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# Overview



## Research Base

In the past 20 years, since the first publication of *Words*, new research has converged on the importance of explicit, systematic instruction in reading. The National Reading Panel (2000), which was formed to summarize research and implications for effective instruction, recommended five areas of instruction:

- Phonological awareness
- Phonics
- Fluency
- Vocabulary
- Comprehension

McCardle and Chhabra (2004) summarized a great deal of the reading research supported by the National Institute of Child Health and Human Development (NICHD). Research shows that students who are poor readers in first grade are generally poor readers in upper elementary school (Mathes et al., 2005; Shaywitz, 2003). The need for a program such as *Words*—which emphasizes decoding and its counterpoint, spelling, beyond the primary grades—provides opportunities for struggling readers to gain the literacy skills needed for success in school and in the community. Both accurate reading and accurate spelling require knowledge of several components of language, including phonology (the sound system), orthography (the spelling system), morphology (the structure of forms of words), and etymology (the history and origin of words; Henry, 2003; Silliman, Bahr, & Peters, 2006).

Knowing the common patterns contained in single and multisyllabic words enhances not only decoding and spelling, but also fluency, vocabulary, and comprehension. Ehri (2004) reported that systematic and explicit instruction in phonics is the most effective way to ensure appropriate reading growth in students. Learning phonics for single syllables, along with learning syllable division and morpheme patterns (the meaning units, such as compound words, prefixes, suffixes, Latin roots, and Greek combining forms), provides strategies for decoding and spelling unfamiliar words (Henry, 2003). In addition, learning the common morphemes enhances vocabulary and comprehension.

New forms of service delivery have also been introduced since the original version of *Words*. Response to Intervention (RTI) and differentiated instruction seek to identify struggling readers early and provide appropriate intervention as soon as possible (Berninger & Wolf, 2009). *Words* can be used as both Tier 1 and Tier 2 interventions or in Tier 3 or special education settings.

## The WORDS Program

*Words* is designed for teachers of children and adults with reading-spelling skills of approximately third-grade level and above. Children in either general education or learning disability classrooms will benefit from this material meant to supplement traditional classroom reading instruction. Lessons are planned for classroom or small-group instruction, but they can also be used with individual students. Torgesen (2004) and Vaughn and Linan-Thompson (2003) found that struggling readers are served as well in small groups of three to four students as they are individually.

The instructional approach found in these materials emphasizes decoding and spelling instruction based on word origin and word structure. Earlier research using this approach showed that understanding word structure enhances word structure knowledge as well as decoding and spelling ability (Henry, 1988). The instructional process follows procedures used in Orton-Gillingham (Gillingham & Stillman, 1956) and Project READ (Calfee & Henry, 1986) programs.

Students and teachers focus on the content, structure, and process of the lesson in well-defined openings, objectives, procedures found in middle activities, and closings. Lessons center on specific spelling patterns and rules (content), pattern placement and word features (structure), and reading and spelling of numerous words fitting the target pattern (process). Thus, students may be learning about (a) the Latin root words *tract*, *spect*, and *dict* (content) and (b) their orthographic features and location in words (structure) as they (c) generate additional words, read word lists with numerous examples, and spell words from dictation (process). Follow-up activities enable reinforcement of the patterns or concepts.

*Words* provides teachers with “scripts” for developing generic openings, procedures, and closings for integrated decoding and spelling instruction. These scripts are only guidelines for what is being taught. Teachers should use the terminology with which they are familiar.

**Table O.1**

Word Origin by Word Structure Matrix

WORD ORIGIN	LETTER-SOUND CORRESPONDENCES	SYLLABLE PATTERNS	MORPHEME PATTERNS
ANGLO-SAXON	<p><b>Consonants</b></p> <p><i>sad stand thin</i></p> <p><b>Vowels</b></p> <p><i>cap/cape card boil</i> <i>pin/pine tall foul</i></p>	<p><b>Closed:</b> <i>mad</i></p> <p><b>Open:</b> <i>hobo</i></p> <p><b>VCe:</b> <i>kite</i></p> <p><b>Vowel digraph or vowel team:</b> <i>bead</i></p> <p><b>C-le:</b> <i>ramble</i></p> <p><b>R-controlled:</b> <i>barn, bird</i></p>	<p><b>Compound</b></p> <p><i>cowboy software</i></p> <p><b>Affix</b></p> <p><i>like get</i> <i>unlike forget</i> <i>unlikely forgetting</i></p>
ROMANCE based on LATIN	<p><b>Schwa (ə) prevalent</b></p> <p><i>direction</i> <i>spatial</i> <i>excellent</i></p>	<p><b>Closed:</b> <i>struct, flect, rupt</i></p> <p><b>VCe:</b> <i>scribe, vene</i></p> <p><b>R-controlled:</b> <i>port, form</i></p>	<p><b>Affix</b></p> <p><i>construction</i> <i>erupting</i> <i>conductor</i></p>
GREEK	<p><i>ch for /k/ – chorus, scholar</i></p> <p><i>ph for /f/ – phonograph</i></p> <p><i>y as /i/ – symphony</i></p> <p>Also – <i>pn, ps, pt, mn, rh</i></p>	<p><b>Closed:</b> <i>graph, gram</i></p> <p><b>Open:</b> <i>photo, micro</i></p> <p><b>Unstable digraph:</b> <i>create</i></p>	<p><b>Compound</b></p> <p><i>microscope</i> <i>hemisphere</i> <i>metropolis</i></p>

Note. V = vowel; C = consonant. From *Understanding English Orthography: Assessment and Instruction for Decoding and Spelling* (Doctoral dissertation, Stanford University), by M. K. Henry, 1988, Dissertation Abstracts International, 48,11, p. 35. Copyright 1987 by Marcia K. Henry.

The model supporting the instruction is presented as a word origin by word structure matrix (see Table O.1). The matrix represents the categories of word structure (letter-sound correspondence, syllable, and morpheme) and of word origin (Anglo-Saxon, Latin, and Greek). The goal is to make students keenly aware that words of different origins may have different patterns. For example, words of Greek origin add new letter-sound correspondences, such as *ch* as in *chorus*, *ph* as in *phonograph*, and *y* as in *symphony*. The patterns (letter-sound correspondences, syllables, and morphemes) become the strategies available to decode unfamiliar words. Good readers first look for familiar morphemes in unknown words, and then they make decisions based on syllable division. Only when these two strategies have been applied do they rely on letter-sound associations. Beginning or poor readers, on the other hand, appear to use only one strategy: They “sound out” the word letter by letter-sound. While this approach may work for short, regular, one-syllable words, it furnishes little help for reading longer words.

Understanding how these patterns are influenced by word origin (words of Anglo-Saxon, Latin, and Greek origin make up the majority of English words) adds yet another useful dimension for reading and spelling unknown words. For example, when attempting the unknown word *interruption*, the reader will be able to recognize the Latin prefix, root, and suffix. As *-tion* has a unique pronunciation, knowing this suffix makes decoding thousands of words possible. Understanding these forms is equally beneficial for spelling. The speller may be tempted to write “interupshun,” but knowing that the prefix *inter-* ends with an *r* and that the root *rupt* begins with an *r*, he or she is less likely to omit an *r*. Additionally, knowing that the suffix /shən/ is usually spelled *-tion*, the student is able to write the word correctly.

## The Units

Before beginning the units, the *Words* Pretest may be given to assess students’ knowledge of the terminology and concepts to be taught. Following each unit, the corresponding quiz may be administered to assess students’ learning. After completing all five *Words* units, the Posttest may be given.

In each of the scripted lessons, teachers open by describing the purpose and objectives of the lesson and by presenting the new content, generally one or more patterns within a structural category. For example, in order to familiarize students with consonant digraphs, teachers may (a) focus on the similarities and differences of words containing four digraphs, (b) have students read a list of words with consonant digraphs on the board arranged in four separate columns, (c) ask students to generate new words for the four columns, (d) dictate words for spelling, and (e) assign children to look for words containing consonant digraphs in their reading books.

Students have many opportunities to use each new concept for both reading and spelling. The lessons allow the students to think of each concept and strategy as a problem-solving activity. For example, students might be asked to make decisions about whether or not final consonants in a number of words are doubled when adding various suffixes.

Lessons end with a review of the content, structures, and process just covered. Teachers encourage students to reflect upon what they have learned and to review the key ideas. Follow-up assignments may suggest that students identify and use target patterns found in newspapers, literature, or content area textbooks. Follow-up assignments also include a student handout for each lesson. Unit quizzes assess what has been learned and what needs to be reviewed.

One goal of this instruction is to allow students to transfer their new knowledge when decoding and spelling unfamiliar words. The lessons also provide students with a way to talk about decoding and to monitor their performance.

The materials are organized into five units related to the word origin/word structure matrix. The notion of word origin from a historical perspective flows through each unit. The

design and sequence of the instructional units remain the same for all students, although patterns and words selected for practice may differ with grade level. The lessons are not meant to be comprehensive for each category, but are meant to organize prior information and present new material in a coherent way.

The five units of instruction focus on the following:

Unit 1: Organizing Letter-Sound Correspondences

Unit 2: Syllable Patterns

Unit 3: Layers of Language: Anglo-Saxon, Latin, Greek

Unit 4: Morpheme Patterns

Unit 5: Strategies for Decoding and Spelling Long, Unfamiliar Words

Units contain 10 to 14 lessons. The first lesson provides an introduction, and the last contains a review. Teachers may want to subdivide some lessons, depending on students' needs and on time availability.

In Unit 1, students organize the letter-sound correspondences they may have studied in the primary grades. In Unit 2, students consider syllable patterns. Unit 3 introduces students to the layers of language (Anglo-Saxon, Latin, and Greek) influencing English. Unit 4 provides numerous opportunities to read and spell words with Latin- and Greek-based morphemes. In Unit 5, students practice using alternative strategies for decoding and spelling long, unknown words, many of which can be found in their content area textbooks.

**Table 0.2**

Basic Anglo-Saxon Letter-Sound Correspondences

CONSONANTS		
Single Letters	Blends	Digraphs
<i>b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, y, z</i>	<b>Initial:</b> <i>bl, cl, fl, gl, pl, sl, br, cr, dr, fr, gr, pr, tr, sc, sl, sm, sn, sp, st, tw, scr, str, spl, spr . . .</i> <b>Final:</b> <i>ct, ft, lf, lk, lp, mp, nd, nt, sk, st, xt . . .</i>	<b>ch:</b> <i>chip, peach, church</i> <b>sh:</b> <i>shame, crash</i> <b>th:</b> <i>this, thick, that</i> <b>th:</b> <i>thin, thick</i> <b>wh:</b> <i>which, whale</i> <b>Also:</b> <i>wr, kn, gn, ck, tch, dge, ng . . .</i>
VOWELS		
Single Letters (Short/Long)	R- & L-Controlled	Digraphs
<i>a – cap/cape</i> <i>e – pet/Pete</i> <i>i – pin/pine</i> <i>o – rot/rote</i> <i>u – cut/cute</i> <i>w – cow/few</i> <i>y – gym/my, baby</i>	<i>ar – barn, parish</i> <i>arr – marry</i> <i>or – for, corn</i> <i>er, ir, ur – her, perish, bird, hurt</i> <i>err – berry</i> <i>ear – bear, fear, learn</i> <b>I-controlled</b> – <i>wall, halter, full</i>	<b>1 sound:</b> <i>ai &amp; ay – nail, play</i> <i>ee – feed</i> <i>oa – coat</i> <i>oy &amp; oi – boy, foil</i> <i>aw &amp; au – cause, draw . . .</i> <b>2 sounds:</b> <i>ea – bead, head</i> <i>ei – either, vein</i> <i>ie – tie, grief</i> <i>oo – room, book</i> <i>ou – loud, boulder</i> <i>ow – brown, blow . . .</i>

Note . . . = additional blends and digraphs not listed. From *The Book: Components of Reading Instruction* (Unpublished manuscript) (p. 25), by R. C. Calfee and Associates, 1981, CA: Stanford University. Copyright 1981 by R. C. Calfee and Associates. Adapted with permission.

## Unit 1: Organizing Letter-Sound Correspondences

The first unit introduces students to the structures inherent in letter-sound correspondences. Students learn terminology and organize their prior decoding knowledge according to a  $2 \times 3$  matrix focusing on consonant and vowel patterns (see Table O.2). This matrix represents the way letter-sound correspondences can be organized for instruction. Students learn that words have both consonants and vowels, the two major headings. Consonants are single letters, blends, or digraphs. Single-letter vowels can have either short or long sounds, often lose their traditional sound when followed by *r* or *l*, and are called *vowel digraphs* when combined with other vowels. Almost all graphemes (the letter patterns appearing in words) can be placed in one of these six cells. This makes it possible to organize within a coherent framework the almost 200 isolated patterns found frequently in words of one or more syllables (Calfee & Associates, 1981).

Since the material in the *Words* manual is written for older elementary children, this letter-sound-correspondences matrix is used to review and organize their prior phonics knowledge. However, if you are using the material with younger students (i.e., those in Grades 2 and 3), the matrix can be used to introduce and organize letter-sound correspondences. Make a blank six-cell matrix and add consonant and vowel patterns to the blank cells as they are introduced. In addition to learning the patterns in each category, students will explicitly learn the terminology specific to word features. (NOTE: If you use different terms to describe the same patterns, use those terms. For example, in some instructional materials, *consonant blends* are called *consonant clusters*, and *vowel digraphs* are called *vowel teams*.)

As children learn the various letters and letter combinations, both print and cursive writing instruction should be included. Careful monitoring of letter formation by the teacher is encouraged.

## Unit 2: Syllable Patterns

Students begin by discussing the meaning of the term *syllable* and practice counting the number of syllables in words of two to five syllables. Students learn about the six common syllable types and learn about both simple and complex syllable-division patterns existing in most multisyllabic words. Students read long words and divide them into syllables. They also spell words, being sure to count the syllables before writing and to say each syllable as they write.

## Unit 3: Layers of Language: Anglo-Saxon, Latin, Greek

Students study how different word origins influence word structure and therefore English orthography. Teachers discuss the growth of written language, tracing the link of picture drawing, pictographs, and ideograms to alphabetic writing. They then describe the events contributing to the formation of English.

Letter-sound correspondences, as well as syllable and morpheme patterns, are contrasted for each layer of language. Anglo-Saxon letter-sound correspondences, syllable patterns, and morpheme patterns that consist of compound words and affixes, as well as common but irregular words, are considered. Next, the schwa sound (prevalent in words of Latin origin) is introduced, followed by common prefixes, suffixes, and roots. Teachers also introduce their students to the patterns prevalent in Greek-based words.

## Unit 4: Morpheme Patterns

Meaning-based morphemes make up thousands of English words. This unit focuses primarily on Latin-based prefixes, roots, and suffixes. Prefixes introduced include *re-*, *pre-*, *de-*, *pro-*, *mis-*, *trans-*, *ex-*, *uni-*, *inter-*, and *intro-*. Among the suffixes taught are *-ist*, *-ant*, *-ent*, *-ible*, *-or*, *-tion*, *-tious*, *-cial*, *-cian*, and *-sion*. Latin roots include *rupt*, *form*, *tract*, *script*, *spect*, *struct*, *dict*, *flect*, *fer*, and *mit/miss*. Students also focus on Greek combining forms (of-

ten called *roots*) such as *auto*, *phono*, *hydro*, *hyper*, *chron*, *micro*, *hemi*, *graph*, *meta*, and *sphere*. Students are given opportunities to read and spell numerous words and to generate new words fitting each category. Learning morphemes enhances not only decoding and spelling, but vocabulary development as well.

### Unit 5: Strategies for Decoding and Spelling Long, Unfamiliar Words

In this unit, students synthesize the information from previous units. Students practice using their new skills as they analyze long, unfamiliar words. Students follow the sequence used by most fluent readers: They first check for affixation and roots (morphemes). Next, they divide words into syllables. Only if these two strategies fail do they use letter-sound correspondences. In spelling, they are taught to first repeat the word, listen for syllables, and try to identify common affixes and roots. Students are encouraged to use letter-sound correspondences only after they attempt the morpheme and syllable strategies. They review productive spelling rules (i.e., rules for adding suffixes) to assist in spelling words from dictation.

#### Lesson Procedures

A Pretest is included to check students' prior knowledge about the structure of the English language and their word recognition and spelling ability. Feel free to skip lessons in which students are already proficient.

Lessons within each unit focus on specific patterns within the historical and structural categories. Teachers first introduce students to the structural or conceptual focus of the unit. In the lessons that follow, students continue to learn and practice new concepts related to each pattern. The final lesson reviews and summarizes the unit.

The decoding lessons are designed to be presented in five units of 10 to 14 consecutive lessons, which take approximately 45 minutes each to complete. Some teachers teach the lessons on a daily basis for a 10-week period, while others teach the decoding lessons two to three times weekly for an entire semester. Still others expand each lesson and use the units throughout the school year.

Although teachers spend different amounts of time on the lessons, teachers should follow the lesson sequence and format as designed. Each lesson consists of the "opening," in which the teacher describes the purpose and content of the lesson and explains the lesson procedures. Teachers read the red text to students. Following the opening, the teacher provides one or more "middle activities." These activities are framed in a small-group discussion format; students have the opportunity to read, spell, and discuss the patterns and concepts presented. Middle activities provide numerous examples of words fitting each pattern or rule, although some teachers delete some of the words during instruction, depending on their students' reading levels. Lesson plans for several lessons suggest optional word lists and activities, and many teachers include these in the lessons. Students also have the opportunity to generate new words.

At the end of each lesson, teachers and students review and summarize the concepts and patterns learned each day. This "closing" is an important facet of any lesson. During the closing, students and teachers discuss the lesson in terms of its content, relationship to other patterns, key terminology, and applicability to their reading and spelling.

Follow-up activities are found in handouts associated with each lesson. Students may be assigned the handouts as independent work following a lesson, or the handouts may be completed later as homework. Student handouts are found on the accompanying CD and can be printed and photocopied for student use. Each handout provides reinforcement and practice for concepts in each lesson. Reduced-size answer keys can be found in this manual at the end of each lesson. Encourage students to answer the questions on the handouts and to review concepts when needed.

Additional follow-up activities are also suggested in many lessons. Students might be asked to underline words containing Latin word roots in a newspaper article or to find as

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many Greek words as possible in a chapter of their science textbook.

Administer the Unit Quizzes at the end of each unit. They can be found on the CD and may be printed and photocopied. Directions, along with the Word Recognition and Spelling Dictation sections, can be found at the end of this manual. Try not to use the dictation words in your instruction, if possible. Reduced-size answer keys are also at the end of the manual.

Use the Posttest (found after the Unit Quizzes) to evaluate students' achievement at the end of the *Words* program. Return to and review any concepts students have not learned.

## Materials

This revised *Words* program includes a manual and a CD-ROM. The manual contains the teaching materials, and the CD-ROM stores the reproducible tests, quizzes, and student handouts, as well as supplemental word lists and an overview of common spelling rules.

At the end of each lesson in the manual, the corresponding handout for that lesson is shown in reduced size, complete with answers to the exercises. The Pretest, Posttest, and Unit Quizzes can be found in their own sections of the manual, along with reduced-size answer keys at the end of each. The remaining sections include Non-Phonetic Words, Assorted Word Lists, Spelling Rules, and Resources. The Non-Phonetic Words list contains those phonetically irregular words that must be memorized for both reading and spelling. The Assorted Word Lists contain subject matter terms and provide practice for longer words. Although the Spelling Rules are taught directly in various lessons, they are found summarized at the back of the manual. The Resources provide additional books and Web sites that may be helpful for your *Words* instruction.

The *Words* CD-ROM offers a convenient way to print blank handouts, tests, and quizzes for students. The word lists and spelling rules can also be printed from the CD-ROM. Open the Words.PDF file on the CD-ROM. This file opens in Adobe Acrobat Reader (if you do not have Adobe Acrobat Reader on your computer, you may download it free from [www.Adobe.com](http://www.Adobe.com)). Use the table of contents to navigate to the pages or sections you wish to print. Choose *Print* from the PDF menu, type in the page range, and then choose *OK*.

Teachers may want to make or purchase drill cards with the common patterns that are introduced. Instead of writing words on the board, word lists can be written on flip charts or wall charts so they may be used more than once. Otherwise, a chalkboard, whiteboard, or overhead projector can be used to list words for discussion and reading.

Students use newspapers, content area textbooks, literature, the Internet, and other classroom materials for follow-up assignments. Each student needs a three-ring binder with lined paper to use for spelling dictation and writing assignments based on the *Words* patterns. They may also keep their handouts and word lists in their binder so they can refer to them if they need to.