

Chapter

4

Phonics

Learner Objectives for Chapter 4

- Explain the role of phonics in proficient reading.
- Review a brief history of reading instruction in the United States.
- Identify the characteristics of systematic, explicit phonics and contrast those with implicit, incidental approaches.
- Learn and define important terms in phonics instruction.
- Review a typical scope and sequence of phonics instruction.
- Identify the most and least regular phoneme-grapheme correspondences.
- Learn the technique of phoneme-grapheme mapping.
- Distinguish regular from irregular spellings.
- Role-play a few components of a typical phonics lesson.
- Critique a video demonstration of phonics instruction.

Warm-Up Questions

How confident are you about your answers to these questions? Circle the number that applies.

1 = not confident 2 = I know something 3 = pretty confident 4 = highly confident

- | | | | | |
|--|---|---|---|---|
| 1. What is the alphabetic principle? | 1 | 2 | 3 | 4 |
| 2. Which phonics patterns should be taught? | 1 | 2 | 3 | 4 |
| 3. Where is the research support for teaching phonics? | 1 | 2 | 3 | 4 |
| 4. Is there a best way to teach phonics? | 1 | 2 | 3 | 4 |
| 5. How can we identify who needs phonics instruction? | 1 | 2 | 3 | 4 |
| 6. Is phonics instruction appropriate beyond the primary grades? | 1 | 2 | 3 | 4 |

Good Readers Use Phonics!

A Definition of Phonics

Phonics is the *study of the relationships between letters and the sounds they represent*. The term is also used to describe code-emphasis or phonics approaches to reading instruction. Code-emphasis or phonics approaches organize beginning reading lessons around sound-symbol correspondences and teach students how to use sound-symbol associations while decoding and spelling new words.

One Essential Component

Phonics is one of the “five essential components” of reading instruction named in current federal and state policies governing the implementation of scientifically based reading research (SBR). Among scientists who study reading, consensus is very strong that knowledge of phonics plays an important role in learning to read and spell, and that the most effective instruction teaches students to decode and spell new words by using sound-symbol correspondences (Ehri & Snowling, 2004; NICHD, 2000; Rayner et al., 2001). Knowledge of sound-symbol correspondences, in turn, facilitates learning to recognize words “by sight” or automatically. How did reading scientists arrive at that conclusion?

Figure 4.1 “Rope” Model of Reading Skill Development

The Many Strands that are Woven into Skilled Reading

(Scarborough, 2001)

LANGUAGE COMPREHENSION

BACKGROUND KNOWLEDGE
(facts, concepts, etc.)

VOCABULARY
(breadth, precision, links, etc.)

LANGUAGE STRUCTURES
(syntax, semantics, etc.)

VERBAL REASONING
(inference, metaphor, etc.)

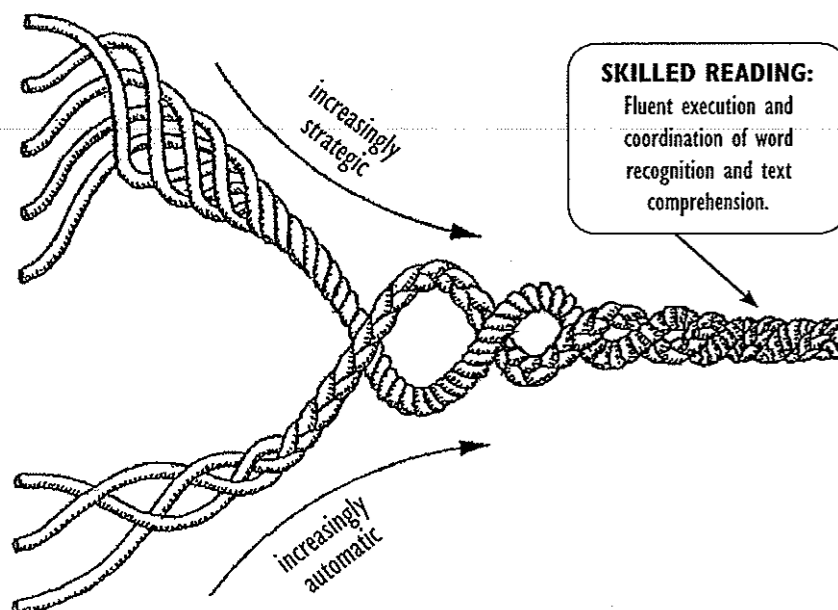
LITERACY KNOWLEDGE
(print concepts, genres, etc.)

WORD RECOGNITION

PHONOLOGICAL AWARENESS
(syllables, phonemes, etc.)

DECODING (alphabetic principle,
spelling-sound correspondences)

SIGHT RECOGNITION
(of familiar words)



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The Alphabetic Principle

The English writing system uses an **alphabet**. English **orthography**, or writing, embodies the **alphabetic principle**. The alphabetic principle is the concept that letters and letter combinations (**graphemes**) represent the individual **phonemes** in words.

- map = /m/ /ă/ /p/
- shout = /sh/ /ou/ /t/
- read = /r/ /ē/ /d/ or /r/ /ě/ /d/ (depending on context)
- exact = /ě/ /g/ /z/ /ă/ /k/ /t/
- collar = /k/ /ō/ /l/ /er/

The alphabetic principle in the structure of the writing system allows us to read a word we have never seen before. Sometimes the alphabetic code allows us to only approximate the pronunciation of a word, as in **vicar**; we must then hear the word pronounced, have it defined, or see its use in context to fully identify it. The alphabetic principle is embodied in the phonics system of English. Other languages, such as Greek, Russian, and Hebrew, also employ the alphabetic principle in their written language systems.

The English alphabet is not perfectly designed for representing speech sounds. If it were, it would use only one letter for each phoneme in the language. As it is, English orthography often uses letter combinations for single phonemes (e.g., **th**, **aw**) instead of single letters, and it sometimes uses single letters (e.g., **e**, **y**, **c**) to represent several different sounds. Nevertheless, someone who knows the phonemes and graphemes (the spellings for phonemes) can approximate the identification of new words in English by blending the sounds, left to right.

The English alphabet is truly a miraculous invention—and a recent one! The English alphabet evolved first from the Phoenicians, then to the Greeks, and then to the Romans. The alphabetic writing system we use today was finally established in the 1800s when comprehensive dictionaries by Noah Webster and others were widely published.

How We Read New Words

In the diagram of the Four-Part Processor of the brain that supports word recognition (refer to Chapter 1, p. 24), phonics is the link between **orthography** and **phonology**. Phonics is a system of correspondences, patterns, and conventions by which speech is represented in print. The system of phoneme-grapheme correspondences can be learned and generalized to new words. In addition, the meanings of words (**semantics**) do influence how they are spelled (e.g., **they're**, **their**, **there**; **playground**; **unnatural**) and the origin, or **etymology**, of words also determines their spellings (e.g., **chlorophyll** is from Greek, so it uses **ch**, **ph**, and **y** for /k/, /f/, and /i/ respectively). Therefore, printed word recognition is facilitated by knowledge of all of these language ingredients:

- *orthography* (letters, letter combinations, and their allowed sequences in the writing system)
- *phonology* (speech sound identification and recall)
- *semantics* (spellings for meaningful word parts and homophones)
- *etymology* (spellings retained from “donor” languages and other influences of language history)

Exercise 4.1 Read a New Word

noctambulist

- How did you do that? Very quickly, your mind:
 - recognized four syllables organized around vowels and the sounds in each syllable;
 - recognized meaningful parts that were familiar from other known words (*noct-* meaning “night,” from Latin and German; *ambul-* meaning “to walk,” from Latin *ambulare*; *ist*, an ending that marks the word as a noun);
 - connected a meaning with your background knowledge.
- In what context might you understand and possibly sympathize with the meaning of **noctambulist**?

- Now, read this sentence:

The noctambulist has no memory of his midnight stroll to the kitchen, where he snacked on chocolate cake and ice cream.
- What does **noctambulist** mean?

Congratulations! You have just completed a very complex task of word recognition and comprehension by employing your knowledge of sound-symbol correspondences, knowledge of meaningful word parts, background knowledge, and ability to use language context to help decipher word meaning. Phonic knowledge, along with other language and cognitive skills, allowed you to decode an unknown word.

A Brief History of Phonics Instruction

Swings of the Pendulum

Reading instruction practices have undergone many changes over the past few hundred years. Since the Greeks and Plato, the “pendulum” of philosophies and methods for teaching people to read an alphabetic writing system has swung many times between *phonics-emphasis* approaches and *meaning-emphasis* approaches. Phonics-emphasis approaches teach students directly about the sounds that letters represent and emphasize the skill of sounding out new words by decoding their sounds. Meaning-emphasis approaches minimize direct teaching of

the written orthographic code. Some go so far as to claim that phonics is destructive, evil, or an impediment to the enjoyment of reading.

Thus, phonics has not always been “in.” In the pendulum swings of favored methods for teaching reading, phonics instruction at times has been relegated to dark closets and even expelled from the classroom. For several periods during the 20th century, phonics was definitely “out,” or at least was considered optional. There was little understanding of why phonics might be necessary or important. If students had difficulty learning and applying phonics to sound out unfamiliar words, “bypass strategies” such as memorization of whole words that involved no phonics were often recommended. A professor was once heard saying, “Some students wouldn’t know a phonic if it kicked them in the shin!”

The Evolution of Research-Based Reading Instruction

Noah Webster initiated the first era of phonics-based reading instruction in the United States with his *Blue-Backed Speller* in 1806. This popular speller was used by millions of Americans to teach their children how to read and helped to standardize English spelling. (Benjamin Franklin used Webster’s speller to teach his granddaughter how to read.) Immigrants who did not speak English used Webster’s speller as a tool to learn to speak, read, and spell the language. By 1861, 1 million copies were sold per year. This book helped to launch the practice of the spelling bee.

Then, in the mid-1800s, a second era in reading instruction began when Horace Mann, the secretary of education in Massachusetts, wrote this about phonics: “It is upon this emptiness, blankness, silence and death, that we compel children to fasten their eyes; the odor and fungleousness of spelling book paper; a soporific effluvium seems to emanate from the page, steeping all their faculties in lethargy” (quoted by Balmuth, 1992, p. 190). Mann’s strong sentiment regarding phonics had sweeping consequences for reading instruction. Mann’s wife, Mary Peabody Mann, wrote the first “look-and-say” reader based on the ideas of Thomas Gallaudet, who developed reading material for the deaf, in which an opening sentence reads, “Frank had a dog; his name was Spot.” Spot was in for a long and popular life!

Scott Foresman published look-and-say readers beginning in 1914. Spot the dog reappeared in the “Dick and Jane” reading series in the 1930s. Look-and-say reading instruction was dominant in reading instruction, even though parents were being told more and more often that their children needed remedial help. In the 1950s, illiteracy rates were increasing. The stage was thus set for Rudolph Flesch (1955) to publish his provocative book, *Why Johnny Can’t Read*, in an attempt to resurface phonics as an important component of learning to read. Said Flesch (1955): “The truth is, of course, that any normal six-year-old loves to learn letters and sounds. He is fascinated by them. They are the greatest thing he has come up against in life.” Research reviews, government-funded studies, and essays by Jeanne Chall (1967) helped to bring phonics back into favor for about 10–15 years until the next era of reading instruction took hold.

A Historical Summary of Reading Instruction in the United States

- **Early 1800s**—Children were taught to read by memorizing the alphabet, learning spelling correspondences, writing spelling lists, and reading the Bible and other “character-building” stories. Webster’s *Blue-Backed Speller* was published in 1806.
- **Mid-1800s**—Horace Mann and others denounce phonics as vile and wicked, urging a change to meaning-based instruction.
- **1914**—Scott Foresman publishes the first look-and-say primers, organized by grade level.
- **1930–1965**—“Dick and Jane” readers—a look-and-say series emphasizing high-frequency words and sight word memorization—predominate. Phonics was an optional “add-on” in some schools.
- **1955**—Rudolph Flesch publishes *Why Johnny Can’t Read*, an emotional diatribe against whole-word approaches that is intended to revive phonics instruction.
- **1967**—Jeanne Chall publishes *Learning to Read: The Great Debate*, a scholarly review of reading research that supports phonics instruction within a comprehensive program.
- **1960s–early 1970s**—Ayres (1972), Frostig (1965), and Kephart (1960), among others, promote the idea that students who struggled with reading were deficient in visual and perceptual motor skills and required extensive practice crawling, walking balance beams, and visually discriminating between geometric shapes that were the same and different.
- **1970s**—Whole-language philosophy evolves in Australia, New Zealand, and North America, urging a return to meaning-based instruction with “authentic” children’s literature and warning that phonics instruction is unnecessary and an impediment to good reading.
- **1974**—Isabel Liberman, Alvin Liberman, and Donald Shankweiler at the Haskins Laboratories at Yale publish their first studies showing the strong relationship between phoneme awareness, word recognition, and spelling, pointing educators toward a critical link between language and literacy.
- **1984**—*Becoming a Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985), published by the National Academy of Education, urges attention to reading research and supports the efficacy of phonics in a comprehensive English program.
- **1990**—Marilyn Adams (1990), commissioned to review reading research by the U.S. Department of Education, publishes *Beginning to Read*. This award-winning work of scholarship explains, on the basis of cognitive and linguistic studies, why phoneme awareness and phonics, along with comprehension, are essential components of language instruction. The national debate (“the Reading Wars”) heats up.

- **1996**—California, after embracing whole-language standards and practices in 1987, reverses itself in the face of reading achievement declines and adopts regulations supporting explicit phonics- and research-based language instruction.
- **1998**—The federal Reading Excellence Act provides funds for research-based programs.
- **2000**—The National Reading Panel (NICHD, 2000), convened by Congress, publishes results of meta-analyses of rigorous research supporting “five essential components” of reading instruction; this report spawns funding for the Reading First initiative.
- **Present**—“Balanced literacy” continues as a popular alternative to systematic, explicit, phonics-emphasis approaches; all publishers claim their products are research-based, diminishing the importance of that term. Most approaches include some phonics instruction, although the quality and effectiveness vary widely. Phonics is “in,” but practices range from incidental, unsystematic teaching to very structured, explicit, systematic teaching.

In the early 1970s, a third era of reading instruction was ushered in with the advent of a “new” reading philosophy vigorously advocated by its proponents. This approach, called **whole language**, championed *authentic* readers, children’s literature, and learning to read from context and exposure. Phonics was not only out of favor, it was also demonized as a barrier against learning to read, even though all objective research summaries up until that time supported the value of phonics instruction. Instead of the familiar vocabulary of Dick and Jane, students were given books with many sophisticated and novel words meant to replicate “natural” language patterns, words whose pronunciations and meanings students were to guess from the context of the passage being read. Teachers were warned against “taking words apart” or being analytical about the skills necessary to support reading acquisition.

Whole language was a disaster for children who had not already learned to use the alphabetic code when they entered school. National test results in the 1990s, showing declines in reading achievement in states such as California that had embraced whole language, precipitated action on the part of lawmakers. When more than 40 percent of the nation’s fourth graders were unable to demonstrate satisfactory reading skills on the National Assessment of Educational Progress, state and federal officials undertook a serious reassessment of standards, methods, and textbooks for reading instruction. Subsequently, Congress mandated a federally sponsored synthesis of reading research that eventually was published as the “Report of the National Reading Panel” (NICHD, 2000).

Where Are We Now?

What are colleges of education teaching new teachers about phonics and other aspects of reading instruction? The National Council on Teacher Quality recently completed a study to answer this question (Walsh, Glaser, & Dunne-Wilcox, 2006). Syllabi and textbooks from more than 250 reading-instruction courses were analyzed to determine if and how systematic and explicit phonics instruction, along with all essential components of instruction, was addressed in typical reading instruction courses. The findings demonstrated that many course

syllabi and textbooks pay some attention to phonics, but the information remains simplistic and confusing, characterized by surface treatment, brief explanations, and inaccurately defined terms. It appears from this study and others that meaningful exposure to explicit and systematic phonics is somewhat difficult to come by. Some textbooks continue to dismiss explicit phonics as undesirable while promoting implicit, teach-as-you-need-it phonics. No wonder teachers are often confused about the best way to go.

Textbook publishers are changing their programs, however, to comply with Reading First guidelines and state standards for both teachers and students. Most of the publishers of core, comprehensive programs have fairly strong phonics components in their new offerings, and there are many strong phonics intervention programs on the market. The Florida Center for Reading Research (www.fcrr.org) publishes unbiased reviews to help consumers find good teaching tools. The What Works Clearinghouse (www.whatworks.ed.gov/), directed by the U.S. Department of Education, also provides reviews of reading programs.

Contrasting Approaches

Some currently popular approaches to reading instruction continue to emphasize comprehension instruction over phonics and language skills and claim to be supported by reading research. Many of these go under the name of “whole language” or “balanced literacy” approaches. When the wrapping is removed from many “balanced literacy” programs, however, one does not usually find a *systematic, explicit, complete* phonics component or even a *systematic, explicit* vocabulary and comprehension component. That’s what can be difficult to distinguish, especially for a person new to reading instruction.

In a systematic, explicit, phonics-emphasis program, the teacher organizes his or her instruction according to a preplanned sequence of phonics and word-recognition skills, from easier to more difficult. Vocabulary and comprehension are also taught, but the primary emphasis in the beginning stages is on getting students to read the print without relying on pictures or memorization. A basic assumption is that if students learn the phonics code and

acquire independent word-recognition skills, they will be able to read words accurately and will then be more likely to read fluently for comprehension. Phoneme/grapheme correspondences are taught cumulatively and thoroughly in the first stages of instruction, with increasing emphasis on text reading as students become proficient in reading the words. In the first few months of instruction, comprehension and vocabulary are developed through reading aloud and oral-language comprehension until students can read text for meaning. In a systematic phonics approach, students are taught to: (1) look carefully at the word; (2) sound the word out; and (3) check to see

Contrasting Approaches

Systematic, Explicit

- Preplanned scope and sequence
- Easy to more difficult
- Cumulative review
- “I do, We do, You do”
- Guided practice to independent practice

Incidental, Embedded

- Opportunistic, as children make errors
- No predetermined sequence
- Skills taught in mini-lessons, as needed
- Insufficient practice for students at risk

if the pronounced word makes sense in the passage. Decodable text, with many examples of the phonics patterns already taught, is used to provide practice as new skills are introduced.

Whole language and balanced literacy approaches, in contrast, promote context-based strategies for teaching word recognition. The important component of instruction, phonics, represents a primary difference between methods. In whole-language approaches, students are encouraged to guess unknown words from pictures, context, and a few letters, or to memorize whole words and repetitious language patterns in the text ("predictable text"). Phonics may receive some attention, but the instruction may be haphazard, implicit, and lacking in the kind of extended practice that many students need. The phonics instruction may not be connected to the books that students are asked to read. Most importantly, nonsystematic approaches may be ineffective for "average" to "low average" students who need phonics, phoneme awareness, and fluency-building along with vocabulary and comprehension instruction in order to progress at an optimal rate.

Contrasting Strategies

Systematic, Explicit

- Look carefully at the word.
- Sound it out.
- Check it (use the context to resolve meaning).

Incidental, Embedded

- Think about what would make sense here.
- Read the whole sentence.
- Look at the pictures.
- Look at the first letter.
- Sound it out (last resort).

Who Needs Phonics, and How Do We Know?

Cumulative scientific research gathered over the past several decades provides evidence that the alphabetic principle and explicit, systematic phonics are important components of reading instruction for all students (Ehri, 2004). Dozens of studies were summarized in the Report of the National Reading Panel (NICHD, 2000), and evidence continues to support the report's conclusion. Systematic phonics instruction is generally associated with improved ability to read words, spell accurately, comprehend text, and read text orally with sufficient speed to support understanding. Phonics, built on a foundation of phoneme awareness and letter knowledge, is most important for students who struggle with learning to read, including minority students, ELL students, and those in the lower half of the distribution of reading skill.

Phonics instruction should begin as soon as children can identify two and three phonemes in spoken words and when they know their alphabet letters. Typically, this is during the last half of kindergarten. A series of studies on the prediction of later reading outcomes has shown how important this step can be in building later reading fluency and comprehension (Good, Simmons, & Kame'enui, 2001; Torgesen, 2005). It should continue until students know all the major phoneme/grapheme correspondences and syllable patterns and can make a good attempt to decode any unfamiliar word (Ehri & Snowling, 2004).

Students are likely to benefit from phonics instruction if they:

- are stymied or guess wildly when they approach unfamiliar words
- cannot associate phonemes and graphemes with accuracy and fluency
- have trouble blending sounds into words
- spell poorly
- score low on a test of reading nonsense syllables
- score low on a test of reading real words out of context

Advanced phonics instruction moves beyond phoneme/grapheme correspondences. This component should continue through at least second and third grade. Instruction emphasizes how to break down and decode words of more than one syllable. The sounds of vowel spellings are related to the six basic syllable types in English. In addition, the meaningful parts of words (i.e., morphemes) and word history are taught systematically. If older students are not accurate and fluent in word recognition, they will still need a strong phonics and word study component in their reading programs.

Where Else Is the Evidence to Support the Value of Phonics?

Additional support for phonics instruction can be found in eye-movement research in cognitive psychology, studies of the reading brain at work, and studies of instruction since the publication of the Report of the National Reading Panel (NICHD, 2000).

- Eye-movement studies help us understand that proficient readers perceive and register all the letters in words while reading (Rayner et al., 2001).
- Results from a complex series of recent studies known as the Early Interventions Project documented the importance of students learning the alphabetic principle and mastering the step of phoneme awareness (Foorman & Moats, 2004). At-risk children scored above average in word recognition, phonic decoding, and spelling at the end of first grade—and tended to be better at all reading skills, including passage comprehension at the end of second grade—when phonics instruction was strong (Foorman & Schatschneider, 2003).
- When a whole-language tutorial approach is modified with a systematic, explicit phonics component added to instructional routines, students progress significantly faster and more students reach grade level (Chapman, Tunmer, & Prochnow, 2001).
- Studies since 2000 continue to show an advantage for programs that include systematic, explicit instruction in the orthographic code of English, such as the study abstracted here.

Abstract of Research Study on Decoding Skills*

This study compared the efficacy of two decoding skill-based programs, one based on explicit orthographic rime and one on grapheme/phoneme correspondences, to a control group exposed to an implicit phonics program. Children in both explicit decoding programs performed consistently better than the control group in the accuracy with which they read and spelled words covered in the program. Only children in the grapheme/phoneme correspondence group consistently read words more quickly than children in the control group. Children in both explicit decoding programs scored higher than the children in the control group on measures of reading comprehension and oral reading at posttest.

* Christenson, C. A. & Bowey, J. A. (2005). The efficacy of orthographic rime, grapheme-phoneme correspondences, and implicit phonics approaches to teaching decoding skills. *Scientific Studies of Reading*, 9(4), 327-349.

Phonics Defined: Know Your Terminology!

This section will briefly teach the most common phonics terms, provide examples of those terms in words, and then, through interactive exercises, practice and review the information.

Exercise 4.2 Explore the Meanings of Phonics Terms

- Cut out the 12 letter (grapheme) tiles or copy them onto sticky notes. Use them to explore the phonics terms as they are presented.
- Note that each two-letter combination—**th**, **ck**, and **ng**—represents one speech sound. In addition, the three-letter combinations—**dge** and **igh**—represent one speech sound. Each grapheme tile represents a single speech sound for this exercise.

-dge	b	r	th	y	igh	i	ck	ng	t	l	s
------	---	---	----	---	-----	---	----	----	---	---	---

(Some words that can be made from these graphemes are **bridge**, **bridges**, **light**, **lightly**, **thing**, **things**, **brick**, **thick**, **stick**, **sticky**, and **thigh**.)

Grapheme: A letter or group of letters used to spell a phoneme.

Task: Point to a grapheme tile with more than one letter. Say the sound represented by the grapheme.

Consonant. A speech sound that is created by a partial or complete obstruction of the air stream by any of various constrictions of the lips, tongue, teeth, throat, etc., such as /p/, /f/, /t/, /w/, and /h/. Consonant graphemes represent consonant phonemes.

Task: Group the consonant graphemes, and put the vowels (i.e., **igh**, **i**, **y**) aside. Say the sound represented by each consonant grapheme. Select one consonant grapheme. What part of the mouth is used to constrict or close off the air stream when you say the sound?

Consonant digraph. Two consonant letters that represent one sound; that sound is not represented by either letter singly. For example, the grapheme **sh** is a digraph. It does not represent /s/ or /h/. It spells its own sound, /sh/.

Task: Find a consonant digraph. What sound does it represent? Say a word that uses this grapheme.

Consonant blend: Two or three separate consonant sounds that occur as a cluster before or after the vowel in a syllable, such as **gl-**, **scr-**, and **-ft**. Consonant blends have separate sounds: **gl-**, while blended, still has two distinct separate phonemes: /g/ and /l/.

Task: Make a consonant blend with two of your tiles. Say the sounds separately. Blend the sounds together, and put them in a real word.

Exercise 4.2 (continued)

Vowel: Vowel graphemes represent vowel phonemes. Vowels are open sounds. Every syllable has one vowel sound. The most familiar vowel graphemes are **a, e, i, o,** and **u,** but vowel graphemes often use letter teams to represent vowel sounds, such as **igh, oy, ue,** and **oa.**

Task: Group the vowel graphemes (i.e., **igh, i, y**). What grapheme can represent either a consonant or a vowel phoneme?

Syllable: A unit of spoken language organized around a single vowel sound that may or may not have consonants before or after the vowel.

Task: Spell a one-syllable word with your tiles. Spell a two-syllable word. What vowel graphemes (i.e., **igh, i, y**) are in your syllables?

Orthography: A writing system. When we study a language's orthography, we study its spelling, spacing conventions, and capitalization and punctuation marks.

Task: Spell the word your trainer dictates to you. Discuss the orthography of this word with your partner. How many graphemes in the word? How many letters? Is there an unusual spelling for this word? Are there alternate spellings for this word? What else can you say about the word **orthography**?

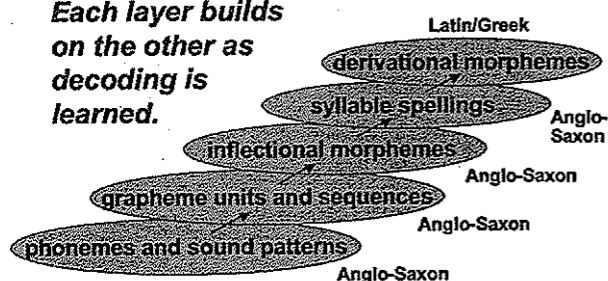
Content of Phonics Instruction: What Should Be Taught?

Consonant Phoneme- Grapheme Correspondences

Common spellings (graphemes) are listed in the following chart for each of the consonant sounds. Note that the term *grapheme* refers to a letter or letter combination that corresponds to one speech sound.

The Content of Phonics Instruction

Each layer builds on the other as decoding is learned.



Consonant Phoneme-Grapheme Correspondence Chart		
Phoneme	Word Examples	Graphemes for Spelling*
/p/	pit, spider, stop	p
/b/	bit, brat, bubble	b
/m/	mitt, comb, hymn	m, mb, mn
/t/	tickle, mitt, sipped	t, tt, ed
/d/	die, loved	d, ed
/n/	nice, knight, gnat	n, kn, gn
/k/	cup, kite, duck, chorus, folk, quiet	k, c, ck, ch, lk, q
/g/	girl, Pittsburgh	g, gh
/ng/	sing, bank	ng, n
/f/	fluff, sphere, tough, calf	f, ff, gh, ph, lf
/v/	van, dove	v, ve
/s/	sit, pass, science, psychic	s, ss, sc, ps
/z/	zoo, jazz, nose, as, Xerox	z, zz, se, s, x
/th/	thin, breath, ether	th
/th/	this, breathe, either	th
/sh/	shoe, mission, sure, charade, precious, notion, mission, special	sh, ss, s, ch, sc, ti, si, ci
/zh/	measure, azure	s, z
/ch/	cheap, future, etch	ch, tch
/j/	judge, wage	j, dge, ge
/l/	lamb, call, single	l, ll, le
/r/	reach, wrap, her, fur, stir	r, wr, er/ur/ir
/y/	you, use, feud, onion	y, (u, eu), i
/w/	witch, queen, one	w, (q)u, (w)o
/wh/	where	wh
/h/	house, whole	h

* Graphemes in this word list are among the most common spellings, but the list does not include all possible graphemes for a given consonant. Most graphemes are more than one letter.

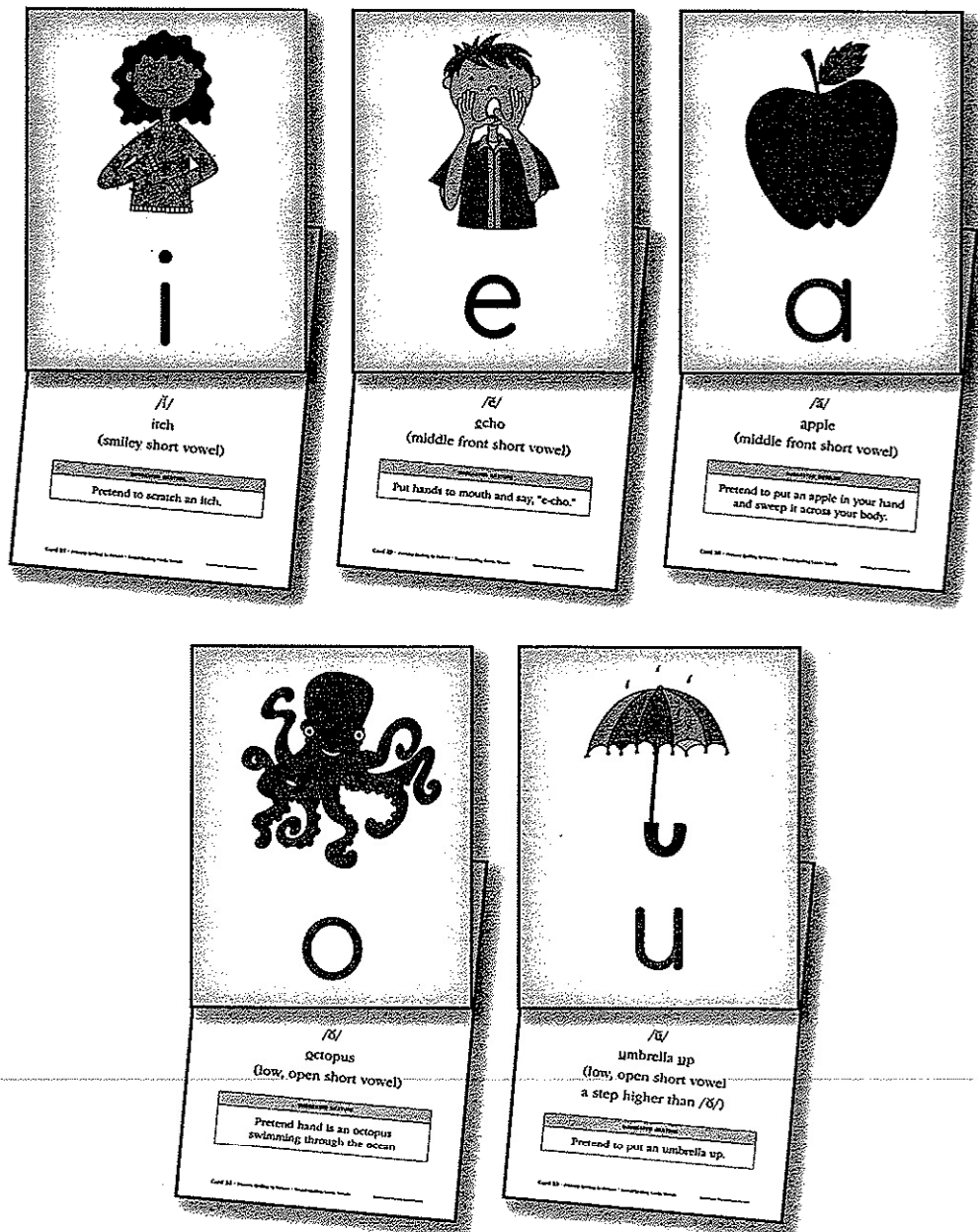
Vowel Phoneme-Grapheme Correspondences

Common spellings (graphemes) are presented within words in the following chart for the vowel sounds explored in Chapter 3.

Vowel Phoneme-Grapheme Correspondence Chart		
Phoneme	Word Examples	Graphemes for Spelling*
/ē/	see, these, me, eat, key, happy, chief, either	ee, e_e, -e, ea, ey, -y, ie, ei
/ī/	sit, gym	i, y
/ā/	make, rain, play, great, baby, eight, vein, they	a_e, ai, ay, ea, -y, eigh, ei, ey
/ĕ/	bed, breath	e, ea
/ă/	cat	a
/î/	time, pie, cry, right, rifle	i_e, ie, -y, igh, -i
/ō/	fox, swap, palm	o, wa, at
/ū/	cup, cover, flood, tough	u, o, oo, ou
/aw/	saw, pause, call, water, bought	aw, au, all, wa, ough
/ō/	vote, boat, toe, snow, open	o_e, oa, oe, ow, o-
/oo/	took, put, could	oo, u, ou
/ū/ (/oo/)	moo, tube, blue, chew, suit, soup	oo, u_e, ue, ew, ui, ou
/y/ /ū/	use, few, cute	u, ew, u_e
/oi/	boil, boy	oi, oy
/ow/	out, cow	ou, ow
/er/	her, fur, sir	er, ur, ir
/ar/	cart	ar
/or/	sport	or
schwa	<u>a</u> bout, les <u>so</u> n, <u>e</u> lect, def <u>i</u> nition, circ <u>u</u> s	a, o, e, i, u

* The word examples in the list present the most common spellings, but the list does not include all possible graphemes for a given vowel. Most graphemes are more than one letter.

- Short vowel sounds are almost always spelled with single vowel letters, as follows:



Sound-spelling cards from *Spelling by Pattern, Level 1* (Javernick and Moats, 2007).

- Long vowel sounds are more complicated because there are more ways to spell them, and the correspondences are not as predictable. Diphthongs—the “sliding” vowels—are different because we shift the position of our mouth to say them.

Exercise 4.3 Hunt for the Code

- Use the Phoneme-Grapheme Correspondence Charts to answer these questions:
 1. Which consonant sounds have the least consistent spellings? The most consistent?

 2. Which vowel sounds have the least consistent spellings? The most consistent?

 3. Which spellings have your students learned, and which are taught at the grade level you teach?

Teaching Phoneme-Grapheme Correspondences and Word Recognition

Reflection

If you were learning to play a musical instrument to improve your musical ability, what would enable you to learn best: exposure to lots of good music or direct, sequential, cumulative, and systematic instruction, with lots of practice? Or both? If we are learning a new task, we undoubtedly expect our instruction (especially if we are paying for it!) to be carefully planned and presented in a way that will help us learn it well and become confident in our skills! In what other ways is learning to read like learning to master any other skill?

What Is Explicit and Systematic Phonics?

Explicit and *systematic* are common terms frequently used when phonics is being discussed. These terms deserve more specific explanation, because many instructional texts and reading programs are not clear about what “explicit” teaching is and what “systematic” means.

- **Explicit.** The information to be learned is explained and taught to students. The concept is put out, made transparent, as in **ex-**, which means “out.” The skill is clearly presented, discussed, explained, and taught, leaving nothing to guesswork. Explicit instruction demystifies the phonics system. Explicit instruction provides a lot more direction and support for students than incidental teaching or teaching that simply corrects errors.
- **Systematic skills sequence.** When phonics is taught systematically, a *predetermined sequence of skills guides the order in which phonic elements are introduced*. Those skills are then practiced through reading material, with multiple examples of words with the

phonic element just learned. Systematic instruction alleviates the hit-or-miss game that is common when teachers constantly create their own lessons.

- **Systematic lesson format.** Systematic can also refer to a predictable lesson format with instructional routines. A systematic lesson unfolds in this order:
 1. The teacher explicitly teaches a skill (“I Do”).
 2. Students are guided and supported as they practice the skill (“We Do”).
 3. Students practice the skill independently with teacher monitoring (“You Do”).

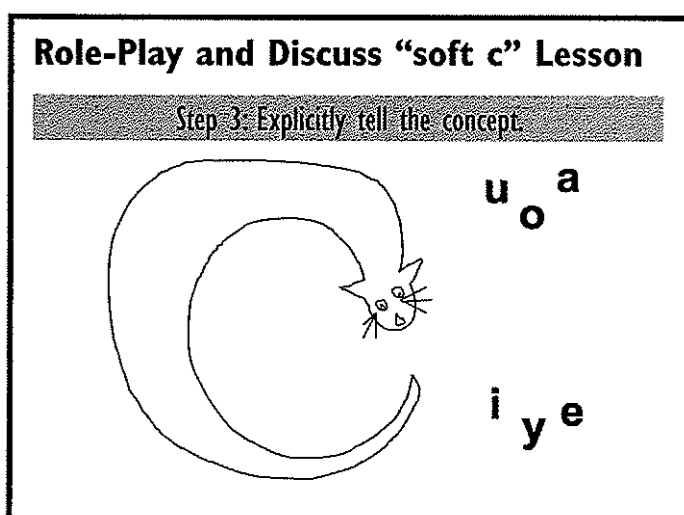
What Are the Typical Routines of Systematic, Explicit Phonics Instruction?

A lesson is usually structured around routines that: (a) provide review; (b) introduce a new concept; and (c) offer various kinds of practice. A general framework designed to provide students with enough practice to apply phonics skills to reading and writing is as follows:

- State the lesson objective and purpose.
- Review.
- Identify sounds in words (sound warm-up).
- Match letters to sounds and vice versa.
- Teach the new letter-sound correspondence pattern.
- Blend sounds together into words.
- Teach “heart words” (irregular words).
- Practice to build fluency:
 - Conduct question-and-answer games (e.g., “Read the word that means . . .”)
 - Conduct timed speed drills.
 - Demonstrate pattern recognition (e.g., underline the rime in several words, then ask students to read the rime and then the whole word).
 - Conduct word-sorting exercises.
- Read words in context (connected text reading such as phrases and sentences).
- Read decodable text to practice recognizing words with known patterns.
- Spell words, write sentences.

Exercise 4.4 Role-Play and Discuss “soft c” Lesson

- Role-play a systematic and explicit lesson that teaches the letter **c** spells the /s/ sound.
- Follow your presenter’s instructions to see what a systematic and explicit lesson feels like, or role-play with a partner.



Lesson Structure	Lesson Content
1. State purpose for lesson.	Teacher: “Today we will read and spell some words that use the letter c for the sound /s/. Sometimes c stands for /k/, and sometimes it stands for /s/.”
2. Isolate phoneme awareness.	Teacher: “Listen while I say some words. [Teacher models the following gestures.] If you hear /k/ at the beginning, say /k/ and make your scraping motion, /k/ /k/ /k/. If you hear /s/ at the beginning, say /s/ and make your snake motion.” cent city cyclone carry cot circus
3. Explicitly tell the concept.	Teacher: Display a picture of Momma C Cat with her babies i , e , y , and a , o , u . Say: “Momma C Cat’s babies a , o , u are such good little children, they make her purr, /kkkkk/. But e , i , y are naughty children and make her hiss, /ssssss/. The letter c can stand for /s/ when it is followed by e , i , or y , as in cent , city , or cyclone . We call it <i>soft</i> or <i>hissing c</i> .” *

(continued)

Exercise 4.4 (continued)

Lesson Structure	Lesson Content
4. Check student memory.	Teacher: "When can the letter c stand for the sound /s/?" Students: "When it is followed by [e, i, or y]."
Have some fun!	Teacher: "Here's a song that can help us remember (sing to "Old MacDonald Had a Farm")": ** There are three letters that soften c , E I E I Y. Teacher: Show Momma C Cat. Hold up individual vowel letter cards (a, e, i, o, u) to her right. Ask: "What does Momma C Cat say?"
5. "I Do" (teacher demonstration)	Teacher: "Let's blend some words with the soft c sound, /s/. First, I'll say the sounds as I point to them. Then, I'll say the whole word as I move my finger underneath." cent rice cinder icy
6. "We Do" (teacher and students together)	Teacher: "Now, you 'touch and say' with these words. You say the sounds as I point to them, and blend the word as I trace underneath it with my finger." acid face cell recipe nice cymbal
	(Multisyllabic words can be read one syllable at a time, then blended.)
7. "You Do" (students practice independently)	Teacher: "Now, get ready to read these words with soft c (/s/). First, underline c and the vowel that follows it on your paper. [pause] Now, touch and say each word." citrus peace spicy fence
8. Read the words in sentences.	It is a <u>cinch</u> to write with this <u>nice pencil</u> . <u>Nancy</u> fell off her <u>bicycle</u> <u>twice</u> on the <u>icy</u> path.

Exercise 4.4 (continued)

Lesson Structure	Lesson Content
9. Read a simple decodable story. ***	(Systematic programs provide stories and informational text for extended practice in reading words with phonic elements that have been taught.)
10. Spell some words, and write sentences to dictation.	Teacher dictates a few words and a sentence to provide additional practice and to build automaticity with the skill.

- * The Momma Cat story was shared with us by a phonics teacher who can no longer identify where she learned it. We, and everyone who learns it, love to use it to teach the soft and hard sounds of **c**.
- ** The “soft **c**” song, to the tune of “Old MacDonald Had a Farm,” is credited to Kathi Grace (2007), author of *Phonics and Spelling Through Phoneme-Grapheme Mapping*.
- *** “The Race” (by Deborah Glaser): Cindy helped me move the dirt by the fence to fill a hole. It was a race to see who could place the dirt in the center of the hole first. When we were done, not a trace was left in the space, and the nice man gave us a fancy cent to go to the circus.

A Sample Skills Sequence for the Primary Grades

The phonics concept that **c** = /s/ when followed by **e**, **i**, or **y** is advanced and is taught to students after they have already learned many other phonics concepts. The following chart is a possible sequence of skills showing at what point the concept of “soft **c**” might be explicitly taught. (Start reading down the first column, then continue into the second column.) Study this sequence of skills, and then answer these questions:

1. What skills have students learned prior to learning the “soft **c**” concept that prepared them to be able to read the sample words in Exercise 4.4?

2. A skills sequence is an integral part of systematic phonics lessons. What are the advantages of having a skills sequence for the teacher? For students?

Sample Skills Sequence (Primary Grades)*

1. First consonants and vowels: c o a d g m l h t 2. i (as in itch) 3. j 4. k 5. p 6. ch (as in chip) 7. u (as in up) 8. b 9. r 10. f 11. n 12. e (as in echo) 13. s (as in sun) 14. sh	22. th (unvoiced, as in think) 23. qu (as in quilt) 24. Two-syllable compound words 25. Spelling rule: double ff-ll-ss 26. Two closed syllables 27. Consonant blends 28. Two closed syllables with consonant blends 29. Nasal rime patterns: -ing -ang -ong -ung -ink -ank -onk -unk 30. "magic e" or CV-e 31. Two-syllable words containing "magic e" 32. ph (as in phrase) 33. ea (as in meat)	40. er (as in term) 41. ir (as in sir) 42. ur (as in hurt) 43. ow (as in cow) 44. ou (as in out) 45. igh (as in night) 46. Consonant-le syllables: -ble -fle -tle -dle -gle -kle -ple -zle 47. Odd long-vowel words: -ild -old -ind -ost -olt 48. ar (as in art) 49. or (as in born) 50. oo (as in moon) 51. Endings: -ly and y 52. ck (as in back)
15. <u>th</u> (voiced, as in this) 16. w 17. wh 18. y (as in yellow) 19. v 20. x 21. z	34. oa (as in boat) 35. ai (as in pain) 36. ee (as in bee) 37. ay (as in day) 38. oe (as in doe) 39. Syllable division	53. Hard-soft c 54. Hard-soft g 55. ge -dge 56. etc.

* This sequence was adapted with permission from Educators Publishing Service: *Recipe for Reading Sequence Chart* (Traub & Bloom, 2004).

A Sample Skills Sequence for Older Students

This sequence is designed for older (middle and high school) students who do not know their vowels, have trouble reading multisyllabic words, and need help with the foundation of phoneme awareness.

Phonics Blitz Scope and Sequence*			
Lesson	One-Minute Timed Oral Reading	Phonemic Awareness	Phonics
1	Each lesson begins with one-minute timed readings.	None	Introduce oral reading. Teach letter sounds: short vowels, consonants, digraphs.
2	One student is the Warm-Up Reader who reads aloud to the class for one minute, and the whole class marks any reading errors made.	<i>Explain that vowels can be sounds or letters (e.g., long/short a).</i>	Introduce closed syllables. Introduce "build a word" and "touch and say."
3		<i>Review long/short a.</i>	Read nonsense words and explain why they are important. Introduce word sorts and word lists.
4		long/short i	Introduce sentences. Digraph -ck occurs at the end of a l-l-l word.
5	After the Warm-Up Reader finishes, all students read aloud in pairs for one minute.	<i>Cumulative review</i>	Trigraphs
6		long/short o	Two-sound blends
7		<i>Cumulative review</i>	Three-sound blends
8		Identifying syllables	-ing, -ang, -ong, -ung, -ink, -ank, -onk, -unk
9	All students chart their accuracy percentage and WCPM at the beginning of each lesson. The goal is to reach at least 98% accuracy regularly, then to improve WCPM.	<i>Review syllables</i>	Reading multisyllabic words: two syllables
10		long/short e	Schwa
11		<i>Cumulative review</i>	Reading multisyllabic words: three or more syllables
12		long/short u /yu/	Spelling multisyllabic words
13		<i>Cumulative review</i>	Three sounds of suffix -ed
14		/oo/ (school)	Pay attention to suffixes. Vowel vs. consonant suffixes.
15		/oi/ + diphthong	l-l-l doubling rule for one-syllable words

(continued)

Phonics Blitz Scope and Sequence*			
Lesson	One-Minute Timed Oral Reading	Phonemic Awareness	Phonics
16	Oral reading at the beginning of each lesson lets the teacher and students know if <i>Phonics Blitz</i> instruction is transferring to non-decodable reading at a selected grade level.	/ou/ + diphthong	Hard c / soft c . Y as a vowel spells three sounds: short i (gym), long i (hi), long e (happy).
17		/oo/ (cook)	Hard g / soft g
18		/or/	Consonant -le
19		/ar/	Other spellings of /əl/: -el (channel), -il (tonsil), -al (rascal)
20		/er/	r-controlled vowels: /or/ and /ar/
21		Add comprehension questions to oral reading passages in place of phonemic awareness.	Spellings of /er/: -er, -ir, -ur, -ear
22			Spellings of /er/: -or, -ar
23			Open syllables
24			Vowel Consonant e : single-syllable words
25			Vowel Consonant e : multisyllabic words
26			Vowel Consonant e : schwa in VCe syllables at the end of words
27			Drop e when adding vowel suffixes
28			Spellings of long o : o, oa, ow, oe, o_e, -ough
29			Spellings of long a : a, ai, ay, a_e, -eigh, ea
30			Spellings of long i : i, ie, y, -igh, i_e
31			Spellings of long e : e, ee, ea, ie, y, ye, e_e
32			Spellings of long u /yu/: u, u_e, ue, ew
33			Spellings of /oo/ (school): u, oo, ou, ew, u_e, ue

Phonics Blitz Scope and Sequence*			
Lesson	One-Minute Timed Oral Reading	Phonemic Awareness	Phonics
34			Spellings of /oi/: oi, oy
35			Spellings of /ōō/ (book): oo, u
36			Spellings of /ou/: ow, ou
37			Spellings of /aw/: aw, au
38			OW spells two sounds: /ō/, /ou/
39			OO spells two sounds: /ōō/ (school), /ōō/ (book)
40			Two vowels together, each in a different syllable

* This scope and sequence is reproduced here with permission from Really Great Reading: *Phonics Blitz* (Farrell & Hunter, in press).

Exercise 4.5 View a Video Demonstration of a Phonics Lesson Component

(*Teaching Reading Essentials* [Moats & Farrell, 2007], Part 3, Demonstration 7.)

- Use the following checklist to note examples of explicit and systematic teaching in the video. Be ready to discuss your observations.

Observation Checklist for Systematic and Explicit Instruction	
The Teacher . . .	Examples
. . . <i>demonstrates, or shows, students how to do something.</i> “I do”	
. . . <i>explains to students how or why to do something while demonstrating the skill.</i> “I do”	
. . . <i>breaks down the skill into simpler steps, shows, and explains the process or concept to students.</i> “I do”	
. . . <i>provides support by doing the task with students.</i> “We do”	
. . . <i>provides feedback through specific praise and immediate correction.</i> “We do”	
. . . <i>slowly releases the responsibility for students to practice independently.</i> “You do”	

The Value of Practice

Often overlooked elements of effective phonics lessons are **practice** and **repetition**. Studies of the repetitions needed for students to automatize new phonic elements help us understand the importance of sounding out words, building words, and reading carefully designed texts with the phonic features we have taught. Learners vary in the number of repetitions they require to automatize new associations, as this chart illustrates.

Type of Learner	Average Number of Repetitions Needed
Most capable	1 or 2
Average	4 to 12
Least capable	20 +

Given these guideposts, one can see how important it is to follow the introduction of a new concept with extended and varied opportunities to practice the new skill. The following exercises present a few instructional tools that are meant to supplement any phonics lessons and provide the extra practice students need through active, hands-on involvement.

Teaching Sound Blending

There are several procedures for teaching sound blending. We will practice the one called *whole-word blending*, or *touch and say*. (Continuous sounds are easier to begin with. For example, /b/ /ă/ /t/ or /ch/ /ě/ /k/ are a little harder than /sh/ /ě/ /l/, /th/ /i/ /n/, or /m/ /ö/ /s/.)

Students touch each letter tile or grapheme, say the sounds as they touch the letter(s), and then blend the whole word together, sweeping their finger across the word. An example of this procedure using the word **wheel** is as follows:

1. Point to the digraph **wh** at the beginning of **wheel**. Say “sound”; students respond “/w/” or “/wh/” (the unvoiced /wh/ is not typical of American English speakers.)
2. Touch each successive grapheme, saying “sound” for each one—/ē/ /l/—as students make the sound the grapheme stands for.
3. Then go back and blend the whole word smoothly—/w/ /ē/ /l/—running your finger under the word left to right.
4. Slowly compress the extended word. Go from *whwheeeelll* to **wheel**.
5. Point to the word and say, “The word is **wheel**.”
6. Check for understanding by asking students to use **wheel** in a phrase or sentence.

Exercise 4.6 Practice Sound Blending

- Practice blending with a partner or small group.
- Choose words from each category:
 1. Simple words (no digraphs or blends): **top, bad, net, mud**
 2. Words with digraphs and doubled letters: **moss, shell, thing, whiff**
 3. Words with blends: **stop, shelf, milk, thrift, crash**
- Write the words on a sheet of paper, and take turns being the teacher to practice whole-word sound blending.

Phoneme-Grapheme Mapping

This technique is especially valuable for second and third graders whose phonics and spelling are weak. Developed by Grace (2007), *Phonics and Spelling Through Phoneme-Grapheme Mapping* (PGM) follows a systematic scope and sequence based on the six syllable types and includes word lists for every concept. Sound-spelling boxes can also be used, however, to complement other phonics and spelling programs (e.g., PGM can be used to present a new correspondence within a cumulative sequence). The PGM concept can also be used to explain to students why words are spelled the way they are and to give corrective feedback when misspellings occur. PGM is especially useful when second- and third-grade students:

- need a novel, multisensory technique that will engage their attention;
- are learning that one sound can be spelled with more than one letter; or
- need extra practice attending to the details of spelling.

Systematic Steps for Phoneme-Grapheme Mapping

To use this technique, you will need:

- A transparency of the Phoneme-Grapheme Mapping Grid (see p. 119)
- Grid paper or copies of the Phoneme-Grapheme Mapping Grid for students
- Movable markers (e.g., tiles) that will fit in the grid boxes

1. Introduce the PGM concept; model and explain the *sound* or *sound pattern* of the lesson.

Example:

- “Today we’ll learn that three different sounds are spelled with double letters when they come at the end of a one-syllable word.”
- “Say **stuff**. What’s the last sound you feel as you say that word? Yes, it’s /f/.”
- “Say **mill**. What’s the last sound in that word? Yes, it’s /l/.”
- “Say **pass**. What’s the last sound in that word? Yes, it’s /s/.”
- “The sounds /f/, /l/, and /s/ are usually spelled with doubled letters at the end of one-syllable words.”

2. Using an overhead projector, point to a row of boxes on the grid. Tell students they will segment words into phonemes by placing one tile for each speech sound in a grid box.

Example:

- “One tile equals one *sound*, not one letter. We’ll say the word, and then we’ll say each phoneme while we place a tile.”
- “Watch me—**mill**, /m/ /i/ /l/.” (Place the tiles in three boxes as you say each phoneme.)
- “Let’s do another one together—**well**, /w/ /ē/ /l/.” (Students say each sound and place their tiles while you demonstrate on the overhead.)
- Repeat with the words **Jeff**, **sill**, and **boss**. As students work, ask them questions such as:
 - “What does this tile stand for?”
 - “What tile stands for /l/?”

3. Now show students a list of words that demonstrate the concept you are working on. Ask students to:

- a. Read the word list silently, then together.
- b. Circle the doubled letters at the end of each word.

shall	shell	dull	doll	still
stuff	whiff	staff	cliff	scoff
grass	chess	kiss	Bess	muss

4. Turn attention to the Phoneme-Grapheme Mapping Grid.
 - “We are going to see how the *sounds* (phonemes) in a word map to its *letters* (graphemes). Look at your grid paper. We’ll use one box for the letter or letters (grapheme[s]) that correspond to each speech sound (phoneme) in a word. *You’ll always have the same number of boxes as you have sounds in the word.*”
 - Say a word. Say its sounds as you place a tile in a grid box.
 - Say the sound the first tile represents. Now, slide the tile above the box, and write the grapheme that spells that sound.
 - Say the sound the second tile represents. Now, slide the tile above the box, and write the grapheme that spells that sound.
 - Continue with all the sounds. As students work, ask them questions such as:
 - “What do you hear?”
 - “What do you write?”
 - Read the whole word that was written, blending the sounds left to right, if necessary.

shell	sh	e	ll	
mess	m	e	ss	
stuff	s	t	u	ff
grass	g	r	a	ss

5. Ask students to summarize the mapping concept in their own words (e.g., “A box stands for one phoneme. Two letters are used to spell some sounds. The letters f, l, and s are often doubled at the end of one-syllable words”).
6. Practice reading and writing words with the target sound-spelling pattern and those already learned. (Appropriate sentence dictations and decodable text should be used as necessary to reinforce recognition of the patterns.)

Phoneme-Grapheme Mapping
(A Method for Bridging Sound to Print)

Name: _____ Date: _____

(Grace, 2007, p. 290)

Exercise 4.7 Spelling Chains With Grapheme Tiles

- Spelling chains require students to compare spoken words carefully and to recognize when words differ by just one phoneme. Spelling chains also provide extra practice with sound-spelling association. This exercise uses grapheme tiles for the chaining activity. Remember, graphemes may be more than one letter (e.g., /th/ is on one tile because it represents one sound).

Part 1

- As an example, you might use the following activity to reinforce the two spellings for the sound /ng/—**ng** (**sing**) and **n** (**sink**). Words for spelling chains may be taken from a phonics lesson or from a core reading program, but successive words in the chain must differ from each other by *only one sound*.
- Create the following grapheme tiles on sticky notes. Place them in a row above your work surface.

o l th ng n i k b s
- As your instructor dictates words, use the tiles to show the changes in a word's spelling. Be ready to say, "Out comes the [grapheme that is being changed] and in goes the [grapheme that is being substituted]."
 — When is /ng/ spelled **ng**, and when is it spelled with a single **n**?

Part 2

- Now, work with a partner to develop a new spelling chain of five or six words that will contrast short **i** and long **e** vowel sounds. (Remember—change *only one sound* each time! You may use a nonsense word in your chain if you need to.)
- Pretend that your students know how to decode the most common consonant sounds, including common digraph spellings. You want them to contrast short **i** (spelled with a single **i**) and long **e** (spelled **ee** or **ea**).

High-Frequency, Irregular (Heart), and Sight Words

High-frequency words are those that are most commonly used in written English text. In fact, approximately only 100 words account for 50 percent of the words used in print. **Irregular (heart)** words, on the other hand, are those that do not follow phonic patterns. The spellings of about three-fourths of our most frequently occurring words are regular, or pattern-based, while only about one-fourth are truly irregular. We call them “heart” words because they must be learned “by heart.”

Sight words are not necessarily irregular words. Sight words are those that students must or can recognize and read automatically *without having to sound them out*. It is important that teachers understand that far fewer words must be memorized “by heart” because of their irregular spellings than most of us think! Consider the spellings of these words. Which ones are truly irregular? Why?

about of water best saw were

Exercise 4.8 Recognizing Heart Words

- Heart words are those that are irregular and must be learned a different way.
- Read this story with a partner. Many of the high-frequency words are underlined in the story. List the heart words that are truly irregular.

The Funny Little Bird

By Deborah Glaser

Once upon a time, there was a small pretty bird who could not fly. Her wings would not work right because they were not very big. She had to walk, run, and jump everywhere she went.

“I will not live long if I cannot make my wings go. I know there is a big brown and yellow cat who likes to pick on little birds and carry them around to eat for lunch. I wish I could fly.”

But the bird had a gift. She was funny. She told jokes that made people laugh. Once she said, “What is black and white and red all over?” They did not say. It was a puzzle to them.

She said, “A newspaper!”

And that made her friends smile.

One cold night, the bird went to sleep under an old green tree by some water where she could keep warm. When she was sleeping, the brown and yellow cat came around. It saw the bird.

“I do want that small bird! I will not have to work hard to get it.”

(continued)

Exercise 4.8 (continued)

"Give me some time," said the small bird. "Please hold those claws. Look here. If I can make you laugh, you will not eat me."

The cat said, "I think I shall wait and see what you say."

The bird said, "Knock, knock."

"Who is there?"

"Iguana."

"Iguana who?"

"Iguana fly away right now!"

She put both of her wings together above her head and gave a hard push. "These wings will help me go so fast now!"

Just when the cat was about to open its mouth, the little bird began to fly. She went up into the tree.

The cat said, "I have been tricked! I don't think that your joke was funny at all."

So the happy bird sat in her own tree, and many could hear her sing for a long time. She was full of pride in her new talent—flying!

- Compare your selection of irregular heart words with your partner's.
 - How do the words compare?
 - Why are the words you chose irregular?
 - Are some really pattern-based?

Exercise 4.9 View a Video Demonstration of a Teacher Teaching a Heart Word

(*Teaching Reading Essentials* [Moats & Farrell, 2007], Part 3, Demonstration 1)

- As you watch the video, note the steps the teacher uses to provide ample exposure to the spelling of an irregular heart word:
 1. The teacher spells the word with letter tiles.
 2. Students take a mental picture of the word.
 3. The teacher turns over the letter tiles.
 4. Students name letters from memory, first in random order, then backward, then in correct sequence.
 5. Students write the word on their boards.
 6. The teacher turns over the letter tiles so that students can check their spelling.
- Describe the method the teacher uses to help students create a strong memory in the orthographic processor.

Exercise 4.10 Role-Play Teaching Heart Words

- Choose one irregular heart word in “The Funny Little Bird” story in Exercise 4.8.
- Teach the word to a partner using the heart-word process demonstrated in the Exercise 4.9 video.

Exercise 4.11 Phoneme Awareness or Phonics: Which One Is It?

- Write “PA” (for phoneme awareness) on one index card and “Phonics” on another.
- Listen to the sample teaching prompts or questions, and hold up the card that indicates which component of instruction is being addressed. (Hint: Does the task ask for *sounds* or *letters*?)
 1. How many speech sounds are in the word **bat**?
 2. Sound out this written word: **rug**.
 3. What silent letter is at the end of **game**?
 4. Listen: /f/ /r/ /ō/ /g/. What is the word?
 5. What letter spells the sound /s/ when followed by **i, e, y**?
 6. Spell a word with more than 10 letters.
 7. Tap out the speech sounds in **lake**.
 8. Tell me the middle sound in **mom**.
 9. Find a word that ends with **-ll**.
 10. Say **bed** without the /b/.
 11. What two letters spell the sound /sh/?
 12. Spell the first syllable in **cracker**.
 13. Change the /ō/ in **cop** to /ā/. What's the new word?

Take 2 Review

- Complete this two-column organizer.
- In the first column are restatements of main ideas. Work with the group or a partner to complete the second column. List a few details that elaborate the main ideas or that state the relevance of those ideas for your school or classroom.

Knowledge/Main Ideas	Application/Practice
1. Explicit and systematic phonics instruction results in higher levels of reading comprehension for greater numbers of students.	
2. Practice is critical to support mastery and automatic application of the alphabetic principle to reading and spelling.	

Linking Concepts to Your Core Program

- Which patterns are taught or reviewed in your program?
- Do you have sound-spelling cards?
- What are some instructional strategies used to introduce the patterns?
- Are any spelling rules taught (e.g., doubling, dropping, or changing)?

What Else Goes Into Word Study?

Once students have become automatic with the basic phonic principles, including the common and not-so-common phoneme-grapheme correspondences, they are ready for *advanced word analysis*. In well-designed reading programs, phonics instruction continues beyond simple phoneme-grapheme correspondence to include analysis at the morpheme and syllable levels. The student of sound-symbol relationships graduates to decoding multisyllabic words and then to the morpheme or meaning level. Advanced word analysis picks up where many practitioners think phonics instruction stops, and the tools students learn in advanced

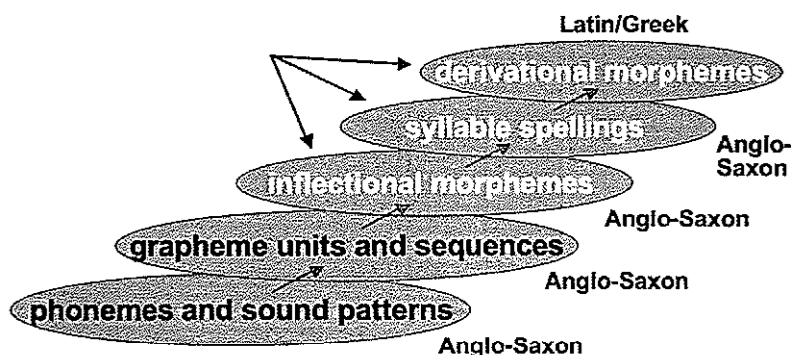
word analysis become the tools they will use to read unfamiliar words, spell them, and decipher meaning at the word level for the rest of their lives.

What Else Is There to Learn About Phonics, Spelling, and Word Study?

These topics are addressed in more depth in *LETRS Modules 3, 7, and 10* (Moats, 2004c, 2004g, 2004j):

- How word history influences spelling patterns
- Why and how English spelling reflects both sound and meaning
- Advanced phoneme-grapheme mapping
- Position-based spellings in English, such as **-ck**, **-tch**, and **-dge**
- Principles and techniques for dividing multisyllabic words
- Six syllable types in English
- Word endings and how they affect spelling
- Morphemes: what they are and how to teach them
- Distinguishing syllables and morphemes

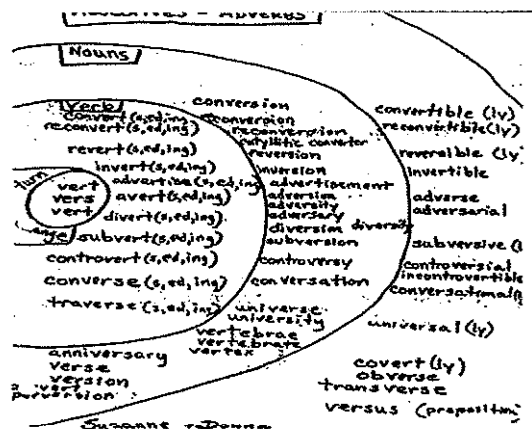
Advanced Phonics



- Advanced phonics instruction will cover much more than phoneme-grapheme correspondences. Word study continues beyond phoneme-grapheme relationships to syllable types, and decoding meaningful units such as inflectional and derivational morphemes.
- Instruction in morphology will occur once students have the building blocks.

What Else Is There to Learn About Phonics, Spelling, and Word Study? (continued)

Advanced Word Classification: Sample Activity



- Advanced phonics and word study will involve activities such as classifying words that come from the Latin root *vers*, *vert*.
- LETRS *Module 10* addresses morphology in depth.
- There is lots more to know than what we have covered in LETRS *Foundations*!