*. She also spells the common silent *e* long-vowel pattern correctly in words like *time* and *game*. Kim hears the long vowel sound in words like *team*, *goal*, and *throw*, but she selects incorrect patterns, spelling them as TEME, GOWL, and THROWE and she omits the silent *e* in *cones*. These are good examples of how Kim is using but confusing long-vowel patterns.

During the within word pattern stage, students first study the common long-vowel patterns (long *o* can be spelled with *o*-consonant-*e* as in *joke*, *oa* as in *goal*, and *ow* as in *throw*) and then less common patterns such as the VCC pattern in *cold* and *most*. The most challenging patterns are **ambiguous vowels** because the sound is neither long nor short and the same pattern may represent different sounds, such as the *ou* in *mouth*, *cough*, *through*, and *tough*. These less common and ambiguous vowels may persist as misspellings into the late within word pattern stage.

Although the focus of the within word pattern stage is on the pattern layer of English orthography, students must also consider the meaning layer to spell and use **homophones**, words such as *bear* and *bare*, *deer* and *dear*, and *hire* and *higher*. These words sound the same but have different spellings and meanings. Learning the correct spelling of homophones requires attention to sound, pattern, and meaning. Homophones introduce the spelling–meaning connection that is explored further in the next two stages of spelling development.

**SYLLABLES AND AFFIXES STAGE.** The syllables and affixes spelling stage is typically achieved in middle to upper elementary school when students are expected to spell many words of more than one syllable. This represents a new point in word study when students consider spelling patterns where syllables and meaning units such as affixes and base words join. A base word is a word to which prefixes and/or suffixes are added. Students in this fourth stage are most often between 8 and 12 years old, though many adults can also be found in this stage.

**FIGURE 1.7 Syllables and Affixes Spelling: Xavier's Account of His Summer Adventures**




In Figure 1.7, a fourth-grader in the early part of the syllables and affixes stage has written about his summer vacation. Xavier spelled most one-syllable short and long vowel words correctly (*went*, *west*, *drove*, *last*). Many of his errors are in two-syllable words and fall at the places where syllables and affixes meet. Xavier does not know the conventions for preserving vowel sounds when adding affixes such as *-ed* and *-ing*. He spelled *stopped* as STOPED and *hiking* as HIKEING. The convention of doubling the consonant to keep the vowel short is used in LITTEL for *little*, but is lacking in his spelling of *summer* as SUMER. Final syllables often give students difficulty because the vowel sound is not clear and may be spelled different ways, as shown in Xavier's spellings of LITTEL and MOUNTINS.

During the syllables and affixes stage, students explore the spelling of affixes that affect the meanings of words—for example, DESLOYAL for *disloyal* and CAREFULL for *careful*. Though studying simple affixes and base words as a decoding strategy begins earlier, studying base words and affixes more closely at this stage helps students construct the foundation for further exploration of word meanings in the next stage, derivational relations. At that

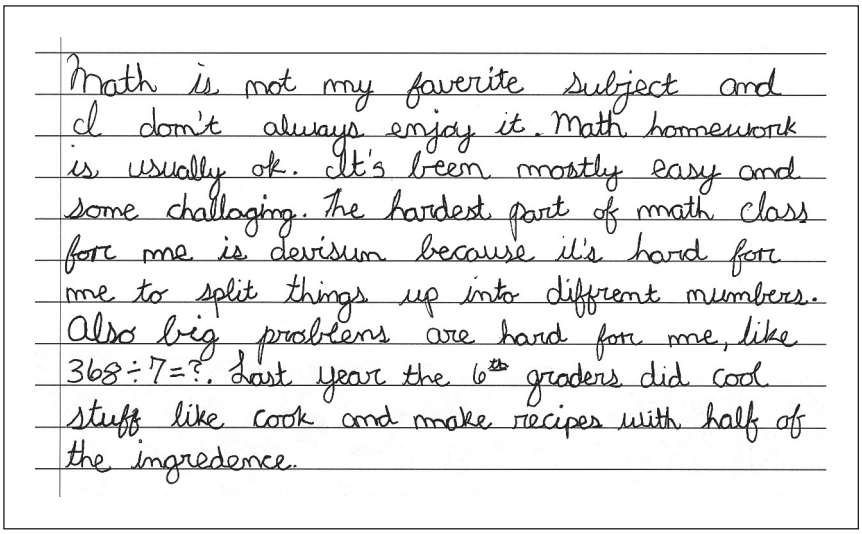
stage, students study the spelling–meaning connections of related words (Templeton, 2004). By studying base words and derivational affixes, students learn more about English spelling as they enrich their vocabularies.

**DERIVATIONAL RELATIONS STAGE.** Some students move into the derivational relations spelling stage as early as grade 4 or 5, but most derivational relations spellers are found in middle school, high school, and college. This stage continues throughout adulthood, when individuals continue to read and write according to their interests and specialties. This stage of orthographic knowledge is referred to as *derivational relations* because this is when students examine in depth how many words may be *derived* from base words and word roots. Students discover that the meanings and spellings of meaningful word parts or morphemes remain constant across different but derivationally related words (Henry, 1988; Schlagal, 2013; Templeton, 2004) —for example *mandate/mandatory*, *human/humanity*, *custody/custodian*, and *define/definite/definitive*. Word study in this stage builds on and expands knowledge of a wide vocabulary, including thousands of words of Greek and Latin origin. We refer to this study as **generative** because as students explore and learn about the word formation processes of English they are able to *generate* knowledge of literally thousands of words (Harris, Schumaker, & Deshler, 2011; Kirk & Gillon, 2009; Templeton, 2012). Learning that the Latin root *jud* means "judge" and seeing how it combines with other word parts in *judgment*, *judgmental*, and *prejudice* helps students figure out the meaning of the unfamiliar words such as *adjudicate*, *judiciary*, and *injudicious* when they encounter them in context.

Early derivational relations spellers like sixth-grader Kaitlyn (Figure 1.8) spell most words correctly. However, some of her errors reflect a lack of knowledge about derivations. For example, *favorite* spelled FAVERITE and *different* spelled DIFFRENT do not reflect their relationship to *favor* and *differ*. Her errors on final suffixes, such as the *-sion* in *division* and the *-ent* in *ingredients* are also very typical of students in this stage.

The logic inherent in this lifelong stage can be summed up as follows: Words that are related in meaning are often related in spelling as well, despite changes in sound (Templeton, 1979, 1983, 2004). Understanding these spelling–meaning connections provides a powerful means of expanding vocabulary.

**FIGURE 1.8 Derivational Relations Spelling: Kaitlyn's Sixth-Grade Math Journal Reflection**


Math is not my faverite subject and
I dont always enjoy it. Math homework
is usually ok. It's been mostly easy and
some challaging. The hardest part of math class
for me is devisum because it's hard for
me to split things up into diffrent numbers.
Also big problems are hard for me, like
368÷7=?. Last year the 6th graders did cool
stuff like cook and make recipes with half of
the ingredence.

## Stages of Spelling: A Perspective

As an educator, you should know that the concept of "stages" in the development of the ability to spell and read words has been debated for many years. It's important that you be aware of this debate because it has direct implications for instruction. A number of researchers have challenged a stage model, describing spelling development as "overlapping waves" (Sharp, Sinatra, & Reynolds, 2008), "nonlinear" (Bahr et al., 2012), "statistical" (Treiman & Kessler, 2006), or based on "multiple sources" (Masterson & Apel, 2010). There is considerable overlap between the stage model on which *Words Their Way* is based and these other perspectives, but they differ in the degree to which they emphasize alphabet, pattern, and meaning information at any point in development.

The critiques of the stage model of development are based on a literal interpretation of stages—that they limit what learners are exposed to and are capable of learning. In learning and instruction, for example, they assume that a stage model of spelling development implies that:

- Letter name–alphabetic learners are not exposed to or able to learn about words with long vowel spellings, or able to spell simple morphological endings such as *-ed* and *-ing*.
- Within word pattern learners are not exposed to or able to learn about words of more than one syllable.
- Syllables and affixes learners do not learn about Greek and Latin word roots.

Stage theorists have long argued that a developmental model does *not* mean that learners are limited in what they are exposed to or that they are incapable of learning about multiple aspects of words (Templeton, 2003). For example, in the world of print that surrounds them and in which they are immersed, letter name–alphabetic learners of course are exposed to words with long vowel patterns. By grounding instruction for such learners in what they are "using but confusing," however—short vowel spellings, consonant digraphs and blends—we are more effectively helping them develop the quality of their lexical knowledge to eventually better understand and accommodate those long vowel patterns. By grounding instruction for within word pattern learners in long vowel and other more challenging vowel patterns, we are supporting them in applying that knowledge to multisyllabic words they want to spell and need to read. And for all learners, as we will explore throughout this book, vocabulary learning and instruction will often focus on multisyllabic words and their meanings. However, though letter name and within word pattern children may learn the meanings of *pterodactyl*, *brontosaurus*, and *Jurassic* and be able to recognize these words in print, we would not expect them to read and spell other related multisyllabic words correctly forever after!

With the important exception of the literal interpretation of developmental stages, stage theorists would otherwise agree with much of what some other researchers are saying. There *is* overlap between stages in learning and instruction, and different aspects of words may be addressed at any one point in development. The key is in knowing *which* aspects, and *how much* they should be emphasized. *Words Their Way* provides you with that key.

## The Synchrony of Literacy Development

So far in this chapter we have seen how research supports the developmental progression in students' orthographic knowledge that underlies their ability to spell and to read words. The scope and sequence of word study instruction we present in Chapters 4 through 8 is based on this developmental relationship between spelling and reading behaviors. When teachers conduct word study with students, they address learning needs in all areas of literacy because development in one area relates to development in other areas. This harmony in the timing of development has been described as the **synchrony** of reading, writing, and spelling development (Bear, 1991b; Bear & Templeton, 1998). The word *synchrony* literally means "together in time," and we'll see how reading, writing, and spelling advance together in stage-like progressions that share important dimensions. Table 1.3 illustrates this synchrony and presents key examples in the following discussion of each reading stage.

Individuals may vary in their rate of progress through these stages, but most tend to follow the same order of development. The observed synchrony makes it possible to bring together reading, writing, and spelling behaviors to assess and plan differentiated instruction that matches each student's developmental pace. The following discussion centers on this overall progression, with an emphasis on the synchronous behaviors of reading and writing with spelling.

**TABLE 1.3** The Synchrony of Literacy Development

# The Synchrony of Literacy Development

## *Layers of the Orthography*

ALPHABET/SOUND

PATTERN

MEANING

### Reading and Writing Stages:

| Emergent | Beginning | Transitional | Intermediate/Advanced |
|---|---|---|---|
| Pretend read | Read aloud; word-by-word, finger point reading | Approaching fluency, phrasal, some expression in oral reading, emergence of silent reading | Read fluently, with expression. Develop a variety of reading styles. Vocabulary grows with reading experience. |
| Developing concept of word | Rudimentary–Firm concept of word | | |
| Pretend write | Word-by-word writing; writing moves from a few words to paragraph in length | Approaching fluency, more organization, several paragraphs | Fluent writing, build expression and voice, experience different writing, styles and genre, writing shows personal problem solving and personal reflection. |

### Spelling Stages:

| | Emergent → | | | Letter Name–Alphabetic → | | | | Within Word Pattern → | | | Syllables and Affixes → | | | Derivational Relations → | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Early* | *Middle* | *Late* | *Early* | *Middle* | *Late* | *Early* | *Middle* | *Late* | *Early* | *Middle* | *Late* | *Early* | *Middle* | *Late* |
| Examples of spellings: | | | | | | | | | | | | | | | | | |
| *bed* |  | *M3T* | *B* | *bd* | *bad* | | *bed* | | | | | | | | | | |
| *ship* |  | *TFP* | *S* | *sp* | *sep* | *shep* | *ship* | | | | | | | | | | |
| *float* |  | *SMT* | *F* | *ft* | *fot* *flot* | *flott* | *flote* | *flowt* | *floaut* | *float* | | | | | | | |
| *train* |  | *FSMP* | *G* | *jn* | *jan* *tan* *chran* | *tran* | *teran* | *traen* | *trane* | *train* | | | | | | | |
| *bottle* | | | *B* | *bt* | *botl* | *bodol* | | *botel* | | *botal* | *bottel* | *bottle* | | | | | |
| *cellar* | | | *S* | *slr* | *salr* | *celr* | *seler* | *celer* | | *seler* | *celler* | *seller* | *cellar* | | | | |
| *pleasure* | | | *P* | *pjr* | *plasr* | *plager* | *plejer* | *pleser* | | *plesher* | *pleser* | *plesher* | *plesour* | *plesure* | *pleasure* | | |
| *confident* | | | | | | | | | | *comfudate* | *confadent* | *confendent* | *confedent* | *confendent* | *confident* | | |
| *opposition* | | | | | | | | | | *opasishan* | | *opasishion* | | *opositian* | *oposition* | *opposition* | |

## Emergent Readers

During the emergent stage, children may undertake reading and writing in earnest, but adults will recognize their efforts as more pretend than real. These students may "read" familiar books from memory using the pictures on each page to cue their recitation of the text. Chall (1983) called this stage of development *prereading* because students are not reading in a conventional sense. Emergent readers may call out the name of a favorite fast food restaurant when they recognize its logo, but they are not systematic in their use of any particular cue.

During the emergent stage, children lack an understanding of the alphabetic principle or show only the beginning of this understanding as they start to learn some letters. Emergent learners gradually acquire **directionality**—the understanding that print moves left-to-right, top-to-bottom—as they try to fingerpoint read, and in their writing. By the end of this stage, emergent learners will have learned many letters of the alphabet and they may even include a few letters to represent some speech sounds when they write.

## Beginning Readers

Understanding the alphabetic nature of our language is a major hurdle for readers and spellers. The child who writes *light* as LT has made a quantum conceptual leap, having grasped that there are systematic matches between sounds and letters that must be made when writing. Early letter name–alphabetic spellers have moved from pretend reading to the beginning of real reading, as they start to use systematic letter–sound matches to identify and store words in memory. Beginning reading is achieved when students have a **concept of word in text**, which is demonstrated by a child's ability to point accurately to a few lines of familiar text—a demonstration of the one-to-one correspondence between what they read and say (Clay, 1979; Morris, Bloodgood, Lomax, & Perney, 2003; Uhry, 1999, 2002).

Just as early attempts to spell words are partial, beginning readers initially have limited knowledge of letter sounds as they try to identify words by using the letter sounds they do know. The kinds of reading errors students make during this phase offer insights into what they understand about print. Using context as well as partial consonant cues, a child reading about good things to eat might substitute *candy* or even *cookie* for *cake* in the sentence, "The cake was good." Readers in this stage require support in the form of predictable, memorable texts or books that limit the number and nature of words.

The reading by beginning letter name–alphabetic learners is often disfluent—that is, choppy and often word-by-word, unless they have read the passage before or are otherwise familiar with it (Bear, 1992). If you ask them to read silently, the best they can do is to whisper. They need to read aloud to vocalize the letter sounds and usually fingerpoint as they read. Chall (1983) described children as being "glued to print" during this stage as they plod along slowly reading words, sometimes letter-by-letter, sound-by-sound. Beginning writers progress from writing a few words as they work to match letters and sounds to writing full stories. So much of their writing length at this stage will depend upon students' enthusiasm and the encouragement they receive.

## Transitional Readers

During the transitional stage, students' reading becomes more fluent because it is supported by a store of words that can be identified automatically "at first sight." These tend to be words they have read over and over again in meaningful contexts and words with frequently occurring letter patterns that they have mapped to speech sounds such as the consonant-vowel-consonant (CVC) pattern for short-vowel words. However, they "use but confuse" the various long-vowel patterns of English (Invernizzi, 1992).

During this stage, students integrate the knowledge and skills acquired in the previous two stages and they become more flexible in thinking about alphabet, pattern, and meaning. Advances in word knowledge affect students' writing, too. Their sizable sight word vocabulary allows them to write more quickly and with greater detail. Writing and reading speeds increase significantly from the beginning letter name–alphabetic stage to the transitional within word

pattern stage, and over the course of this stage, oral reading is gradually replaced by silent reading as the preferred mode (Bear, 1992; Ehri, 2014; Invernizzi, 1992).

### Intermediate and Advanced Readers

The stages of word knowledge that characterize intermediate and advanced readers include syllables and affixes and derivational relations. Students in these stages have relatively automatic word recognition, leaving their minds free to think as rapidly as they can read. Intermediate students read most texts with good accuracy and speed, both orally and silently. Students learn to become *flexible*, *strategic readers* and ultimately become *proficient adult readers* (Spear-Swerling & Sternberg, 1997). Reading becomes an ever-more dominant mode of learning information and concepts. Intermediate and advanced readers are usually fluent writers. The content of their writing often displays more complex analysis and interpretation, reflecting a more sophisticated, discipline-specific vocabulary. The degree to which they write at this level often depends on the quality of the writing instruction they receive.

Vocabulary and word use play a central role in the connections that intermediate and advanced readers forge between reading and writing. From adolescence on, most of the new vocabulary students learn—except perhaps for slang—comes from reading, and reflects new domains of content-specific knowledge that students explore (Beck, McKeown, & Kucan, 2013; Zwiers, 2014). Studying spelling–meaning connections is central to maximizing this vocabulary growth (Nunes & Bryant, 2006; Templeton, 2011/2012).

Teachers often return to Table 1.3 to examine the integrated model of how reading, writing, and spelling progress in synchrony. In parent–teacher conferences, they often refer to it when they discuss a student's development. They explain to the parent how the child's spelling level corresponds to the characteristics of her reading level, as well as the types of writing to expect from a child at that particular developmental level.

## Words Their Way

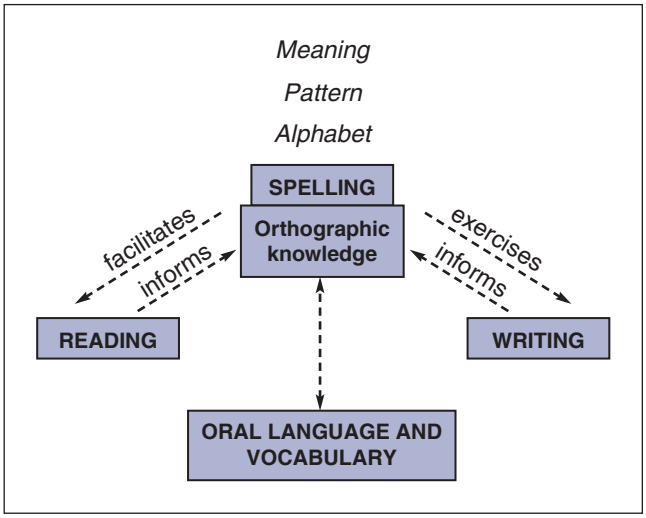
Students acquire word knowledge implicitly as they read and write, and explicitly through instruction orchestrated by the teacher. An informed interpretation of students' reading and writing attempts shows us which words they can read and spell, and of those, which they might learn more about. There is more to pacing instruction than plugging students into a sequence of phonics or spelling features. Instructional *pacing* must be synonymous with instructional *placing*. That is, we must fit our instruction to what our students are using but confusing. How do we know what they are using but confusing? A good deal of what students understand about orthography is revealed in their uncorrected writing. Using the spelling inventories described in the next chapter as a guide, you will be able to place students and pace the content of word study.

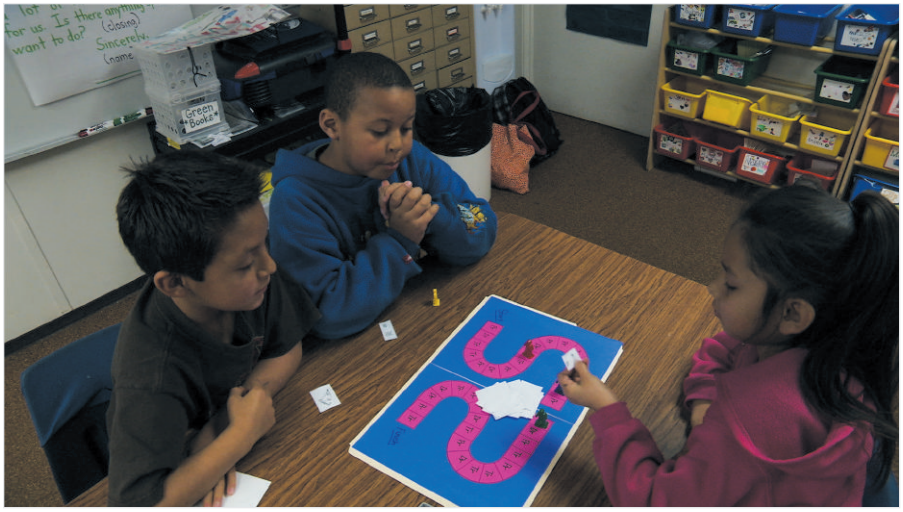
Figure 1.9 illustrates the theory of developmental word knowledge and shows how word study links reading and writing. To help students explore and learn about words their way, instruction must be sensitive to two fundamental tenets:

1. Students' learning of phonics, spelling, and vocabulary is based on their developmental or instructional level.
2. Students' learning is based on the way they are naturally inclined to learn—through comparing and contrasting word features and discovering consistencies.

When these two tenets are honored, students learn *their* way—building from what is known about words to what is new. Rather than rote memorization activities designed only to

**FIGURE 1.9 The Integration of Word Study with Reading and Writing**





Word study is active and engaging

ensure repeated mechanical practice, word study encourages exploration and examination of word features presented in focused contrasts that are appropriate to a student's stage of literacy development. Word study is active, and by making judgments about words and categorizing words according to similar features, students construct their own understandings about how the features work. Engaging instruction and thoughtful practice helps students internalize word features and become automatic in using what they have learned.

The box on pages 20–22 provides a bird's-eye view of the terrain you will explore in *Words Their Way*: the characteristics of each spelling stage, the reading and writing contexts, and the instruction that is appropriate for each stage. After learning in Chapter 2 how to assess the developmental word knowledge of your students, Chapter 3 presents the key word study activities for all stages, and Chapters 4–8 provide detailed scope and sequences with specifics about planning and conducting word study instruction for each stage of development. As a bookend to Chapter 3, Chapter 9 presents routines, schedules and grouping strategies to help you implement word study in your classroom. As you delve into the instructional chapters, the box that follows can be a handy reference to check for how reading, writing, and word study are integrated at each developmental stage.

## Developmental Stages, Characteristics, and Word Study Instruction

### I. EMERGENT STAGE—CHAPTER 4

#### *Characteristics*

1. Scribbles letters and numbers
2. No concept of word in text
3. No letter–sound correspondence at first; later, represents most salient sounds with single letters
4. "Pretend" reading and writing

#### *Reading and Writing Activities*

1. Read to children and encourage oral language activities
2. Model writing for children, including dictations and charts
3. Encourage pretend reading from memory of rhymes, dictations, and simple pattern books
4. Encourage pretend writing and invented, or developmental, spelling

#### *Word Study Focus*

1. Develop oral language with concept sorts
2. Play with speech sounds to develop phonological awareness
3. Teachers plan activities to learn the alphabet
4. Children sort pictures by beginning sound

### II. LETTER NAME–ALPHABETIC STAGE—CHAPTER 5
### EARLY LETTER NAME–ALPHABETIC STAGE

#### *Characteristics*

1. Represents beginning and some ending sounds in writing
2. Uses letter names to create developmental spellings

3. Has rudimentary concept of word in text seen in fingerpointing
4. Reads word-by-word in beginning reading materials
5. Has a sight vocabulary of less than 15 words
6. Word by word writing

### *Reading and Writing Activities*

1. Read to students and encourage oral language activities
2. Develop concept of word in text reading in predictable books and simple rhymes
3. Model writing and record and reread individual dictations
4. Label pictures and write in journals regularly

### *Word Study Focus*

1. Collect known words for word bank
2. Categorize pictures and words by beginning sounds
3. Study word families that share a common vowel
4. Study beginning consonant digraphs and blends
5. Encourage developmental spelling

## MIDDLE TO LATE LETTER NAME–ALPHABETIC STAGE

### *Characteristics*

1. Correctly spells initial and final consonants and some blends and digraphs
2. Uses letter names and articulation as clues to spell vowel sounds
3. Spells phonetically, salient sounds in a one-to-one, linear fashion
4. Omits most silent letters and preconsonantal nasals in spelling (*bop* or *bup* for *bump*)
5. Has a firm concept of word; fingerpoints accurately and can self-correct when off track
6. Reads aloud slowly in a word-by-word manner
7. Adds sight words easily from extensive reading

### *Reading and Writing Activities*

1. Read to students
2. Encourage developmental spellings in independent writing, but hold students accountable for features and words they have studied
3. Collect two- to three-paragraph reading selections in books, poetry, and dictations. Read and reread beginning reading materials and dictations.
4. Encourage more expansive writing and consider some simple editing procedures for punctuation and high-frequency words

### *Word Study Focus*

1. Sort pictures and words by different short-vowel word families
2. Sort pictures and words by short-vowel sounds and CVC patterns
3. Continue to examine more difficult consonant blends with pictures and words
4. Study preconsonantal nasals, digraphs, and blends at ends of words
5. Sort pictures comparing short-and long-vowel sounds
6. Collect known words for word bank (up to 200)

## III. WITHIN WORD PATTERN STAGE—CHAPTER 6

### *Characteristics*

1. Spells most single-syllable short vowel words correctly
2. Spells most beginning consonant digraphs and two-letter consonant blends correctly
3. Attempts to use silent long-vowel markers
4. Reads silently and with more fluency and expression
5. Writes more fluently and in extended fashion
6. Can revise and edit

### *Reading and Writing Activities*

1. Continue to read aloud to students
2. Guide silent reading of simple chapter books
3. Write each day: writers' workshops, conferencing, and publication

### *Word Study Focus*

1. Complete daily activities in word study notebook
2. Sort words by long and short vowel sounds and by common long-vowel patterns
3. Compare words with *r*-influenced vowels
4. Explore less common vowels, diphthongs (*oi, oy*), and other ambiguous vowels (*ou, au, ow, oo*)
5. Examine triple blends and complex consonant units such as *thr, str, dge, tch, ck*
6. Explore homographs and homophones; vocabulary from reading

## IV. SYLLABLES AND AFFIXES—CHAPTER 7

### *Characteristics*

1. Spells most single-syllable words correctly
2. Makes errors at syllable juncture and in unaccented syllables

(*continued*)

3. Reads with good fluency and expression
4. Reads faster silently than orally
5. Potential to write responses that are more sophisticated and critical

### *Reading and Writing Activities*

1. Plan read-alouds and literature discussions
2. Include self-selected or assigned silent reading of texts from different genres
3. Begin simple note-taking and outlining skills, report writing, and work with adjusting reading rates for different purposes
4. Explore reading and writing styles and genres, developing a critical stance and independently backing up opinions with evidence to support them

### *Word Study Focus*

1. Study compound words
2. Study consonant doubling and inflectional endings including plurals
3. Study open and closed syllables and other syllable juncture features
4. Explore syllable stress and vowel patterns in the accented syllable, especially ambiguous vowels
5. Focus on unaccented syllables such as *er* and *le*
6. Explore unusual consonant blends and digraphs (*qu, ph, gh, gu*)
7. Study base words and affixes (prefixes and suffixes)
8. Focus on two-syllable homophones and homographs
9. Connect spelling and vocabulary studies; link meaning and spelling with grammar and meaning
10. Examine general and domain-specific vocabulary in texts

## V. DERIVATIONAL RELATIONS—CHAPTER 8

### *Characteristics*

1. Makes errors on low-frequency multisyllabic words derived from Latin and Greek
2. Reads with good fluency and expression
3. Reads faster silently than orally
4. Writes responses that are sophisticated and critical

### *Reading and Writing Activities*

1. Include silent reading and writing, exploring various genres
2. Develop study skills, including textbook reading, notetaking, adjusting rates, test taking, report writing, and reference work
3. Focus on exploring and analyzing the genres within literature and informational texts with more sophisticated responses
4. Read and analyze primary source material

### *Word Study Focus*

1. Join spelling and vocabulary studies; link meaning and spelling with grammar and meaning
2. Examine vowel and consonant alternations in derivationally related pairs
3. Examine common Greek and Latin word roots and their combination with affixes
4. Examine easily confused Latin suffixes (*ent/ant, ence/ance; ible/able*)
5. Explore less common Greek and Latin word roots
6. Learn about absorbed or assimilated prefixes
7. Focus on words that students bring to word study from their reading and writing
8. Explore etymology, especially in the various disciplines/content areas
9. Examine content-related foreign borrowings

*This page intentionally left blank*

chapter 2

# Getting Started

## THE ASSESSMENT OF ORTHOGRAPHIC DEVELOPMENT

*WTW Digital* is a new online tool that accompanies this core text, and it was designed to help you implement word study in an engaging and interactive way. Resources for this chapter include:

- **Automatically scored qualitative spelling inventories** suggest each student's approximate stage of spelling development. Word study groups are also automatically generated based on inventory results.

An access code for *WTW Digital* is included with each new copy of package ISBN: 9780135174623. Visit www.wtwdigital.pearson.com to get started.

Effective teaching cannot begin until you understand what students already know about words and what they are ready to learn. Likewise, you cannot make changes to improve instruction until you evaluate the results of your teaching. This chapter presents an informal assessment process that will enable you to:

- Informally observe and interpret orthographic knowledge in writing and reading. (page 25)
- Select and administer a qualitative spelling inventory. (page 27)
- Score and analyze the inventory to identify features that students need to study as well as their developmental stage of word knowledge. (page 31)
- Group students for differentiated instruction. (page 38)
- Monitor students' progress and set realistic goals for their growth in orthographic knowledge over time. (page 45)
- Interpret the orthographic knowledge of your English learners. (page 47)

# Informal Observations to Assess Orthographic Knowledge

There is synchrony in the development of reading, writing, and spelling. Because of this synchrony, informal observations of what students do when they read and write provides information for planning word study instruction.

## Observe and Interpret Students' Writing

Daily observations of student writing reveal what students understand about words. The following example appears to be a menu, but Sarah posted it on the wall the way she had seen reviews posted in restaurants.

| What Sarah Wrote | How Sarah Read What She Wrote |
|---|---|
| 1. CRS KAM SAS | First course, clam sauce |
| 2. CRS FESH | Second course, fish |
| 3. CRS SAGATE | Third course, spaghetti |
| 4. CRS POSH POPS | Fourth course, Push Pops |

This writing tells us a lot about Sarah: She sees a practical use for writing and she enjoys displaying her work. She has a good grasp of how to compose a list and she is even beginning to understand menu planning! When we look for what Sarah knows about spelling, we see that she represents many consonant sounds and some digraphs (the /sh/ in *fish* and *push*), but blends are incomplete (using only K to spell the *cl* in *clam* or S for the *sp* in *spaghetti*). She is using vowels consistently (except in CRS for *course*); however, in spelling *fish* as FESH, Sarah confuses *e* and *i*. According to the sequence of development presented in Chapter 1, Sarah is considered a letter name–alphabetic speller who would benefit from instruction emphasizing short vowel sounds and blends.

**FIGURE 2.1 Jake's Writing Sample**

My Acident

Last year I scrapped my chian. I was shacking and my mom was too. My Dad met us at the docters offises. And I had to have stiches. Then my Dad bout me an ice crem cone. And we went home. I didn't go to school the nexs day. I was to tird.

**LOOK FOR WHAT STUDENTS KNOW AND WHAT THEY USE BUT CONFUSE.** In Figure 2.1, we see a writing sample from Jake, an older student. The writing is readable because many words are spelled correctly and the others are close approximations. When we look for what Jake knows, we see that he has mastered most consonant relationships—even the three-letter blend in SCRAPPED—but not the complex *tch* unit in STICHES. Most long and short vowels are spelled correctly, as in *had*, *have*, *went*, *cone*, *home*, and *day*. When we look for what Jake uses but confuses, we see that he confuses the *-ck* and *-ke* ending in SHACKING for *shaking*. He inserts an unnecessary extra vowel when he spells *chin* as CHIAN but omits some silent vowel markers where they are needed, as with CREM for *cream*. Based on the vowel errors, Jake is considered a within word pattern speller who would benefit from the study of vowel patterns. We will take another look at Jake's word knowledge when we examine his spelling inventory later in this chapter.

Student writing, especially unedited rough drafts, are a goldmine of information about their orthographic knowledge. Many teachers keep a variety of student writing samples to document students' needs and growth over time. The Qualitative Spelling Checklist in Appendix A, provides a systematic way to analyze your students' writing samples for specific orthographic features. However, over time as you become familiar with spelling features and stages you will become more adept at analyzing your students' writing samples "on the fly."

**THE LIMITATIONS OF WRITING SAMPLES.** Relying entirely on writing samples does have some drawbacks. Some students are anxious about the accuracy of their spelling and will only use words they know how to spell. Others will get help from resources in the room, such as word walls, dictionaries, and the person sitting nearby, and thus their writing may overestimate what they really know. On the other hand, when students concentrate on getting their ideas on paper, they may not pay attention to spelling and make excessive errors. Some students write freely with little concern about accuracy and need to be reminded to use what they know. Daily observations will help you to determine not only students' orthographic knowledge but also their habits and dispositions.

Assessing student's reading performance

## Observe Students' Reading

Important insights into orthographic knowledge can also be made when we observe students' reading. Reading and spelling are related but not mirror images because the processes differ slightly. In reading, words can be recognized with many types of textual supports, so the ability to read words correctly lies a little ahead of students' spelling accuracy (Bear & Templeton, 2000; Templeton & Bear, 2011). For example, within word pattern spellers, who are also transitional readers, read many two-syllable words like *shopping* and *bottle* correctly but may spell those same words as SHOPING and BOTEL.

Spelling is a conservative measure of what students know about words in general, so if students can spell a word, then we know they can read the word. It seldom works the other way around except in the emergent and early letter name stages, in which students might generate spellings they don't know how to read (Invernizzi & Hayes, 2010; Rayner, Foorman, Perfetti,

Pesetsky, & Seidenburg, 2001). When students consult reference materials such as a spell checker or dictionary, the spelling task becomes a reading task; we all know the phenomenon of being able to recognize the correct spelling if we just see it.

**RESPONDING TO READING ERRORS.** Like spelling errors, reading errors show us what students are using but confusing when they read, and certain errors can be expected of students in different stages. Teachers who understand students' developmental word knowledge will be in a good position to interpret students' reading errors and to make decisions about the appropriate prompt to use in reading with students (Brown, 2003). A student who substitutes *bunny* for *rabbit* in the sentence "The farmer saw a rabbit" is probably a very beginning reader and an early letter name–alphabetic speller. The student uses the picture rather than knowledge about sound–symbol correspondences to generate a logical response. For students in the partial alphabetic phase (Ehri, 2014), drawing attention to the beginning sound can teach them to use their consonant knowledge. The teacher might point to the first letter and say, "Can that word be *bunny?* It starts with an *r*. What would start with *rrrrr?*"

Later in development, assessments of oral reading substitutions show a different level of word knowledge. A transitional reader who substitutes *growled* for *groaned* in the sentence "Jason groaned when he missed the ball" is probably attending to several orthographic features of the word. The student appears to use the initial blend *gr*; the vowel *o*, and the *-ed* ending to come up with an approximation that fits the meaning of the sentence. Because this student has vowel knowledge, a teacher might direct the student's attention to the *oa* pattern and ask him to try it again.

**SOUND IT OUT?** Our response to reading errors and our expectations for correcting such errors depend on a number of factors, one of which is knowing where students are developmentally. For example, it is inappropriate to ask beginning readers in the early letter name–alphabetic stage to sound out the word *flat* or even to look for a familiar part within the word because they simply don't know enough to sound out words or apply analogies. They must use context clues and pictures to identify unknown words on the page (Adams, 1990; Johnston, 2000). In contrast, students in the latter part of the letter name–alphabetic stage could be expected to sound out *flat* because they know other written words that sound and look the same and they know something about blends and short vowels. Students reading at their instructional level read most words correctly and when they encounter unfamiliar words in text, their orthographic knowledge, combined with context, will usually help them figure out the words with adequate comprehension. As noted earlier, there are parallels between oral reading errors and the types of spelling errors students make but there is not a one-to-one match, for with the use of context, students can read more difficult words than they can spell.

## Qualitative Spelling Inventories to Assess Orthographic Knowledge

Although observations made during writing and reading offer some insight into students' development, assessments should also include an informal qualitative spelling inventory administered two or three times a year.

### The Development of Spelling Inventories

**Spelling inventories** consist of lists of words specially chosen to represent a variety of spelling or phonics features at increasing levels of difficulty. The lists are not exhaustive in that they do not test all features; rather, they include those that are most helpful in identifying a stage


Ms. Kiernan administers a spelling inventory to her class

of development and planning instruction. Students take an inventory as they would a spelling test. The results are then analyzed to obtain a general picture of their orthographic development.

The first inventories were developed under the leadership of Edmund Henderson at the University of Virginia (Bear, 1982; Ganske, 1999; Invernizzi, 1992; Invernizzi, Meier, & Juel, 2003; Morris, 1999; Viise, 1994). The same developmental progression has been documented through the use of these inventories with learning-disabled students (Invernizzi & Worthy, 1989), students identified as dyslexic (Sawyer, Wade, & Kim, 1999), and functionally literate adults (Worthy & Viise, 1996). Spelling inventories have also been developed and researched for other alphabetic languages (Ford & Invernizzi, 2009; Helman, Delbridge, Parker, Arnal, Mödinger, 2016; Gill, 1980; Temple, 1978; Yang, 2005).

We start by focusing on the three inventories shown in Table 2.1: the Primary Spelling Inventory (PSI), the Elemetary Spelling Inventory (ESI), and the Upper-Level Spelling Inventory (USI). Each can be found in Appendix A.

## Using Inventories

Spelling inventories are quick and easy to administer and score, and they are reliable and valid measures of what students know about words. Many teachers find these spelling inventories to be the most helpful and easily administered literacy assessments in their repertoires. Using these spelling inventories requires the four basic steps summarized here and discussed in detail in the sections that follow.

1. Select a spelling inventory based on grade level and students' achievement levels. Administer the inventory much as you would a traditional spelling test, but do not let students study the words in advance.
2. Analyze students' spellings using a **feature guide**. This analysis will help you identify what orthographic features students know and what they are ready to study, as well as their approximate stage.
3. Organize groups using a **classroom composite form** and/or the **spelling-by-stage classroom organization chart**. These will help you plan instruction for developmental groups.
4. Monitor overall progress by using the same inventory two or three times a year. Weekly spelling tests and unit spell checks will also help you assess students' mastery of the orthographic features they study, and are excellent tools to monitor progress.

**SELECTING AN INVENTORY.** The three spelling inventories described in this chapter can cover the range of students from primary to high school and college. The best guide to selecting one is the grade level of the students you teach. However, you may find that you need an easier or more challenging assessment depending on the range of achievement in your classroom.

**TABLE 2.1** *Words Their Way*® Spelling Assessments

| Spelling Inventories | Grade Range | Developmental Range |
|---|---|---|
| Primary Spelling Inventory (PSI) (p. 376) | K–3 | Emergent to late within word pattern |
| Elementary Spelling Inventory (ESI) (p. 380) | 1–6 | Letter name to early derivational relations |
| Upper-Level Spelling Inventory (USI) (p. 383) | 5–12 | Within word pattern to derivational relations |

Table 2.1 is a guide to make your selection. Specific directions are provided in Appendix A, but the administration is similar for all of them.

Some teachers begin with the same list for all students but shift to small-group administration of other lists. For example, a second-grade teacher may begin with the Primary Spelling Inventory and decide to continue testing a group of students who spelled most of the words correctly using the Elementary Spelling Inventory. A key point to keep in mind is that students must generate about five errors for you to determine a spelling stage.

**Primary Spelling Inventory (PSI).** The PSI found in Appendix A on page 376 consists of a list of 26 words that begins with simple CVC words (*fan*, *pet*) and ends with inflectional endings (*clapping*, *riding*). It is recommended for kindergarten through early third grade because it assesses features found from the emergent stage through the within word pattern stage. The PSI is used widely along with the accompanying feature guide and is a reliable scale of developmental word knowledge. The PSI validity was established using the California Standards Tests (CST) for English Language Arts (ELA) (Sterbinsky, 2007).

For kindergarten students or with other emergent readers, you may only need to call out the first five words. In an early first-grade classroom, call out at least 15 words so that you sample digraphs and blends; use the entire list of 26 words for late first grade, and second and third grades. For students who spell more than 20 words correctly, you should use the Elementary Spelling Inventory.

**Elementary Spelling Inventory (ESI).** The ESI found in Appendix A on page 380 is a list of 25 increasingly difficult words that begins with *bed* and ends with *opposition*. The ESI can be used in grades 1 through 6 to identify students up to the derivational relations stage. If a school or school system wants to use the same inventory throughout the elementary grades to track growth over time, this inventory is a good choice, but we especially recommend this inventory for grades 3 through 5. By third grade, most students can try all 25 words but be ready to discontinue testing for students who are visibly frustrated or misspell five in a row. Students who spell more than 18 words correctly should be given the Upper-Level Spelling Inventory.

The words on the ESI present a reliable scale of developmental word knowledge. As with the PSI, the validity of the ESI was established using the California Standard Tests (CST) for English Language Arts (ELA) (Sterbinsky, 2007). In this study with 862 students, the relationships between scores on the ESI teachers' stage analysis and standardized reading and spelling test scores were moderte to strong.

**Upper-Level Spelling Inventory (USI).** The USI found in Appendix A on page 383 consists of a list of 31 words, arranged in order of difficulty from *switch* to *succession*. It can be used with students in upper elementary to college. List words were chosen because they help identify—more specifically than the ESI—what students in the syllables and affixes and derivational relations stages are doing in their spelling.

The USI is highly reliable; for example, scores of 183 fifth-graders on the USI significantly predicted their scores on the Word Analysis subtest of the CST four months later (Sterbinsky, 2007). With normally achieving students, you can administer the entire list, but stop giving the USI to students who have misspelled five of the first eight words—the words that assess spelling in the within word pattern stage. The teacher should use the ESI with these students to identify within word pattern features that need instruction.

**PREPARING STUDENTS FOR THE SPELLING INVENTORY.** Unlike weekly spelling tests, these inventories are used for screening and are not used for grading purposes. Students should not study the list of words either before or after the inventory is administered. Set aside 20 to 30 minutes to administer an inventory. Ask students to number a paper as they would for a traditional spelling test. For younger children, you may want to prepare papers in advance with one or two numbered columns. (Invariably, a few younger students write across the page from left to right.) Very young children should have an alphabet strip on their desks for reference in case they forget how to form a particular letter.

**Create a Relaxed Atmosphere.** Children who are in second grade and older are usually familiar with spelling tests and can take the inventory as a whole class but sometimes it is easier to create a relaxed environment working in small groups, especially with kindergarten and first-grade students. If any students appear upset and frustrated, you may assess them individually at another time or use samples of their writing to determine an instructional level with the Qualitative Spelling Checklist.

**Explain the Purpose.** Students must understand the reason for taking the inventory so they will do their best. They may be anxious, so be direct in your explanation:

> "I am going to ask you to spell some words. You have not studied these words and will not be graded on them. Some of the words may be easy and others may be difficult. Do the best you can. Your work will help me understand how you are learning to read and write and how I can help you."

Once these things are explained, most students are able to give the spelling a good effort. You can use the model lesson below to prepare younger students for the assessment or to validate the use of developmental spelling during writing. Lessons like these are designed to show students how to sound out words they are unsure of how to spell.

**Copying.** Some students will try to copy if they feel especially concerned about doing well on a test. Creating a relaxed atmosphere with the explanation suggested earlier can help overcome some of the stress students feel. Arrange seating to minimize the risk of copying or hand out cover sheets. There will be many opportunities to collect corroborating information, so there is no reason to be upset if primary students copy. If it is clear that a student has copied, make a note to this effect after collecting the papers and administer the inventory individually at another time.

## Model Lesson for Spelling the Best You Can

To help young children feel more comfortable attempting to spell words conduct several lessons using the theme, "How to Spell the Best You Can." You might do this to prepare them for taking the inventory or to encourage them to write for many other purposes. If you want children to feel free to write about topics important to them, they need to take risks in their spelling. Hesitant writers who wait for the teacher to spell a word for them or avoid using words they can't spell lose the reward of expressing themselves.

**Talk about spelling:** Begin a discussion by saying something like, "We are going to do a lot of writing this year. When we want to write a word and we don't know how to spell it what can we do?" Students might respond with, "Ask the teacher, ask someone else, use the word wall, or use another word." If no one suggests the strategy of listening for the sounds, bring it up: "You can say the words slowly and listen for the sounds. Do you ever do that? Let's practice."

**Spell some words together:** Say, "Let's try spelling some words by listening for the sounds. Who has a word they want to spell?" A student might suggest something like *turtle*. The teacher can then respond, "That's a good one. Let's say it slowly and stretch out the sounds. *Turtle* has two syllables: turrr – till. What is the sound at the beginning of *turtle*? What letter do we need to spell that /t/ sound? Continue to stretch out the word and listen for more sounds. Depending on the level of the group you might generate a range of possible spellings: TL, TRTL, TERTL, and TERTUL. Write down what the children come up with.

**Spell it the best you can:** Explain, "This is not the way you would see *turtle* spelled in a book, but it has some of the right letters. In kindergarten (or __ grade) it is okay to spell *the best you can*. Sometimes all you can do is start with the sound at the beginning and write the first letter, but you are getting practice in spelling! At the end of the year you will be surprised by how much more you can write." Repeat this exercise several times or when you feel it is needed.

**If students criticize each other:** Occasionally a student might be critical about another student's attempt: "That's not right." Handle this firmly and say something like, "The important thing is that you have written down the word you need and spelled it the best you can. You and I can read it. Later you will learn how to spell it correctly, but for now this is a good try."

**ADMINISTER THE INVENTORY.** After setting up a relaxed atmosphere, you are ready to administer the inventory:

**Call the Words Aloud.** Pronounce each word naturally without drawing out the sounds or breaking them into syllables. Say each word twice and use it in a sentence if context will help students know what word is being called. For example, use *cellar* in a sentence to differentiate it from *seller*. Sentences are provided with the word lists in Appendix A. For most words, however, offering sentences is time-consuming and may even be distracting.

**Can You Read What Students Have Written?** Move around the room as you call the words aloud to observe students' work and behaviors. Look for words you cannot read due to poor handwriting. Without making students feel that something is wrong, it is appropriate to ask them to read the letters in the words that cannot be deciphered. Students using cursive whose writing is difficult to read can be asked to print.

**FIGURE 2.2 Jake's Spelling Inventory**

| Jake | | September 8 | 9/25 |
|---|---|---|---|
| 1. bed | | 14. caryes | *carries* |
| 2. ship | | 15. martched | *marched* |
| 3. when | | 16. showers | *shower* |
| 4. lump | | 17. bottel | *bottle* |
| 5. float | | 18. faver | *favor* |
| 6. train | | 19. rippin | *ripen* |
| 7. place | | 20. selar | *cellar* |
| 8. drive | | 21. pleascher | *pleasure* |
| 9. brite | *bright* | 22. forchunate | *fortunate* |
| 10. shoping | *shopping* | 23. confdant | *confident* |
| 11. spoyle | *spoil* | 24. sivulise | *civilize* |
| 12. serving | | 25. opozishun | *opposition* |
| 13. chooed | *chewed* | | |

**Know When to Stop.** As you walk around the room or work with a small group, scan students' papers to look for misspellings and look for signs of frustration to determine whether to continue with the list. With younger students who tire quickly, you might stop after the first five words if they do not spell any correctly. For older students in groups, who can usually take an entire inventory in about 20 minutes, it is better to err on the side of too many words than too few. Rather than being singled out to stop, some students may prefer to "save face" by attempting every word called out to the group even when working at a frustration level.

In Figure 2.2, you can see that Jake missed more than half the words on the inventory but continued to make good attempts at words that were clearly too difficult for him. However, his six errors in the first 15 words identify him as needing work on vowel patterns, and testing could have been discontinued at that point. Sometimes teachers are required to administer the entire list in order to have a complete set of data for each child. In this case, explain before you start that the words will become difficult but to do the best they can.

## Score and Analyze the Spelling Inventories

After you administer the inventory, collect the papers and set aside time to score and analyze the results. Scoring the inventories is more than marking words right or wrong. Instead, each word has a number of features that are counted separately. For example, a student who spells *when* as WEN knows the correct short vowel and ending consonant and gets points for knowing those features even though the complete spelling is not correct. The feature guides will help you score each word in this manner. This analysis provides *qualitative* information regarding what students know about specific spelling features and what they are ready to study next.

**SCORE STUDENT PAPERS.** Begin by marking the words right or wrong. It helps to write the correct spellings beside the misspelled words as was done in the sample of Jake's spelling in Figure 2.2. This step focuses attention on each word and the parts of the words that were right and wrong and makes it easier to share results with parents or other teachers. At this point you can calculate a raw score or **power score** by adding up the total number spelled correctly (nine words correct on Jake's paper in Figure 2.2). Table 2.2 can be used to get a rough estimate of the student's spelling stage. The table lists the power scores on the three major inventories in relation to estimated stages and their breakdown by early, middle, or late stage designations. As we can see, Jake's ESI power score of 9 places him in the late within word pattern stage.

**TABLE 2.2** Power Scores and Estimated Stages

| | Letter Name | | | Within Word Pattern | | | Syllables and Affixes | | | Derivational Relations | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inventory | *E* | *M* | *L* | *E* | *M* | *L* | *E* | *M* | *L* | *E* | *M* | *L* |
| Primary Spelling Inventory | 0 | 1–3 | 4–6 | 7–10 | 11–15 | 16–19 | 20–22 | | | | | |
| Elementary Spelling Inventory | 0 | 1–2 | 3–4 | 5–6 | 7–8 | 9–10 | 11–13 | 14–16 | 17–18 | 19–25 | | |
| Upper-Level Spelling Inventory | | | | 1–2 | 3–6 | 7–8 | 9–10 | 11–15 | 16–18 | 19–22 | 23–25 | 26–31 |

**FEATURE ANALYSIS.** Feature guides help teachers analyze student errors and confirm the stage designations suggested by the power score. Every feature in every word is not scored; however, the features sampled are sufficient to identify the stages of spelling. The feature guides that accompany each inventory are included in Appendix A.

Jake's spelling inventory in Figure 2.2 will be used as an example for the feature guide in Figure 2.3.

**Complete a Feature Guide.** Use the following steps to complete the feature guide.

1. To score by hand, make a copy of the appropriate feature guide for each student and record the date of testing. The spelling features are listed in the second row of the feature guide and follow the developmental sequence observed in research.
2. Look to the right of each word to check off features of the word that are represented correctly. For example, because Jake spelled *bed* correctly, there is a check for the beginning consonant, the final consonant, and the short vowel for a total of three feature points. Jake also gets a point for spelling the word correctly, recorded in the far-right column. For the word *bright*, which he spelled as BRITE, he gets a check for the blend *br* but not for the *igh* vowel pattern. Notice on Jake's feature guide in Figure 2.3 how the vowel patterns he substituted have been written in the space beside the vowel feature to show that Jake is using but confusing these patterns. Some teachers like to insert the actual errors a student made for each feature.
3. After scoring each word, add the checks in each column and record the total score for that column at the bottom as a ratio of correct responses to total possible features. (Adjust this ratio and the total possible points if you do not ask a student spell all the words.) Notice how Jake scored six out of six under Digraphs, seven out of seven for Blends, and four out of five under Long Vowels.
4. Add the total feature scores across the bottom and the total words spelled correctly. This gives you an overall total score that you can use to rank-order students and to compare individual growth over time.

**Common Confusions in Scoring.** Questions often arise about how to score reversals and other errors.

**Reversals.** Letter reversals or **static reversals**, such as writing *b* as *d*, are not unusual for young spellers. Reversals should be noted and there is a space in the boxes of the feature analysis to record them but they are not considered spelling errors. Reversals might be considered handwriting errors instead and should be seen as the letters they were meant to represent. Letter reversals occur with decreasing frequency through the letter name–alphabetic stage.

Confusions can also arise in scoring **kinetic reversals** when the letters are present but out of order. For example, beginning spellers sometimes spell the familiar consonant sounds and