Т	he root <i>phon</i> is derived from the Greek meaning "vocal sound."
Phonological Processing	Multiple functions of speech and language perception and production, such as perceiving, interpreting, storing (remembering), recalling or retrieving, and generating the speech sound system of a language
Phonological Awareness	Conscious awareness of <i>all</i> levels of the speech sound system, including word boundaries, stress patterns, syllables, onset-rime units, and phonemes
Phoneme	The smallest unit of sound in any language used to build words
Phonemic Awareness	The conscious awareness of the individual speech sounds (consonants and vowels) in spoken syllables and the ability to consciously manipulate those sounds
Phonology	The rule system in a language by which phonemes can be sequenced, combined, and pronounced to make words
Phonetics	The study of the sounds of human speech; <i>articulatory phonetics</i> refers to the way the sounds are physically produced in the human vocal tract

Table 2.1: Terminology Counts: Defining the Phon Words

What Is a Phoneme?

A phoneme is the smallest segment of speech in a language system that can determine word meaning, or that can be combined with other speech sounds to make a new word (*Table 2.1*). For example, the words *cloud* and *clown* differ in one phoneme (the final consonant). The words *etymology* (the study of word origin) and *entymology* (the study of insects) differ in one phoneme. (*Entymology* has one extra phoneme, /n/.) The word *shoe* has two phonemes (/sh/–/ū/), the word *choose* has three phonemes (/ch/–/ū/–/z/), and the word *stove* has four phonemes (/s/–/t/–/ō/–/v/).

In English, the speech sound \bar{a} is a phoneme, because it can be combined with either /b/ or /d/ to make the different words *bay* and *day*. The words *rich* and *ridge* also have different meanings and differ in one phoneme (the final consonant sound), so it can be inferred that /ch/ and /j/ are both phonemes in English.*

The phonological processing system is designed to extract the meaning of what is said, not to focus consciously on the speech sounds in the words. It is supposed to work *automatically*, without getting in the way of efficient communication.

*LETRS uses slashes (/ /), also called *virgules*, to denote speech sounds and to distinguish them from written letters. LETRS does not use the International Phonetic Alphabet or IPA (found in Moats, 2010). The IPA consists of individual symbols that represent all the phonemes, or speech sounds, in the English language.

Units of Speech			Sample	Activity		
Word: A word has a consistent pronunciation, a consistent referent		Orally say each word in a sentence while touching a chip or block that represents each word.				
(meaning), and a place within sentence structure.		Our	cat	runs	fast.	
Syllable: A syllable is a unit of speech that is organized around a vowel sound. <i>dis</i> - <i>or</i> - <i>gan</i> - <i>i</i> - <i>za</i> - <i>tion man</i> - <i>eu</i> - <i>ver</i>	Tap your arm as you say each syllable. cer – e – al muf – fin choc – o – late			ble.		
Alliteration: The repetition of initial sounds in two or more words or syllables.	Say: " Say: " Magio	'Suzy sells 'Let's mak c monkeys	s seashell ke a silly s s make	s by the so entence w ."	eashore." ⁄ith /m/ words:	
Onset and Rime: Every syllable has two parts. The <i>onset</i> is the sound(s) that come before the vowel; the <i>rime</i> is the vowel plus the consonant(s) that follow. f - ish $squ - ishfr - esh$ $spl - ash$	Orally <i>cl</i> + <i>h</i> + (Note of <i>rim</i>	v blend the + ean = cle + am = han that rhym nes.)	e two piec ean m ning involv	es of a syl ves the ma	lable together. inipulation	
Phoneme: A phoneme is the smallest segment of sound that differentiates words in a language system.	Phone syllab eac kno hou	eme Coun bles as you ch = /ē/-/c ow = /n/-/ use = /h/-	iting: Say u raise a fi ch/ ō/ /ou/–/s/	all the sound al	unds in these ach sound.	
	Phone only s /p/- /ch /f/-	eme Blen say one sc -/ĕ/–/g/ (µ /–/ŏ/–/p/ -/r/–/ī/–/t/	ding: Say: ound at a t oeg) (<i>chop</i>) /-/ĕ/-/n/ (: "Listen. ⁻ ime. What <i>frighten</i>)	The robot can t's the word?"	
	Phoneme Segmentation: "Say <i>pan</i> ." (<i>pan</i>) "Say the sounds in <i>pan</i> ." (/p/–/ă/–/n/)					
		Phoneme Deletion: "Say <i>sleep</i> ." (<i>sleep</i>) "Now say <i>sleep</i> but don't say /s/." (<i>leap</i>)				
		Phoneme Substitution: $chose = /ch/-/\bar{o}/-/z/$ $those = /\underline{th}/-/\bar{o}/-/z/$ (one sound change) $these = /\underline{th}/-/\bar{e}/-/z/$ (one sound change) $threes = /th/-/r/-/\bar{e}/-/z/$ (two sound changes)			change) change) und changes)	
	Phone "Say "Now last."	eme Reve cat." (cat) say the la (tack)	ersal: ast sound	first and t	he first sound	

and phonetically accurate spelling, or achievement of Ehri's (2014) later alphabetic phase of reading development. Beyond first grade, however, these skills are not as useful as predictors as they occur earlier in development and lose their power to explain good and poor reading.

Advanced Phonemic Awareness

These skills continue to develop through about fourth grade in a normally progressing student. Advanced skills include the ability to substitute sounds for one another in a spoken word (e.g., "Change /v/ to /b/ in *revel*. What word?"), reverse the order of sounds (e.g., "Say *sigh*. Now say the last sound first and the first sound last. What word?"), and insert or delete sounds to make new words (e.g., "Say *croak* without /r/."). Pig Latin requires advanced phonemic awareness! Kilpatrick (2015) emphasizes that mental phonemic manipulations must be fast and automatic to support consolidated, automatic word recognition. Advanced phonemic awareness "appears to be needed for efficient sight vocabulary development" (Kilpatrick, 2015, p. 85). More will be said about this later in LETRS, as the process of sight word learning is explored.

Table 2.3 summarizes the ages by which phonological awareness skills are typically mastered by 90 percent of students, as documented by Lucy Hart Paulson (2004).

Typical Age	Phonological or Phonemic Skill	Sample Tasks
4	Responsiveness to rhyme and alliteration during word play	Enjoying and reciting learned rhyming words or alliterative phrases in familiar storybooks or nursery rhymes
5	Rhyme recognition, odd word out; production of learned rhymes or recognition of changes that don't belong	Which two words rhyme? <i>stair, steel, chair</i> Hickory dickory dock, the mouse went up the?
	Clapping, counting syllables	truck (1), airplane (2), boat (1), automobile (4)
	Matching words with the same first sound	Do <i>Mary</i> and <i>Martha</i> start with the same sound? Yes or no?
5.5	Distinguishing and remembering separate phonemes in a series	Showing sequences of single phonemes with colored blocks, such as /s/, /s/, /f/ or /z/, /sh/, /z/
	Blending onset and rime	What word? <i>th – umb, qu – een, h – alf, d – amp</i>
	Segmenting and pronouncing the initial sound of a word	Say the first sound in <i>shoelace</i> (/sh/), <i>sock</i> (/s/), <i>funnel</i> (/f/).

Table 2.3: Levels of Phonological Awareness (with Description of Tasks Often Used to Assess and Teach)

Typical Age	Phonological or Phonemic Skill	Sample Tasks
	(continuea	/)
6	Syllable deletion	Say <i>parsnip</i> . Say it again but don't say <i>par</i> .
	Deleting part of a compound	Say <i>cowboy</i> . Say it again but don't say <i>cow</i> .
	Onset-rime blending; beginning phoneme blending	/sh/–op (<i>shop</i>) /kw/–ēn (<i>queen</i>) /b/–ā <u>th</u> (<i>bathe</i>) /b/–/ā/–/t/ (<i>bait</i>)
	Phoneme segmentation, simple syllables with 2–3 phonemes (no blends)	Say each sound in the word as you move a chip for each sound: /sh/–/ē/, /m/–/ă/–/n/, /l/–/ĕ/–/g/.
6.5	Phoneme segmentation up to 3–4 phonemes, including blends	Say the separate phonemes while you tap the sounds: /b/–/ă/–/ck/ (<i>back</i>) /ch/–/ē/–/z/ (<i>cheese</i>) /k/–/I/–/ou/–/d/ (<i>cloud</i>)
	Phoneme substitution to build new words—simple syllables with no blends	Change the /j/ in <i>cage</i> to /n/. Change the /ā/ in <i>cane</i> to /ō/.
	Extracting and pronouncing beginning, final, and medial phonemes from one-syllable words	Say the last sound in <i>milk</i> . Say the vowel sound in <i>rope</i> .
7	Sound deletion, initial and final position	Say <i>meat.</i> Say it again without the /m/. Say <i>safe.</i> Say it again without the /f/.
	Sound substitution in words with 5–6 phonemes	Listen. What sound have I changed? <i>Shrink, shrank; square, squire</i>
8	Sound deletion, initial position, including blends	Say <i>prank</i> . Now say it again without the /p/.
9	Sound deletion, medial and final blend position	Say <i>snail</i> . Say it again without /n/. Say <i>smoke</i> . Say it again without /m/. Say <i>fork</i> . Say it again without the /k/.
	Phoneme reversal	Say <i>safe</i> . Say the last sound first and the first sound last. (<i>face</i>)
		Say <i>slack</i> . Say the last sound first and the first sound last. (<i>class</i>)
	Phoneme chaining	In a series of words that change only one sound at a time, use colored blocks to show addition, deletion, substitution, and resequencing of sounds from one word to the next.

	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Stops							
Unvoiced	/p/			/t/		/k/	
Voiced	/b/			/d/		/g/	
Nasals	/m/			/n/		/ng/	
Fricatives							
Unvoiced		/f/	/th/	/s/	/sh/		/h/
Voiced		/v/	/ <u>th</u> /	/z/	/zh/		
Affricates							
Unvoiced					/ch/		
Voiced					/j/		
Glides							
Unvoiced	/wh/					(/wh/)	
Voiced	/w/				/y/	(/w/)	
Liquids				/1/	/r/		

Because young students have difficulty feeling the presence of liquid consonants in words, these two sounds are often confused in student reading and spelling. Some languages have no liquids at all. Others, notably Cantonese and Japanese, have one liquid phoneme, pronounced like a combination of /l/ and /r/. Thus, words with liquids may be difficult for speakers of these Asian languages to articulate and they may substitute /l/ for /r/.

When liquids follow vowels, they either change the vowels or become part of the vowels. The r-controlled vowels—/er/, /ar/, and /or/—are being treated in LETRS as vowel units and therefore they are located in the vowel chart (*Figure 2.6* on page 120), not the consonant chart.

Syllabic Consonants

The liquids and nasals—including /l/, /r/, /m/, and /n/—can stand in for whole syllables when they occur at the ends of words of more than one syllable. In a word such as *button*, the last syllable is often pronounced like /n/. The vowel

Young students' early spellings often omit vowel letters from final syllables pronounced like /l/, /r/, /m/, and /n/. The spellings are phonetically accurate because there is no sounded, separate vowel sound in the final syllables. is there, but it overlaps with the consonant so much that a separate vowel segment is not heard or pronounced. In the abstract, there is a vowel in every syllable, but when the vowel is blended (coarticulated) with a consonant in a final unaccented syllable, in words such as *little* (/l/) and *better* (/r/), it becomes one sound spoken as one syllable. Of course, most of the time /m/, /n/, /r/, and /l/ are single consonants that are not syllables—as in *mystery*, *need*, *red*, and *laugh*.



Figure 2.6 English Vowel Phonemes by Order of Articulation

English Vowel Phonemes by Order of Articulation

The English vowels can be distinguished from one another by using the dimensions of tongue position (front, mid, back), tongue height (high to low), and lip shape (rounded and unrounded). The vowels can be contrasted by placing them between the consonants /b/ and /t/ (or a substitute when necessary) and forming a series of words (read down the columns):

Front Vowels	Low, Mid Vowels	Back, Rounded Vowels
beet	bot (tle)	bought
bit	but	boat
bate	[schwa, ə]	put
bet		boot
bat		butte (or beaut)
bite		
Diphthongs	r-Controlled	
boy	Bert	
bout	Bart	
	(a)bort	

Unit 2

To anticipate phonological

that Spanish-speaking ELs might

present in the classroom, begin with a comparison of the Spanish

If a speech sound of a second

and English phonological systems.

language is not in a speaker's first

language, that phoneme may be

difficult for him or her to identify,

pronounce, and manipulate.

substitutions and confusions

To anticipate phonological substitutions and confusions that Spanish-speaking ELs might present in the classroom, it is helpful to begin with a comparison of the

Spanish and English phonological systems. If a speech sound of a second language is not in a speaker's first language, that phoneme may be difficult for him or her to identify, pronounce, and manipulate in phonological awareness exercises. This is especially true when children do not hear the English language in their environments before they are one year old. Spanishspeaking ELs benefit from direct teaching of speech sounds in each language (August, Carlo, Calderón, & Proctor, 2005; Cárdenas-Hagan, Carlson, & Pollard-Durodola, 2007; Leafstedt & Gerber, 2005). Teaching both the sound and the feel of the sound helps students to "hardwire" these missing English phonemes in the phonological processing system.

Spanish Vowels

In Spanish, there are fewer phonemes (22) than in English (40+). The greatest difference between these language systems is the number of vowels. Spanish has five, while English has 18 vowel phonemes plus schwa. The five Spanish vowels (Figure 2.7) are easy to distinguish from one another and are represented with consistent spellings. In Spanish reading instruction, students are usually taught the vowel correspondences first.



Figure 2.7 Spanish Vowel Phonemes by Order of Articulation

Spanish words often have two or three vowels in a sequence. Each retains its identity. In some words, two adjacent vowels belong to different syllables: *fiesta*, *diablo*, *lea*. In some words, the adjacent vowels occur within the same syllable and are glided into one vowel sound: *cielo*, *muy*, *voy*, *puede*.

If all but five of the vowels in English are not part of a Spanish speaker's existing phonological system, then explicit and direct instruction in the English vowels and how they are articulated should be very helpful to the EL. If only five English vowels are part of a Spanish speaker's existing phonological system, then explicit and direct instruction in the other English vowels and how they are articulated should be very helpful to the EL. For example, the short vowel /ĭ/ in English is pronounced with the jaw more open and relaxed than /ē/. In addition, vowel pronunciation is slightly different even when vowels are shared between the languages; the Spanish /ō/, for example, does not glide like the long /ō/ in English.

Table 2.6: Spanish Consonant Phonemes by Place and Manner of Articulation

	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Stops Unvoiced Voiced	/p/ pera /b/ bueno baca			/t/ taza		/k/ que /g/ gato	
Nasals	/m/ mano			/n/ nido	/ñ/ año		
Fricatives Unvoiced Voiced		/†/ fiesta	/ <u>th</u> / pescado	/s/ silla zapato			/x/ <i>Mexico</i> (pronounced like hard /h/, as in <i>jicama</i>)
Affricates Unvoiced					/ch/ chile		
Glides Unvoiced Voiced	/w/ hueso				/y/ Ilama yo		
Liquids				/\/ limon	/r/ 'rio barro		

Early Phonological Awareness Activities (Pre-K or Beginning Kindergarten)

1. Read Aloud

Read books aloud with rhyme patterns and alliteration. Let students chime in and supply the rhyme or extend the alliteration.

2. Rhyme Judgment

Say: "Words rhyme if the last part of each word sounds the same. *Cake* and *bake* rhyme; so do *merry* and *cherry*. Listen while I say the poem, and get ready to say the rhyming word. 'Jack and Jill went up the <u>hill</u>.' What words rhyme?"

3. Rhyme Matching

Say: "Listen carefully. Rhyming Robot wants to find a match for each of his favorite words. If one of his favorite words is *shake*, which of these words can he have: *meat*, *steak*, or *corn*?" (*steak*)

4. Alliteration

- Say: "Peter Piper picked a peck of pickled peppers."
- Say: "Let's make a silly sentence with /n/ words. Neat Nancy . . ."

5. Syllable Blending

Say: "Silly Caesar speaks very slowly. What word is Silly Caesar saying?"

ta – ble	hos – pi – tal	tan – ger – ine
roll – er – blades	fire – truck	play – ground

6. Syllable Deletion

Say: "Let's play a game with words. We're going to break some long words into parts and leave a part out. If I say *toothpaste*, and then leave off the *tooth*, what's left? That's right: *paste*. Let's try some more."

What's baseball without ball?	What's <i>butterfly</i> without <i>butter</i> ?
What's paddleboat without boat?	What's Sunday without day?
What's power without -er?	What's telephone without tele-?

7. Syllable Counting

Say: "Inside this treasure chest are lots of things with names that you know. When it's your turn, reach in and take something out. Then tap the syllables as you say the word."

balloon	cricket	calculator	eraser
sharpener	stapler	candlestick	napkin

8. Initial Sound Matching

Say: "Let's see whose name starts with the same sound as someone else's name. They can stand together. *Tanya* and *Timmy*. What sound begins each of your names? That's right: /t/. Let's think of another name that starts with /t/."

Unit 2

9. Onset-Rime Division and Manipulation with Squares

a. Say: "Let's say some words in parts. I'll say the whole word. Then you say the whole word and divide it into two parts. Touch a colored square for each part, like this." Be sure to model the technique first.

c - ar sh - ip d - eskw - ave p - ie fl - at

b. Say: "If this says d - en, change it to p - en. Which square needs to change? If this says p - en, change it to p - eck. Which square needs to change?"

10. Rhyme Production

- Say: "Let's play a game. I'll say three words that rhyme and sound alike at the end. You say one more word that rhymes. It can be a silly word. Let's start: *hinky, pinky, slinky, ______*."
- Say: "Say a word that sounds like (rhymes with) star."

Basic Phonemic Awareness Activities (Grades K-1)

1. What Sound?

Say: "Say the word after me. We'll use a chip [or block] for each sound. *Pet.* What's the first sound?" (/p/) "The middle sound?" (/ \check{e} /) "The last sound?" (/t/)

2. Final Sound Matching

Say: "Listen while I say two words. If they end with the same last sound, repeat the sound."

moon, pen (/n/)
bridge, page (/j/)
witch, mash (two different sounds /ch/ and /sh/)
brick, steak (/k/)

3. Blending Phonemes

Say: "Listen. The robot can only say one sound at a time. What's the word?"

/p/_/ĕ/_/g/ /ch/_/ŏ/_/p/ /sh/_/ū/ /w/_/ē/

4. Initial and Final Sound Substitution

Say: "Let's see if we can make some new words by changing just one sound. If I change /b/ in *bat* to /r/, what new word do I have?" (*rat*) "If I change /w/ in *wag* to /t/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "If I change /l/ in *shell* to /f/, what new word do I have?" (*tag*) "I change /l/ in *shell* to /f/.

poodle, <u>n</u>oodle witch, wi<u>n</u> race, ray<u>s</u>*

5. Middle Vowel Substitution

- a. First, demonstrate moving same-colored chips to show the segmentation of the word. When the vowel changes, show which chip is changing.
- b. Say: "Now we'll make some new words by changing just one sound in the middle—the vowel sound. Here is *moose*: /m/–/ū/–/s). Let's change *moose* to *mouse*. Which sound is changed? Only the middle one right here—the vowel sound."

moon, man fawn, fin soup, sap boot, beet

6. Tracking Sound Changes with Colored Blocks (Beginning Sound Chaining) Give students five blocks or chips with four different colors (two blocks or chips will have the same color). Different sounds are represented with different colored blocks, but the blocks may represent any sound. Have students show

Occasionally, nonsense words or syllables must be used for transitions from one word to the next. These should be used sparingly for students learning English or students with poor vocabularies. Practice should use real words primarily. the sounds in each dictated word using the blocks. Add, change, delete, or switch the order of sounds in the dictated words, *one sound at a time*. For example, when changing *day* to *date*, have students add a third block of a different color.

Occasionally, nonsense words or syllables must be used for transitions from one word to the next. These should be used sparingly for students learning English or students with poor vocabularies. Practice should use real words primarily. For example:

- day, date, dot, pot, spot, spit, sit, sits
- me, mean, men, zen, zin, zip, chip, pitch, titch, stitch
- ouch, out, shout, shoot, shoes, use, dues, twos, stews

Note: This is not a spelling activity. Since sounds, not letters, are being tracked, words that differ only in one speech sound do not have to be spelled the same way. Words with digraphs and vowel team spellings, for example, can be used, because they represent one sound.

Beginning Change	Ending Change	Middle Change
knees, peas	dock, doll	tip, top
boat, note	room, rude	miss, mess
much, such	bath, bash	hope, hype

Advanced Phonemic Awareness (Grades 2-3 and Up)

1. Blending Longer Words

/l/-/ĭ/-/f/-/t/-/ĭ/-/ng/ /s/-/l/-/ă/-/k/-/er/ /f/-/r/-/ī/-/t/-/ĕ/-/n/

2. Longer Sound Chains

Have students use colored blocks to mark changes to several words in a row, including words with blends. Substitute, add, or delete sounds. Three more chains are illustrated below, in order of difficulty.

- Three Sounds: bit, bet, bat, sat, sit, mitt, mat, mad, sad, said, bed, bid
- One to Three Sounds: rake, ache, make, take, took, book, hook, hike, hi, I, my, mine
- Blend (CCVC, CVCC): train, rain, lane, lame, blame, claim, came, come, some, slum, slump, lump
- 3. Minimal Pairs (A minimal pair of words differs only in one speech sound.) Say: "Look at the word pairs that follow. Think of another word pair that contrasts the same two sounds. See if you can think of words that contrast in the beginning sounds, ending sounds, and/or medial sounds." An example of each is given.

/ā/, /ĕ/ (fail, fell)	/ĭ/, /ĕ/ (pin, pen)
/ŏ/, /aw/ (cot, caught)	/ou/, /oi/ (plow, ploy)
/f/, /v/ (half, have)	/1/, /ɪ/ (lock, rock)
	/ā/, /ĕ/ (fail, fell) /ŏ/, /aw/ (cot, caught) /f/, /v/ (half, have)

/y/, /w/ (yell, well)

4. Sound Deletion

- Syllable: "Say potato without the /po/."
- Initial sound: "Say peas without the /p/."
- Final sound: "Say sheet without the /t/."
- Initial blend: "Say stop without the /s/."
- Final blend: "Say wild without the /d/."

5. Sound Reversal

"Say fine. Say the last sound first and the first sound last." (*knife*) "Say tube. Say the last sound first and the first sound last." (*boot*) "Say ted. Say the last sound first and the first sound last." (*debt*) "Say safe. Say the last sound first and the first sound last." (*face*) "Say park. Say the last sound first and the first sound last." (*carp*)

6. Syllable and Affix Substitution and Deletion

"Say photograph. Change graph to cell." (photocell) "Say anytime. Change time to where." (anywhere) "Say naturalist. Now drop -ist." (natural) "Say invention. Now drop -tion." (invent)

7. Pig Latin

Make a sentence by removing the first consonant from each word, putting the consonant at the end of the word, and adding *-ay* to it (e.g., "Ello-hay, y-may, ame-nay, is-ay, teve-say" for "Hello, my name is Steve.").

Resource List 2.1 catalogues a few of the instructional handbooks and intervention supplements that teachers can use to supplement the major basal programs, or that can enrich intervention programs that have insufficient activities to promote phonological skill development.

Resource List 2.1: Handbooks and Supplementary Programs for Systematic Development of Phonological Skill

- Adams, M. J., Foorman, B. R., Lundberg, I., & Beeler, T. (1998b). *Phonemic awareness in young children: A classroom curriculum*. Baltimore, MD: Brookes.
- Blachman, B. A., Ball, E. W., Black, R., & Tangel, D. M. (2000). *Road to the code: A phonological awareness program for young children*. Baltimore, MD: Brookes.
- Dodson, J. (2008). *50 nifty activities for 5 components and 3 tiers of reading instruction*. Longmont, CO: Sopris West Educational Services.
- Heggerty, M. (2007). *Phonemic awareness: The skills that they need to help them succeed!* (6th ed.). River Forest, IL: Literacy Resources.
- Lindamood, P. C., & Lindamood, P. D. (2011). *The Lindamood phoneme sequencing program for reading, spelling, and speech* (LIPS) (4th ed.). Austin, TX: Pro-Ed.
- Nelson, J. R., Cooper, P., & Gonzalez, J. (2004–2005). *Stepping stones to literacy*. Longmont, CO: Sopris West Educational Services.
- O'Connor, R. E., Notari-Syverson, A., & Vadasy, P. F. (2005). *Ladders to literacy: A kindergarten activity book* (2nd ed.). Baltimore, MD: Brookes.
- Tyborowski, P., & Crosby, J. (2001). *Focus on /F/onemes: The complete phonemic awareness curriculum*. Worcester, MA: /F/onemes to Phonics.