

# Phonemic Awareness Guidance

*What do we currently know from research? How do we align practice?*

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## **WHAT IS A PHONEME?**

A phoneme is the smallest unit of speech that makes a difference in a word's meaning. A phoneme can be thought of as both the speech sound itself and the vocal gesture used to produce that sound. *For example, the word "sick" has 3 phonemes, /s/-/ɪ/-/k/, but the word "six" has four phonemes, /s/-/ɪ/-/k/-/s/. There are 3 phonemes in "ship", /sh/-/ɪ/-/p/, 4 in "clap", /k/-/l/-/ə/-/p/, and 2 in "sigh", /s/-/ɪ/.*

## **WHAT IS A GRAPHEME?**

In English, a grapheme is the written representation of a phoneme. In other words, a grapheme is the letter or letters that spell a phoneme. (long ī spelled <igh>, /th/ spelled <th>, /k/ spelled <c>, <k>, or <ck>, for example)

## **WHAT IS PHONEMIC AWARENESS?**

The awareness that spoken language is made up of sound units, called phonemes. This includes the ability to synthesize (blend), and analyze (isolate, segment, delete, add, substitute) phonemes within words, whether the words are spoken or written.

## **BUT I HEARD IT IS CALLED PHONICS IF WE USE LETTERS?**

Phonics is a method of instruction that teaches phoneme-grapheme correspondences. If you add in graphemes to phonemic awareness instruction, it is both a phonemic awareness lesson and a phonics lesson at the same time!

Recommendation from Research	Further Explanation	How to Align Practice
<p>Start training skills at the phoneme level.... yes, even in preschool and kindergarten, and yes, to all students!</p>	<p>English is morphophonemic, meaning speech is represented in print based on phonemes (single sound units, like /ch/ and /f/) and morphemes (meaning units, like suffix -ed). <i>There is not currently research that suggests students need to be instructed in other phonological skills, such as rhyming or syllables, in order to improve phoneme skills.</i></p> <p>Larger effects on outcomes are observed when the studies were completed in Preschool and Kindergarten, and were large when completed in early intervention for at-risk readers; although phonemic awareness instruction was still effective with older readers with deficits in foundational skills.</p> <p>Instruction in phoneme level skills show both low-SES students and mid-SES students improve phoneme skills at similar rates when instruction is given.</p> <p>Early intervention has better outcomes for reducing achievement gaps in phoneme level skills, decoding, and spelling.</p>	<p>If your curriculum includes phoneme level instruction but also other phonological levels (syllables, rhyming, etc), focus your instructional time on phoneme level skills.</p> <p>You do not need to spend instructional time on other phonological levels; instead use that time to do phoneme-grapheme mapping, word chains, or other phoneme level activities with students.</p> <p>Start early! If your program does not include phoneme level skills in PreK or K, make sure to add this into the reading block. Even in PreK and Kindergarten students can begin breaking down and putting together simple 2 and 3-sound words, with graphemes, to develop PA, reading, and spelling earlier than in typical practice when given explicit instruction.</p> <p>Use graphemes introduced in phonics. If graphemes are included in the instruction, say the sound the grapheme represents as a model or together with students as a scaffold to build phonics knowledge as well as students' phonemic awareness.</p>

<p>Teach one or two phoneme level tasks within a single lesson.</p>	<p>Although all types of studies instructing students in phonemic awareness significantly impacted students' phonemic awareness outcomes, studies with one or two phoneme level tasks improved phonemic awareness outcomes at a larger rate than studies that included many different phoneme level tasks.</p>	<p>You don't need to include many different tasks (isolation, categorization, blending, segmenting, deletion, addition, substitution) within a single lesson to be impactful. You can focus on modeling and scaffolding one or two tasks well each lesson.</p> <p>Beginning tasks could include isolating initial phonemes in a word. Words beginning with continuous sounds will be most easily mastered. Next, students move on to isolating final phonemes in a word. Then, segmenting 3 phoneme words (w-i-th or d-o-g). Finally, when students have mastered these processes, move to including words with blends in instruction (s-l-i-p or s-a-n-d).</p>
<p>Integrate letters (i.e., graphemes) into phoneme instruction!</p>	<p>Studies that taught phoneme skills while integrating letters (i.e., graphemes) had larger effects on phonemic awareness, decoding <u>and</u> spelling outcomes for at-risk and typical readers than studies that did not include graphemes in phonemic awareness instruction, although both types of studies had significant, positive results.</p> <p>Learning how to decode and spell using phoneme-grapheme correspondences increases a student's knowledge of phonemes along with their knowledge of graphemes.</p>	<p>The purpose of teaching phoneme awareness is to build the students' "phoneme hooks" in their brain, in order to "hang" the graphemes onto.</p> <p>Whenever possible, connect this work to the phonics scope and sequence within your program so that students connect graphemes and phonemes together.</p> <p>For greatest impact on student outcomes, include moveable letters or grapheme tiles during phoneme level instruction. For example,</p>

		<p>activities like word chains incorporate graphemes into phoneme substitution activities.</p> <p>While using letters is most effective, studies without letters still showed phoneme skill improvement. Therefore, oral phoneme games can be helpful also. Using these in the hallway, at recess, or to jump or move to can be fun while building skills in the early years.</p>
<p>Teach phonemic awareness in small groups when appropriate and possible.</p>	<p>Teaching phonemic awareness in small groups was found most effective as it allows the teacher to monitor student responses, provide positive, corrective feedback, and scaffold instruction as necessary for student success.</p> <p>Teaching phonemic awareness in whole groups or one-on-one was also found to be effective, just not <i>as</i> effective as small group instruction.</p> <p>A hypothesis as to why small groups were found more effective than one-one-one is that student responses are likely to scaffold understanding for other students within the group.</p>	<p>Small group instruction can allow you to differentiate phonemic awareness needs better. One group of students may be doing decoding, spelling, and manipulating with 3-sound words while another group is ready for 5-sound words.</p> <p>Assess students in their ability along the continuum of phonemic awareness.</p> <p>Can the student:</p> <ul style="list-style-type: none"> <li>● isolate beginning sounds?</li> <li>● isolate final sounds?</li> <li>● isolate medial sounds?</li> <li>● decode/spell/manipulate 3-sound words?</li> <li>● decode/spell/manipulate words with initial blends?</li> <li>● decode/spell/manipulate words with final blends?</li> </ul> <p>Group students at similar skill levels together.</p>

<p>Explicitly teach blending and segmenting.</p>	<p>Studies that included blending and segmenting tasks were associated with better outcomes in decoding and spelling than studies that worked on other phoneme level tasks.</p>	<p>Blending phonemes together is necessary for decoding. Segmenting phonemes in a spoken word is necessary for spelling. These foundational skills need to be mastered by students in order to enable decoding and spelling processes.</p> <p>When students decode words and when they spell words, encourage them to tie this work back to the sounds in words.</p> <p>Coach students to <u>blend</u> sounds together continuously to decode an unknown word (mmmmmaaaat).</p> <p>Coach students to <u>segment</u> each sound in a word as they spell it (i.e., as the child writes the word "sweet" she says, "/s/ /w/ /ee/ /t/").</p>
<p>Teach phonemic awareness in PreK, Kindergarten, and the first six weeks of 1st grade.</p>	<p>Studies found that phonemic awareness instruction lasting from 5 to 18 hours in total produced larger effects than shorter or longer programs.</p>	<p>If students are meeting decoding benchmarks, such as oral reading fluency, in mid-first grade, word-level instruction should focus on more complex phonics patterns, spelling patterns, and beginning morpheme instruction.</p>

From the National Reading Panel Report (2000), and confirmed by more recent studies:

“PA training was effective in boosting reading comprehension, although the effect size was smaller than for word reading. This was not surprising. PA instruction could be expected to benefit children’s reading comprehension because of its dependence on effective word reading. However, the NRP had not expected the effect to be as strong, given that the influence is indirect. Other capabilities influence reading comprehension as well, such as children’s vocabulary, their world knowledge, and their memory for text.

PA instruction helped all types of children improve their reading, including normally developing readers, children at risk for future reading problems, disabled readers, preschoolers, kindergartners, 1st graders, children in 2nd through 6th grades (most of whom were disabled readers), children across various SES levels, and children learning to read in English as well as in other languages.”

**BUT WHAT ABOUT DR. KILPATRICK’S PHONEMIC PROFICIENCY HYPOTHESIS OF THE IMPORTANCE FOR TEACHING ADVANCED PHONEMIC AWARENESS TASKS TO ORAL PROFICIENCY?**

Dr. Kilpatrick’s books, *Equipped for Reading Success* and *Essentials of Assessing, Preventing, and Overcoming Reading Difficulties*, as well as his numerous presentations around the US, have had a positive impact on the field of reading. His Phonemic Proficiency Hypothesis, specifically, is still a hypothesis in which most reading researchers would agree needs further study in order to determine validity. We look forward to seeing how researchers work out these cutting-edge questions in future studies. However, because there is not currently empirical support for Dr. Kilpatrick’s Phonemic Proficiency Hypothesis, we do not have evidence at this time to suggest teaching phonemic awareness tasks to oral proficiency or using only “advanced” phoneme tasks, such as deletion and substitution. On average, the studies that have used graphemes in phonemic awareness tasks have had larger effects on student learning than those that did not, and studies that included blending and segmenting had larger effects than those that did not, though both types had positive, significant effects on student outcomes.


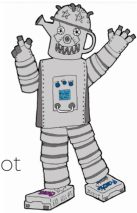

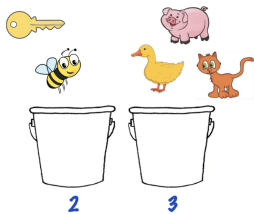


Dr. Ehri’s theory of Orthographic Mapping is a separate, empirically supported theory of how students map graphemes to phonemes in phonetically regular words as well as words with phonetically irregular parts within the brain. Dr. Kilpatrick translated much of her work on Orthographic Mapping and made it accessible to practitioners in his books and presentations. For examples of one way the theory of orthographic mapping translates to classroom instruction, see Really Great Reading’s free Heart Word Magic videos: <https://www.reallygreatreading.com/heart-word-magic>

## References

National Reading Panel, 2000: <https://www.nichd.nih.gov/sites/default/files/publications/pubs/nrp/Documents/report.pdf>

Brady, Susan (2020). A 2020 Perspective on research findings on alphabetics (phoneme awareness and phonics): Implications for instruction (Expanded Version). The Reading League Journal: <https://www.thereadingleague.org/wp-content/uploads/2020/10/Brady-Expanded-Version-of-Alphabetics-TRLJ.pdf>

# Examples of Phonemic Awareness & Decoding Activities

<p>Activity to Improve Phonemic Awareness</p>		<p>Other Programs</p>																																	
<p>Play with Phonemes</p>	 <p>Robby the Robot</p> <p><b>Script for Lesson #5</b></p> <p>Instructor: Today, we'll start by saying some of the same words we've practiced before. Listen to the sounds that Robbie will say and tell me what words they make.</p> <p>a-t      i-f      v-e-t      m-o-p      s-a-t      r-o-b f-a-s-t    s-l-l-p    s-n-a-ke    l-o-s-t    f-r-o-g    m-a-s-k</p>	 <p>Segmenting</p> <table border="1"> <thead> <tr> <th>Skills</th> <th>Monday</th> <th>Tuesday</th> </tr> </thead> <tbody> <tr> <td><b>Segmenting Phonemes</b></td> <td>row</td> <td>sack</td> </tr> <tr> <td>Teacher says the word. Students repeat the word and segment it into phonemes.</td> <td>see</td> <td>name</td> </tr> <tr> <td></td> <td>show</td> <td>peace</td> </tr> <tr> <td></td> <td>tea</td> <td>bike</td> </tr> <tr> <td>Ex. T: may, S: may, m-4</td> <td>bōw</td> <td>home</td> </tr> <tr> <td></td> <td>my</td> <td>cub</td> </tr> <tr> <td></td> <td>fee</td> <td>peg</td> </tr> <tr> <td></td> <td>tie</td> <td>hit</td> </tr> <tr> <td></td> <td>knee</td> <td>sob</td> </tr> <tr> <td>*Students say sounds, not letter names</td> <td>foe</td> <td>love</td> </tr> </tbody> </table>	Skills	Monday	Tuesday	<b>Segmenting Phonemes</b>	row	sack	Teacher says the word. Students repeat the word and segment it into phonemes.	see	name		show	peace		tea	bike	Ex. T: may, S: may, m-4	bōw	home		my	cub		fee	peg		tie	hit		knee	sob	*Students say sounds, not letter names	foe	love
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? [ h ] [ e ] [ l ] [ p ] [ ] [ ] [ ] ↻

a	b	c	d	e	f	g
h	i	j	k	l	m	n
o	p	q	r	s	t	u
v	w	x	y	z		



? [ sh ] [ ee ] [ p ] [ ] [ ] [ ] ↻

Consonant	ch	ph	th	wh	a	b	c	d	e	
Digraphs					f	g	h	i	j	
R-Controlled	ar	er	ir	or	ur	k	l	m	n	o
Vowels	ai	au	aw	ay	ea	p	q	r	s	t
Vowel Teams		igh	oa	oo	ow	u	v	w	x	y
Diphthongs	oi	ou	ow	oy	z					
Other	ck	ed	ing	ng	nk					

In the box are nine words. Print them on the lines.

moon    tooth    Core Knowledge  
 roots    loop    spoon    tools  
 food    boots

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\_\_\_\_\_

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? [ s ] [ l ] [ ee ] [ p ] [ ] [ ] [ ] ↻

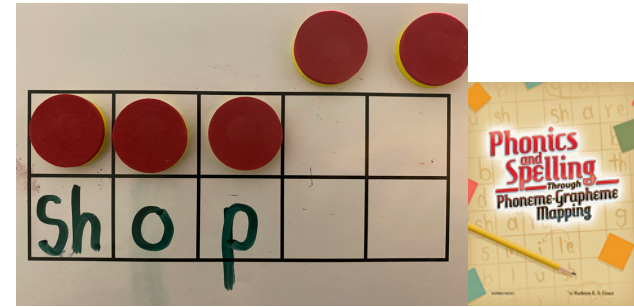
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EBLI

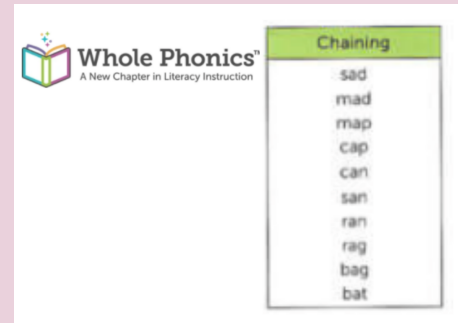
attention    a tten tion  
 refresher    re fasher  
 supplying    su pply ng  
 paramedics    par a m  
 ambulance    am bu lance  
 scheduled    sche du led  
 terrifying    terr i fy ing

Write a Word  
(encoding/  
segmenting)

## Regular Word Spelling



Manipulate Sounds in  
Words  
(manipulating/paired  
contrasts)



h e l p

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a b c d e f g h i j k l m  
n o p q r s t u v w x y z

**Reading SIMPLIFIED**

LETTER SOUNDS

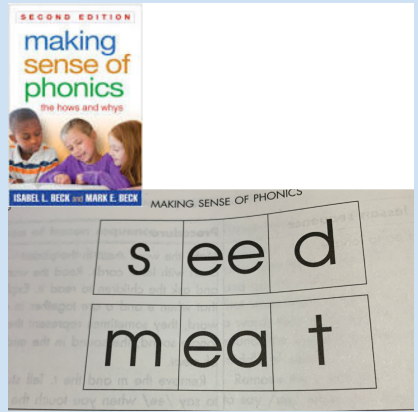
i e o f m s sh ck

s t a n d

f l e d

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a b c d e f g h i j k l m  
n o p q r s t u v w x y z



s t a m p

---

a b c d e f g h i j k l m  
n o p q r s t u v w x y z

*Shifting the Balance: 6 Ways to Bring the Science of Reading into the Balanced Literacy Classroom* by Jan Burkins & Kari Yates

Phonetic Skill Focus	Example Word Chain Sequences
Changes to only beginning consonant	cat → hat → bat → fat → rat
Changes to beginning and ending consonant	cat → cap → map → mat → man
Changes to medial vowel	rid → rod → mad
Changes to initial consonant blends and medial vowel	sap → slap → lip → mip → map → nap
Alternating between simple initial consonant and initial consonant digraph	cat → chat → hat → hat
Changes to initial consonant, final consonant digraph, and medial vowel	math → mash → cash → dash → wish → with
Alternating between short vowel (CVG) and long vowel (CVCe)	cap → cape → ape → tape → tap → tub → tube

## THE BIG TAKEAWAY?

Engaging in phonemic awareness tasks that include the presence of graphemes as early as Pre-K assists students' understanding that words are made of sounds, and that those sounds are represented by letters.  
This lays the foundation for students to become accurate and automatic readers.

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