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Phonological Awareness

A Critical Foundation for Beginning Reading

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Andrew's family loved playing word games and reading books to Andrew and his younger brother. One day when Andrew was 3 years old, he asked his mom for a cookie. She replied, "I'm sorry Andrew, we don't have any cookies, but I can give you a banana." Andrew paused for minute, looked up at his mom, smiled, and said, "Okay, I'll have a banana fofana!"

It is likely that you have similar memories or family stories from growing up. Making up words or even languages such as pig Latin[1] were favorite pastimes. Explicit instruction in manipulating sounds (phonemic awareness) is crucial for learning to read and spell effectively and efficiently. In fact, knowledge of phonemic awareness is an essential skill for learning to read in all alphabetic languages. Phonemic awareness supports reading even in languages, such as Spanish, in which syllables are more often the basis of oral language. Therefore, when young children have early experiences with phonemes in Spanish and other languages, their phonemic awareness ability transfers to English and makes learning to read and write in English easier.[2]

In the vignette above, Andrew's comment showed that he was developing an awareness of playing with words, that words can rhyme, that he could make up words, and that it was fun! His ability to rhyme and his awareness about initial sounds in words are in stark contrast to many of the young students with whom you will work during your teaching career, children for whom this awareness does not develop so easily. Andrew is developing phonemic awareness, a skill critical for learning to read and write.

This chapter addresses the most effective ways to assess and teach overall *phonological awareness*, and the discrete skill known as *phonemic awareness*.

Objectives: After studying this chapter, you will be able to do the following:

1. Explain and provide examples of phonological awareness.
2. Explain and provide examples of phonemic awareness.
3. Identify the number of syllables and phonemes in words.
4. Explain the stages of phonological awareness.
5. Model a routine to teach phonemic awareness.
6. Assess a child's progress toward developing phonemic awareness.
7. Plan general and intervention instruction in phonemic awareness.
8. Teach the student whom you are tutoring to segment and blend three phoneme words.
9. Evaluate the progress of your student and plan a follow-up lesson.
10. Explain to parents the role of phonemic awareness in identifying students with dyslexia.

WHAT IS PHONOLOGICAL AWARENESS? WHAT IS PHONEMIC AWARENESS? WHY ARE THESE SKILLS IMPORTANT? WHAT DOES THE RESEARCH SAY?

Both phonological and phonemic awareness are related to *phonology*, defined as the sound system of language. It may help you to think about a phone as a key word to cue you to remember that phonemes are speech sounds. (The morpheme *phone* refers to sound.) Phonological and phonemic awareness are initially taught only with sounds, no print. Children can learn to discriminate (hear and process) individual sounds in words with their eyes closed!

This chapter describes how to systematically introduce phonological skills in a continuum, from easy to more difficult, to increase your students' reading achievement. Knowing how to teach phonological awareness explicitly is vital given research findings about the importance of this skill for beginning reading achievement. To be an effective teacher, you need to be knowledgeable about why and how to scaffold instruction for children who struggle to develop phonological awareness.

Phonological Awareness and Phonemic Awareness: What is the Difference?

The term *phonological awareness* refers to a global awareness of large chunks of speech.[3] Phonological awareness encompasses an awareness of rhyming and alliteration, the number of words in a sentence, syllables within words (e.g., *cupcake* is made up of *cup* and *cake*), and onset and rime. The onset of a one-syllable word is the beginning consonant(s), and the rime is the vowel and all that comes after (i.e., *dog* begins with /d/, the onset, and ends with /og/, the rime).

Phonemic awareness is the ability to think about, combine, or segment *individual* sounds in speech. This understanding of individual sounds, or phonemes, undergirds the ability to read.[4] This discrete set of skills helps children understand that a word like *dog* can be separated, or segmented, into three individual sounds: /d/ /o/ /g/, and that, inversely, these three sounds can be combined, or blended, into a single word, *dog*. One day when testing a kindergartener early in September, his teacher asked him to tell her the sounds in *dog*, and he answered "woof-woof." Clearly, he did not yet know how to attend to the qualities of the individual sounds in the word, rather than the literal meaning of the word. This student needed intensive instruction to develop phonemic awareness.

Figure 4.1 is an illustration of the continuum of phonological skill development, beginning with oral language and listening skills. Typically, the skills are taught following this sequence, though children may be exposed to several stages at a time. Do not wait, for example, for a child to master rhyming before you introduce syllable segmentation. Examples of how to provide instruction in each stage are discussed later in this chapter.

There is an extensive research base that has shown *why* the concept of phonemic awareness is a vital step in understanding how children learn to read and to spell. This research base describes important pathways for how phonemic awareness undergirds early reading development[5] and spelling development.[6] Phonemic awareness supports development of the alphabetic principle, or letter–sound correspondence.[7] Unless students can hear the individual sounds in words and can blend them together, it will be difficult for them to decode, or sound out, words. Therefore, phonemic awareness plays an important role in *fast mapping*, or the process children develop of forming grapheme–phoneme (i.e., letter–sound) representations for words in their memory.[8] (Some people also use the term phoneme-grapheme correspondences for this concept of letter–sound connections.)

Thus, through fast mapping, phonemic awareness supports the ability to decode unknown or novel words through phonetic decoding. It is not, therefore, surprising that the National Early Literacy Panel reported important predictive relationships between very young children's phonological awareness and decoding and between phonological awareness and spelling.[9] Similarly, the National Reading Panel found that the most effective phonological

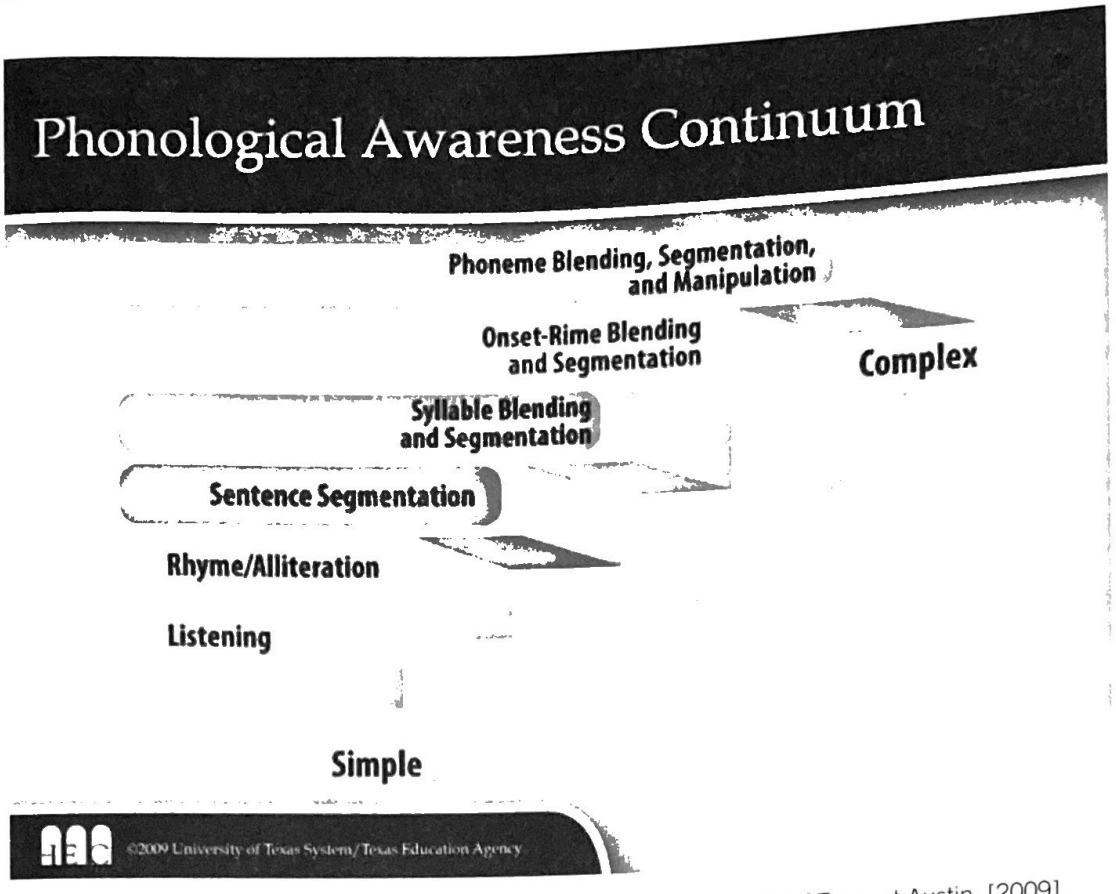


Figure 4.1. Phonological awareness continuum. (From Vaughn Gross Center at The University of Texas at Austin. [2009]. Module 4: Phonological awareness. In *Foundations of reading instruction presentations and print files.* Austin, TX: Vaughn Gross Center [Texas Reading First Higher Education Collaborative]; reprinted by permission.)

awareness instruction incorporated letter–sound work (Box 4.1).[10] The ability to translate print to speech, phonological recoding, is dependent upon phonological skills and is necessary for learning to spell (orthographic learning).[11]

Interestingly, the failure to develop phonological processing skills (which includes phonological and phonemic awareness) is the primary correlate of dyslexia. Students with dyslexia typically have a history of not being successful segmenting and blending phonemes (sounds) to form words. In fact, one component of a dyslexia evaluation is a phoneme awareness test. And as the research above suggests, students who do not have intact phonemic awareness skills struggle to learn letter–sound correspondences or phonics. Also, word recognition is poor. These students tend to read slowly, and their comprehension is negatively impacted. So what may have started out as a phonemic awareness problem in a young child ends up, unless identified and remediated early, affecting reading comprehension and, in most cases, spelling as well. It is important to note that dyslexia frequently occurs with language

BOX 4.1. A large amount of research has demonstrated that explicit training of phonological and phonemic awareness leads to stronger phonological outcomes and to stronger reading and spelling outcomes, too.[9,10]

impairments and attention deficit/hyperactivity disorder. Recent research considers dyslexia as a developmental disorder the severity of which may depend upon co-occurring conditions and other factors.[12] Though students with dyslexia may also have other conditions such as attention deficits and oral language impairments, the majority of students with dyslexia have phonological deficits that must be addressed.

WHAT PHONOLOGICAL SKILLS SHOULD STUDENTS KNOW AT VARIOUS GRADE LEVELS?

Preschool children who have had early book reading experiences with family members and early childcare providers will likely have an awareness of rhyme and alliteration. Children as young as 3 years old are typically aware of when words rhyme and begin with the same letter, such as the alliteration in "busy bees buzz." Consider the earlier example that was provided about Andrew. By age 3, he was making up a word based upon his knowledge of how to combine chunks of sounds, in his case syllables, to make up a word (i.e., *banana* and *fofana*). Children who are read to frequently, or who watch educational media that emphasize reading, may be aware of initial sounds in words that start with the same sound. Andrew's brother, Thomas, was very proud that he shared his name with the ever-popular Thomas the Tank Engine, a book series that features alliteration in the title including two words that start with the /t/ sound: "Thomas" and "Tank."

By around 4 years of age, most children who have book reading experiences will be able to fill in the blank when a parent or teacher reads to them and pauses at the end of a line such as: "Brown bear, brown bear, what do you **see**?"[13] They likely will have heard and sung simple songs or recited nursery rhymes that incorporate rhyme, such as "Twinkle, twinkle little **star**, how I wonder what you **are**." Some children appear to learn these early phonological skills incidentally, without direct instruction but through exposure as they listen and then as they fast map or connect sounds to words.

By the end of kindergarten, children should have mastered phonemic awareness. They should be able to segment and blend the individual sounds in one-syllable words. Once they can segment three- or four-phoneme words into individual phonemes, you can be assured that they have mastered this concept, and you no longer have to address it on a daily basis. Next, children will begin to use this knowledge to support decoding and encoding (spelling) of real words.

However, some children will continue to need instruction in phonemic awareness in first and second grades, sometimes even later. A substantial number of young children, particularly children who have had less exposure to print associated with growing up in poverty or who may be at risk for reading difficulties, will need explicit and systematic instruction in order to master these concepts. You will want to closely monitor children for phonological weaknesses, particularly those with speech and language impairments and children who are learning English as a second language. Still other children just seem to struggle to hear and manipulate sounds in words; some may have a family history of dyslexia or learning disabilities, but, for others, it may seem surprising or unexplainable. Whatever the cause, it is essential these young students receive specialized instruction (remediation) to prevent or ameliorate potential reading disabilities.

You will need to model and explain in child-friendly terms to your students how to rhyme, pronounce sounds, match first sounds, segment, and blend sounds. Your students may be instructionally naïve or struggling to develop this awareness and may be at high risk for reading disabilities. Your systematic, explicit instruction in phonemic awareness will make a tremendous difference in whether these struggling students learn to read and spell.

Here are a few examples for delivering explicit instruction:

"Listen carefully while I say the first sound in Thomas; /t/."

You will also need to know how to follow modeling with guided practice:

"Our turn, let's try one together; let's say the first sound in 'Thomas' together after I tap my finger. Ready? (Tap) /t/."

In addition, you will need to know how to test for understanding and provide independent practice:

"Your turn to tell me the first sound in Thomas." "Does it sound the same as the /t/ in 'tank' "?

At the start of kindergarten, you will find considerable variability in students' skills, and that variability may be associated with a lack of exposure to these concepts. Through instruction that is systematic and explicit and at the students' instructional level, students can learn these skills. For example, you will notice which children can learn to identify the first sound in their own name, and then you teach them to hear the onset and rime and begin to blend and segment chunks of speech at the onset–rime size. For example, if asked what animal sounds like /g/ /oat/, they could answer "goat." By the end of kindergarten, optimally, most children, will be able to blend and segment one-syllable words with two, three, and four phonemes.

At the start of first grade, as students learn to read, these blending and segmenting skills help students learn to sound out words. By the end of first grade, some students may learn to manipulate sounds and be able to know that "cowboy" without the "cow" leaves "boy"; but complex phonemic skills, such as understanding that "tack" pronounced backwards is "cat," may not develop until later.

For many children, including children with learning disabilities, these phonological skills do not develop so easily or efficiently. Given the strong and significant correlation between the ease at which students master these emerging phonological skills and their subsequent reading and spelling development, it is important for teachers to know how to assess phonological skills and recognize when to be concerned about a child's progress.[14] It is particularly challenging to distinguish an early lack of exposure from true difficulties in hearing and manipulating sounds in words. Therefore, teachers should know how to screen for weaknesses, how to determine who needs intensive small group intervention, and how to monitor students' response to the intervention instruction.

HOW DO YOU ASSESS THE ACQUISITION OF PHONOLOGICAL SKILLS?

As a teacher, you will learn to have an eye and an ear poised to informally collect data about your students' acquisition of phonological skills. In time, you will have enough experience to say to yourself, "Should I be worried? Why is this child on my radar screen?" Your inner dialog might sound something like the following:

"Hmm, it is winter and I am worried about Selina, who is 5 and a half now. She started kindergarten having some problems pronouncing and remembering her classmates' names that seemed unusual relative to her peers'. She seems to persist in confusing blends as when she asked for 'psgetti' rather than spaghetti, even when corrected."

Your next bit of data might come from observing her more carefully in a small group book reading that might uncover more concern; for example:

"Uh-oh, Selina is much less sensitive to rhyme and can't tell me the first sound in her own name. I think I had better do some assessments to look into this more systematically."

Fortunately, there are many measures of phonological skills so it is important for you to select an assessment or assessments that will help you "piece" together a picture of a student's strengths and weaknesses. These include both criterion-referenced and norm-referenced assessments. The purpose of norm-referenced tests is to provide a standard score and a percentile that allows you to compare a child's performance to other students her age or in her grade based upon a large national sample. Examples of norm-referenced tests that assess various phonological skills include the Comprehensive Test of Phonological Processing[15] (for children aged 5 and older) and the Test of Preschool Early Literacy.[16]

In contrast, the purpose of criterion-referenced tests is to help you determine whether a child has mastered a specific skill. Many districts use benchmark assessments several times a year. These are a type of criterion-referenced test because the tests measure an individual student's mastery of specified criteria, generally material that has been covered in the classroom.

Universal screening assessments are a type of criterion-referenced assessment and are designed to be teacher friendly so that you can quickly administer them to all children in your class several times per year. The screening assessments help you determine which students are achieving as expected and which are at risk in specific components of reading. Most states require that teachers in K–2 administer universal screening assessments to identify children who are at risk for having reading difficulties.

Progress monitoring assessments are quick checks of student mastery of specific skills and can be used frequently (perhaps once a week) to learn whether students are improving their skills and responding to your instruction. Some examples of criterion-referenced tasks that you can use for progress monitoring include the alliteration or rhyming tasks from the Individual Growth and Development Indicators (IGDIs; 2001),[17] suitable for children ages 3–5 and available from http://ggg.umn.edu/get/procedures_and_materials/Alliteration/index.html. [18] Assessments that are designed for students in kindergarten and first grade include the Initial Sounds Fluency from the Dynamic Indicator of Basic Early Literacy Skills (DIBELS)[19] and the Phonological Awareness Literacy Screening (PALS; http://pals.virginia.edu).[20]

HOW DO YOU USE ASSESSMENTS TO PLAN INSTRUCTION?

Phonological skills do develop rather hierarchically, and you can use your assessment data to plan instruction in order to target areas of weakness. Your data can guide you as you think about grouping students for instruction. For example, you might work with a homogenous group of students who are all struggling to blend onset and rimes (i.e., /m/ /an/ combines to make *man*). While you do so, you might have center time set up with children grouped heterogeneously (mixed abilities) so that the students who have strengths in blending could assist their partners. You know that the ability to segment and blend onset rimes will support phonemic awareness, the next critical skill in phonological awareness.

Note: Throughout this chapter, letter sounds will be denoted between slashes, like this: /a/. Words used as examples will be in italics, *like this*. The phonetic alphabet or dictionary system will be used to illustrate sounds, not the International Phonetic Alphabet (IPA). The IPA represents all the sounds of all the world's languages, and it is too detailed for our purposes at this time.

HOW DO YOU TEACH PHONOLOGICAL AWARENESS EFFECTIVELY, EFFICIENTLY, AND IN A MANNER THAT IS APPROPRIATE TO STUDENTS' AGE AND GRADE LEVEL?

Given the variability in student skills, it is vital for you to understand what instructional strategies are at an appropriate phonological level (i.e., syllables, onset–rime, individual phonemes) to best scaffold phonological awareness instruction to meet your students' diverse needs.[21] Extensive research has concluded that knowledge of phonemic awareness is a strong predictor of which students will learn to read easily and that explicit instruction in phonemic awareness is effective in improving students' achievement.[22]

Knowing that it is important to teach phonological awareness, you will want to do so in a manner that is effective, efficient, and age appropriate. For many of you, you may need to learn to correctly pronounce phonemes, or sounds, yourself. In far too many classrooms, teachers incorrectly add a schwa or "uh" sound to consonant sounds. For example, Mrs. Smith might

say that the sounds in "cat" are /kuh/ /a/ /tuh/ instead of correctly pronouncing /c/ /a/ /t/ (Table 4.1).

As you select phonemes to teach, keep in mind that just as some letters are visually confusing (such as *b* and *d*, which may easily be reversed), sounds may be confusing because the sounds may be pronounced (articulated) in the same part of the mouth and sound similar. For example, if you say *fox* and *victory* the first sound is pronounced in the same part of your mouth because /f/ and /v/ are voiced and voiceless pairs. Another voiced and voiceless pair is the /p/ in *pat* and the /b/ in *bat* (see Table 4.2). You can hear the voiced/voiceless difference

Table 4.1. Guide to pronunciation of English sounds

Sound	Key word	Most frequent spelling	% of the time	Other spellings
/ĭ/	it	i	66%	y
/t/	tip	t	97%	tt, ed
/p/	pig	p	96%	pp
/n/	nose	n	97%	nn, kn, gn
/s/	see	s	73%	c, ss
/ă/	at	a	96%	ae
/l/	lip	l	91%	ll
/d/	did	d	98%	dd, ed
/f/	fly	f	78%	ff, ph, lf
/h/	him	h	98%	wh
/g/	get	g	88%	gg, gh
/ŏ/	on	o	79%	aw, augh, ough
/k/	kit	c	73%	cc, k, ck, lk, q
/m/	man	m	94%	mm
/r/	rat	r	97%	rr, wr
/b/	bin	b	97%	bb
/ĕ/	elm	e	91%	ea, e_e
/y/	yet	y	44%	I
/j/	jar	g	88%	j, dg
/u/	us	u	92%	o, ou
/w/	wet	w	92%	u
/v/	vet	v	99.5%	f (of)
/z/	zoom	z	23%	zz, s
/th/	that	th	100%	--
/ch/	chill	ch	55%	t
/sh/	shop	sh	26%	ti, ssi, s, si, sci
/zh/	sure	si	49%	s, ss, z
/hw/	wheel	wh	100%	--
/ng/	song	n	41%	ng
/oi/	boil	oi	62%	oy
/ou/	house	ou	56%	ow
/oo/	soon	oo	38%	u, o, ou, u_e, ew, ue
/oo/	book	oo	31%	u, ou, o, ould
/ā/	aim	a	45%	a_e, ai, ay, ea
/ē/	ear	e	70%	y, ea, ee, ie, e_e, ey, i, ei
/ī/	ice	i_e	69%	i, igh, u, ie, y_e
/ō/	oat	o	100%	o_e, ow, oa, oe
/yoo/	use	u	69%	u_e, ew, ue
/th/	the	th	100%	--
/ô/	ball	o		a, au, aw, ough, augh
/û/	bird	er	40%	ir, ur
/ä/	car	a	89%	aw, aa, ah
/a/	alarm	a	24%	e, i, o, u
/â/	chair	a	29%	are, air

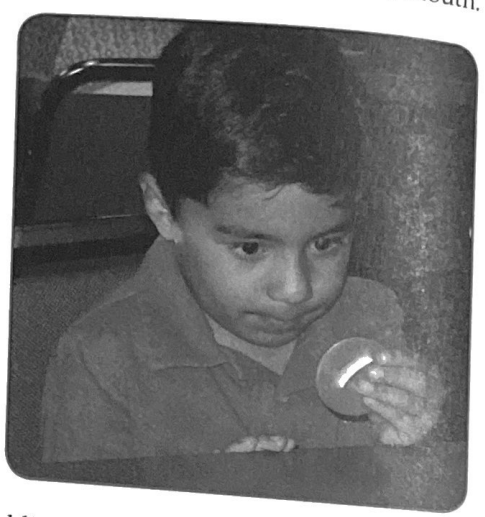
Source: *Research-Based Methods of Reading Instruction Grades K—3 (p. 36-37)*, by Sharon Vaughn & Sylvia Linan-Thompson. Alexandria, VA: ASCD. © 2004 by ASCD. Adapted with permission. Learn more about ASCD at www.ascd.org

Table 4.2. Voiced and unvoiced letter sounds

Voiced	Unvoiced
/b/	/p/
/v/	/f/
/d/	/t/
/z/	/s/
/k/	/g/
/th/ (this)	/th/ (think)
/zh/	/sh/
/j/	/ch/

in at least two ways. First, you can put two fingers gently on your Adam's apple as you say these words. Second, you can cover your ears and feel that the sound /b/ in *bat* has more of an explosion in your head. Keep in mind the guiding principle: teach the sounds that are similar at least 3 weeks apart, and when you do teach them, teach how the sounds differ. Explicitly model how the formation of the mouth is different for individual sounds, where the tongue is placed, whether or not the mouth is open or closed, and if the sound is voiced or unvoiced.

For example, think of the short vowel /ĕ/, as in *Ed*. Look in a mirror and say /e/. Notice how your mouth forms a tight smile, similar to how a horse looks with a bit in its mouth. All these associations help students distinguish the sound of /ĕ/ from /ĭ/ and other vowel sounds. Louisa Moats has a helpful demonstration of the way the mouth forms various sounds. The Speech Sounds of English video is available from http://store.cambiumlearning.com. You can watch an abbreviated video of Dr. Moats working with a kindergarten teacher pronouncing letter sounds at http://www.readingrockets.org/teaching/reading101/soundsofspeech.[23]



You will also use your informal classroom observations and formal assessment data to help you know what level of phonological awareness children have mastered in order to provide instruction at the "just right" level in the phonological hierarchy of skills. This notion of "just right," which is akin to the Goldilocks principle, is essential in scaffolding instruction. In other words, if the activity is too easy, a child may be bored; if it is too difficult, a child may not be able to complete the task and may become frustrated. Instruction might just be right.

One group of children (with weaker skills) may sort objects or pictures into only two categories: words that start with /sss/ or words that start with /mmm/. (So, Sally might be the "boss" of all things that start with /sss/, and Mary might be the "boss" of all things that start with /mmm/.) Another group might be sorting pictures into four or five categories, such as those words with the same initial sound, final sound, medial sound, or by number of phonemes. Another group of children might be playing a more open-ended game like an "I spy treasure hunt" in the classroom. "I spy with my eye something starting with /p/—what is it?"

BOX 4.2. A good place to start is to teach children to sort words by starting sounds. This concept should involve activities that address a continuum from easier to more difficult skills.

Their objective would be to find as many things (paint, pencil, paper, etc.) in the classroom that start with the target sound.

Prominent researchers in the area of phonological awareness consistently recommend using a systematic and explicit direct instruction approach, which leaves little to chance.[24] You should clearly state in your lesson plan the objective for your instruction in measurable terms. In other words, "By the end of this week, Selina will correctly blend all five of the following words when presented orally in onset rime (/c/ /at/; /d/ /og/; /g/ /oat/; /b/ /ear/; and /b/ /ug/)." Of course, you will want to sequence your phonological skills from easiest to more difficult so the first steps will involve larger chunks of words, such as the onset rimes rather than individual phonemes, and you can provide pictures to support the memory of the animals. Your lesson plans should also include a cycle of scaffolding that includes modeling (I do), guided practice (We do), and finally independent practice (You do).[25] This cycle includes multiple exposures for practice and cumulative review, and the last step allows you to monitor and give immediate corrective feedback to ensure mastery.

Foorman and Torgesen[26] argued persuasively that small group instruction is a better vehicle for systematic instruction than a whole class setting because interventions can be more targeted, or individualized, to the students' needs. You can group your students homogenously so that groups have similar levels of skills (revisit Figure 4.1). That way, your students will not only learn, but also practice skills, at the "just right" level.

Catts (1995)[27] offers guidance about what makes activities, or tasks, easier or more difficult. The first factor related to difficulty is now familiar to you; it is the **size of the spoken sound(s).** The bigger the chunk of text, the easier it is to segment, blend, or delete. For example, it is much easier to blend *cow* and *boy* to make *cowboy* than it is to blend the /c/ and /ow/ to make *cow.*

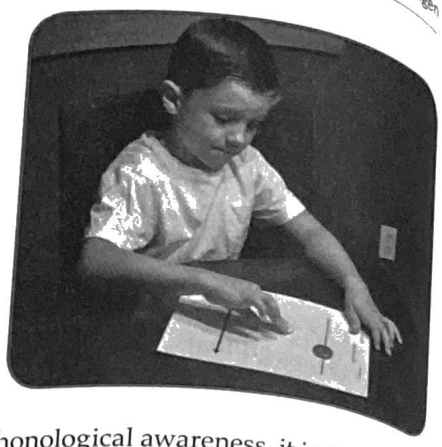
The second factor should also be familiar; it is the **complexity of the linguistic skill** required. As you see in the phonological continuum in Figure 4.1, manipulating phonemes is the hardest task because it requires more memory. For most children, rhyming is the easiest. For example, it is challenging to think that *tack* said backwards is *cat*: it is much easier to rhyme *cat* and *hat.*

The third factor that makes an activity more difficult is the **number of units in the word**. For example, you are when teaching phonemic blending and segmenting, it is easier to segment a two-phoneme word such as *at* /a/ /t/, than a five-phoneme word, such as *scratch* /s/ /c/ /r/ /a/ /tch/. A silly example of a very challenging syllabic segmentation task would be to segment the word *supercalafragalisticexbealadocious.* That is obviously much harder than to segment the syllables in *popcorn* or *birthday.* So, how many syllables are there in that long word above? There are 14 syllables in /su/ /per/ /cal/ /a/ /frag/ /a/ /lis/ /tic/ /ex/ /be/ /al/ /a/ /do/ /cious/.

A fourth factor that impacts task difficulty is the **position of the sound within a word**. It is developmentally easiest to hear the first sound in a word, next is the last sound, and most challenging is the medial sound. Of course, hearing the individual sounds within a blend, as in the /s/ /t/ /r/ in *street,* is also complex.

A fifth factor that impacts difficulty of blending, and segmenting particularly, is whether the **sound is a continuous or is a stop sound.** Continuous sounds may be held or hummed (e.g., the /mmm/ or /sss/ sounds), whereas a stop sound may not (e.g., /t/ or /c/). So you can see for yourself that it is easier to blend continuous sounds like the /mmm/ /aaa/ /nnn/ than it is to blend /t/ /o/ /p/. Say each sound in *man* as you hold up a finger; then close your three fingers as you blend them together to pronounce the whole word *man.* Now try *top.*

BOX 4.3. The National Reading Panel found that phonemic awareness training combined with letter–sound training was most effective.[28]



Because working with sounds requires a child to remember the sounds and may tax short-term memory, the last factor that reduces difficulty is to make the sounds and words, or the process, more *concrete*. Having children choose between two objects is easier than having them provide examples on their own (e.g., Which word starts with the last sound in *bus*? Is it *sun* or *moon*?). Selecting from pictures and objects simplifies the task further: "Show me a picture of a word that rhymes with cat; is it hat or ball?" Using manipulatives to demonstrate is also a good strategy to reduce the working memory load. "Pick the object that starts with /f/. Yes, *fork* begins with /f/."

Finally, once students understand the concept of phonological awareness, it is time to use letters to stand for sounds that are being blended and segmented.

Let us consider now how you might keep these factors in mind while you learn how to use Elkonin boxes or Say-It-Move-It Cards (see Figure 4.2) to support students' ability to blend and segment.[29] We will use the term Benita Blachman and others have used for this strategy: "Say it and move it."[30]

You do: As you teach your students to blend and segment sounds in a word, you model exactly how to move an object, such as a plastic chip or Unifix cube, for each sound. For the lowest performing students in a first-grade classroom, the boxes might initially reflect onset–rime blending and segmenting at their independent level. You might have picture cards to help the children remember the words. Then, during the last 5 minutes of the lesson, you might want to introduce individual boxes to teach phonemic blending and segmenting. Because this is more difficult, you should anticipate doing a lot of modeling. If needed, this activity could be also further scaffolded, or supported, by providing a limited set of pictures of the animals so that students are selecting words from a set number of known objects. This is an example: "Here is a pig and here is a cow. Let's see if you can name my animal. Ready? /c/ /ow/. Good, you heard *cow*. Now watch me use my blocks to show each sound in *cow*. (Move one block to the line to represent /c/ and another block as you say the sound /ow/.) Your turn to try with me. Now, girls, do it by yourselves. Boys, your turn to do by yourselves."

In contrast, for a higher performing first-grade group, the activity with the say-it-move-it boxes might begin with phonemic blending and segmenting, and students might not need picture supports. Instead, you provide clue words from a particular category—for example, animals. "Let's see if you can move a cube for each sound you hear me say. Then, when I ask you and give the sign, you can say my word. Ready? /p/ /i/ /g/."

Working with small homogenous groups will allow you to provide more intensive and supportive activities than you could during whole-group instruction. In working with a small group, it is easier to see and hear if a child is struggling. In a whole group, children who do not know the answer may "sponge" or wait until someone else answers and then copy. Some children mumble, and you may not hear them well enough to distinguish the correct from incorrect pronunciations during group responses. Finally, when you give corrective feedback in a small group, it is easier to do so in an emotionally supportive fashion and to allow an individual child to practice with you until he or she masters the sound on his or her own. You may also "catch" a partially correct answer. For example:

"Selina, say the sounds in pie." Selena says the letter name P. You could say, "that's almost right, the first letter in pie is P and its sound is /p/. Say it with me /p/. Now listen to me say each sound in pie. /p/ /i/. Let's try it together.... Good and your turn...."

This cycle of my turn, our turn, your turn, or I do, we do, you do, is the scaffolding of direct instruction.

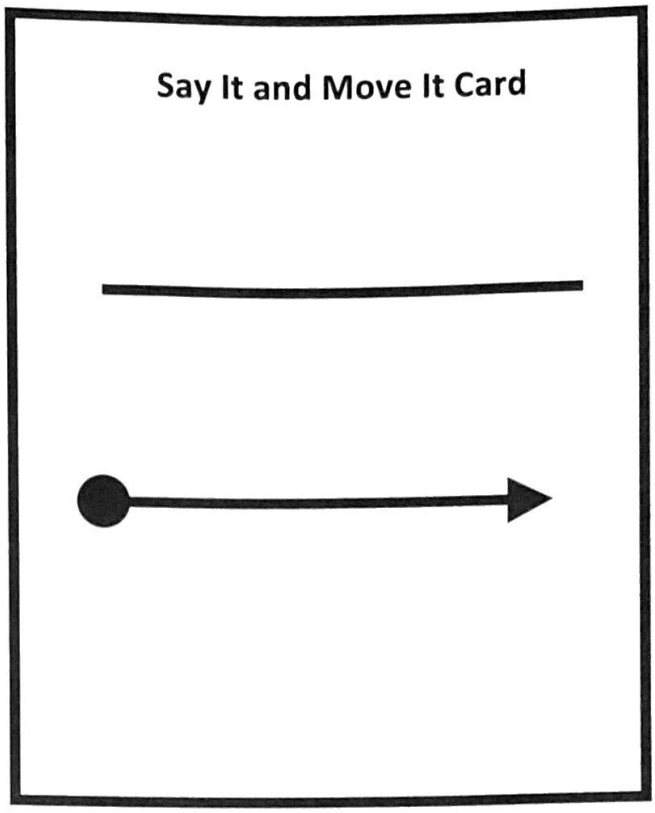


Figure 4.2. Say-It-Move-It card. (From Blachman, B., Ball, E.W., Black, R., & Tangel, D.M. [2000]. *Road to the code: A phonological awareness program for young children.* Baltimore: Paul H. Brookes Publishing Co.; reprinted by permission.)

You might be asking yourself, what activities might the other students be able to do independently while I work with a small group at a teacher table? Successful teachers use a variety of grouping strategies. You could strategically pair a high- and low-performing child for peer practice, or you could form small same-ability groups and vary the activities that you assign to them during center times. Be sure that the activities in the learning centers provide practice for concepts already introduced. Avoid creating center content that the children do not already understand. One recommended resource for center activities and for improving instructional routines may be found at the Florida Center for Reading Research web site (http://www.fcrr.org).[31] An example of a simple phonological awareness game is "Go fish." Introduce this first at a teacher table, and then place in a student center. Students have cards with pictures and try to collect other pictures of objects that start with the same sound. For example, you ask: "I have a picture of a bus. Do you have a picture of anything that starts with /b/ like bus?"

For older students who have still not developed phonemic awareness, you may look for programs that are multisensory or that offer supportive manipulatives such as color-coded squares to help students distinguish vowel and consonant sounds as they practice blending and segmenting. Teaching how to name and write letters and to decode and write simple words will reciprocally contribute to understanding how to hear, manipulate, read, and write the sounds in spoken language.

HOW DO YOU DEVELOP INSTRUCTIONAL PLANS THAT INCORPORATE STANDARDS AND EVIDENCE-BASED STRATEGIES?

This section illustrates sample lessons for several aspects of phonemic awareness development. These brief samples will give you an idea of what instruction in phonemic awareness should look like and sound like. For most students, 10–15 minutes a day in kindergarten and

1. Explicit instruction with modeling.
2. Systematic instruction with scaffolding.
3. Multiple opportunities for students to respond and practice.
4. Ongoing progress monitoring.
5. Immediate corrective feedback.

Figure 4.3. Features of effective instruction. (*Source*: Vaughn Gross Center for Reading and Language Arts 2007.)

the beginning of first grade is sufficient. If you are teaching students who need intensive work in this area, it is suggested that you obtain more information by selecting an evidence-based program, watching videos of teachers and students completing phonemic awareness activities, and observing other teachers. A list of resources that can support you in this area is in Appendix C.

It is known that children learn best when the five features of effective instruction are utilized. Look for these as you review the following activities (Figure 4.3).

Note, this is a good time to wear your rabbit ears!

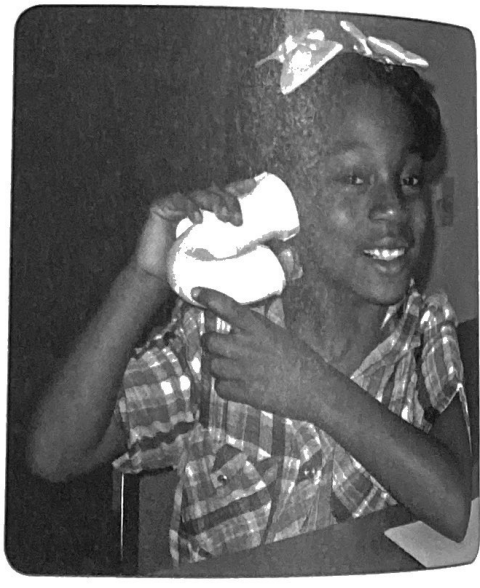
Skill: Identifying Initial Sounds

Same or Different: Thumbs UP if the same, Thumbs DOWN if different.

Say a pair of words, emphasizing the first sound. Ask the student to indicate if the sounds are the same or different. Sample words: *sun* and *sat*, *man* and *me*, *lip* and *loss*, *tip* and *lip*, *song* and *sang*, *cap* and *nap*.

You Do: *Listen: I am going to say some words. If they start with the same sound, I will put my thumb up, like this. If they start with different sounds, I will put my thumb down.* Model. *Here are the words: sssssssun, sssssssat. My thumb is up! They both start with ssss. Say the words after me: ssssun, ssssat. Do they start with the same sound? Yes! Thumbs up! What sound? Sssss.*

Skill: Identifying Final Sounds



You can do the same activity as above but concentrate on the end sounds, using words such as *dog* and *bag*, *walk* and *talk*, *ran* and *rat*, *sip* and *sock*, *match* and *catch*.

You can vary the activity by having the students sort objects or pictures by their initial sound or the final sound. For example: A final sound sort basket for /p/ and /n/ could contain: *top, cup, cap, clip, car, jar, can, pan.*

Skill: Identifying Medial Sounds

Prepare a list of words that you say to the students. The students indicate if the medial sound is the same or different. They could use a phone to amplify the sounds of letters.

When they have learned all the short vowel sounds, you can play a sorting game. Have the short vowels posted on the board (you can use the sticky board for this activity, see Appendix A).

Start with a review of the sounds. Use the reminding word used in your program. Say the letter name, the reminding word or key word, and letter sound.

Let us review the short vowel sounds. Ready? All together: a apple, /ă/, e Ed, /ĕ/, i igloo, /ĭ/, o octopus, /ŏ/, u up, /ŭ/.

Listen for the vowel in the middle of these words. Baaat. What word? Yes, bat. What sound? Yes, /ă/. Put the word *bat* in the /ă/ column. Continue with additional words, including *lap, slap, cap, pest, bell, pet, bit, sit, mitt, sock, cot, mop, sun, gum, pun.* Be sure to mix up the words!

Skill: Blending Phonemes into Words (You Will Need a Turtle Puppet for this Version!)

Tell me, boys and girls, how does a turtle walk? Slowly or quickly? Yes, very slowly. If a turtle could talk, how do you think it would talk? Yes, very slowly. We're going to talk slowly like a pretend turtle might talk, and Tommy Turtle, my puppet friend, is going to help us.

Listen. Tommy Turtle is going to say three sounds. Listen for the beginning sound, the middle sound, and the final sound. See if you know the word Tommy is saying. Tommy will talk very slowly.

Mmmmmmoooooommmmm. What word? Yes, mom! Let's try another one. Tommy says: /p/ /i/. What word? Yes, pie! Continue with additional words. If a student has difficulty, repeat the exercise, more explicitly. Use an easier word. For example: *Listen, Johnny. The sounds are mmmmmmaaaaaannnnn. What word? Yes, man! Everyone, what word! Yes, man.*

Skill: Segmenting Words into Phonemes

This time, let's help Tommy learn some new words. We have to say the words very slowly, enunciating each sound, so Tommy can understand. Then, we'll say the word fast. Let's try one.

The word is man. What word? Yes, man. Say it slowly: mmmmmaaaaannnnn. Say it fast! Man! Let's try another one: seat. What word? Yes, seat. Say it slowly: ssssseeeeeet. Say it fast! Seat!

Continue with additional words, allowing students to take individual turns as well as responding all together.

Skill: Elision (Eliminating Sounds)

This is a more difficult skill as it requires a higher level of phonemic awareness. When you are doing these exercises, be sure you say the letter sounds, not the names.

Today, we're going to play a game. I'll say a word and then ask you to take away a sound. Listen as I do it first: man. I'll take away the /m/ [say the sound, not the letter name]. *What's left? Yes, /an/. Let's try another one. Say slip. Take away the /s/. What word is left? Yes, lip!* Continue with additional words such as *gold/old, mast/mat.*

Skill: Substituting Sounds

This activity uses all the skills your students have practiced. Usually, it takes kindergartners about 6–8 weeks to be able to do this skill.

Listen. I'm going to say a word, and then I'll ask you to substitute, or use a different sound, for some sounds. Let's try it. Everyone, say man. Say it again, slowly: mmmmaaaan. Take away the /m/ and put /p/ [say the sounds, not the letter names]. *What word? Yes, pan. Say pan again. Take away the /n/ and put /t/. What word? Yes, pat! Now be careful with this one. Say pat. Take away the /a/ and put /i/. What word? Yes, pit! Great job listening!*

Figure 4.4 is a sample lesson plan incorporating these features with the "I do, we do, you do" model of instruction. You may use this lesson, adjusted for your student, when you tutor.

Kindergarten or first grade small group intervention

Note: The text in italics is what you could say verbatim. When you first begin teaching, you may want to write down every word you are going to say. Later, once you have learned the patterns and routines, you do not need to write down each word.

Date: 1/10/12

Teacher: Ms. Wilson

Target students: Five students—Jimmy, Kaitlin, Meagan, Beth, Wilber

(Whole class or small group? Identify specific students who need differentiated instruction.)

Objective of the lesson: The students will be able to blend and segment three-phoneme words using Say-It-Move-It charts. Targeted words: *dog, cat, bird, top, sun.*

Required resources: Chips and Say-It-Move-It charts for each student; list of words to teach.

Review of previous learning: Review of segmentation of two-phoneme words: *at, it, in, so.*

Let's review words that we segmented yesterday. Remember, to segment means to pull apart. Everyone, say at. Yes, at. Now let's say the sounds of at. Fingers up. Say /a/. Raise one finger. Now say /t/. Yes, /t/. Second finger up. Let's say both sounds in at. /a/ /t/. Yes! Now blend the two sounds together to form a word. What word? Yes! At.

(Continue reviewing the next three words *it, in, so* at a faster pace.)

I do: Segmenting and blending three-phoneme words.

Teacher models skill to be taught using

- explicit instruction with modeling
- systematic instruction with scaffolding

Today, we are going to learn how to blend and segment words with three sounds. Listen: cat. Now, I am going to say the sounds in cat slowly, and for each sound, I slide one chip down onto this line. Watch me. /c/ [slide a chip]. */a/* [slide a chip]. */t/* [slide a chip]. *Now I'll say the word fast: cat.*

We do: Students blend and segment words with teacher guidance.

Teacher guides instruction focusing on

- Immediate corrective feedback
- Providing multiple opportunities for students to respond and practice

(Present each child with an Elkonin or "Say-It-Move-It" card and three chips.)

Try one with me. Everyone, say this word: cat. Yes, cat. What is the first sound you hear in cat, Jimmy? Yes, /c/. Slide one chip down to the line. Let's say the word again: cat. What is the next sound, the middle sound, of cat? Meagan? Yes, /a/. Everyone, say /a/ and slide a chip down. Say the word one more time, listening for the very last sound: cat. What is the last sound in cat, everyone? Yes! /t/ is the last sound in cat. Slide a chip down to the line. What word? Cat.

Corrective feedback: [Wilber said *kit.*] *Let's try that word again. Listen. The word is cat* [emphasize the */a/*]. *What word? Yes, cat. Wilber, what word? Yes! Cat. Wilber, try this word: /d/ /o/ /g/. What word? Yes! Dog. Great job, everyone! Let's try some more words.*

Figure 4.4. Lesson plan template: example.

Figure 4.4. *(continued)*

(Follow the model for two more words, *bird* and *top*.)

You do: Students practice blending and segmenting.

Students practice skill independently, in pairs, or in small groups.

Practice words: *sun, leaf, road.*

Try the next one by yourself. The word is sun. What word? Yes, sun. Say the word quietly and move a chip down for each sound.

If the children are doing well, add additional words such as leaf and road.

Differentiation

Challenge words for accelerated students (provide them an additional chip): *tree* (3), *slip* (4).

English language learners: Avoid confusing sounds.

(When first teaching the concept of blending and segmenting phonemes, avoid letters and sounds that may be pronounced differently in the child's first language. For example, most Spanish speakers pronounce *ll* as /y/ and /v/ as /b/, so avoid words that contain the letters v, ll, and y and the sounds /v/ and /y/. Also, be cognizant that vowels in other languages may represent different phonemes. For example, the /a/ as in apple does not exist in Spanish. You can say to the child, *"In your first language* [or home language or whatever term you are to use in your district], *you pronounce the letter* ***a*** *differently than it is pronounced in English. In English the letter* ***a*** *is pronounced /a/, as in apple.*

However, if your objective is ensuring the child knows how to segment words into phonemes, do not be too concerned if the phonemes are mispronounced as long as he or she is aware of how many phonemes there are and can segment them. That is your instructional objective. Later, you can focus on the correct pronunciation of the sounds.

Additional scaffolding:

Provide a "Say-It-Move-It" card with circles for the chips and dotted lines from the circle to the bottom line so that students know exactly how to move the chips.

Try hand over hand: place your hand on the child's and guide the movement of the chips as the child says the sounds.

If the child has difficulty with identifying the sounds, go back to the first sound and ask the child to identify the first sound only. When the child has mastered identifying the first sound, ensure the child can identify the last sound and, finally, the median sound before asking the child to identify all the sounds in a three-phoneme word.

Verbally recast the procedures, and model again.

Provide additional guided practice.

Progress monitoring: Students segment and blend two out of three words.

Teacher conducts a quick assessment of student progress.

(One by one, give students a word and ask them say the individual phonemes, then to blend it into a word. Note which children are still struggling and attend to them in a 1:1 format later in the day.)

Objectives for the Next Lesson

The students will match the sounds to letters in three-phoneme words and will blend the letters to form a word.

SUMMARY

Phonological awareness and especially phonemic awareness are precursors to effective reading and writing acquisition. Generally, a few minutes a day of direct instruction in phonemic awareness in grades PreK–1 is sufficient for most children to acquire the necessary skills. Once children can segment and blend three-phoneme words, begin to match the sounds to letters. Spending time on these skills in the early grades may prevent reading and spelling difficulties later.

When older students are not reading on level, teachers may need to assess whether the students' early skills in phonological and phonemic awareness are developed. It is not uncommon in intensive or remedial classes for fourth-, fifth-, or sixth-grade students to spend some time going back to this very early stage in reading development and building the missing concepts. You will want to teach it differently, of course, and associate letters with the sounds.

Students who are English language learners must understand phonemic awareness also. Whether or not they learn the concept in their home language or in English, knowledge of phonemic awareness will transfer to reading English and will support their reading achievement.

Finally, remember that difficulty with phonological skills, particularly phonemic awareness, is generally the most challenging for students with dyslexia and reading disabilities. It is crucial that these children learn this skill so that they can to learn to read.

APPLICATION ASSIGNMENTS

In-Class Assignments

1. With a partner, explain the concepts phonological awareness, phonemic awareness, and phonics. Clarify how they are different and provide examples of each.
2. Find a list of the 44–45 phonemes in the English language (the number differs depending on whether or not the schwa is included). Write the phonemes on sticky notes, and sort them into various combinations as follows: voiced and unvoiced sounds; continuous and stop sounds; sounds that are different in Spanish than English and sounds that are the same in both languages. A list of English phonemes is available at http://www.lancsngfl.ac.uk/curriculum/literacy/lit_site/lit_sites/phonemes_001/. A comparison between English and Spanish sounds is available at http://www.colorincolorado.org/educators/background/capitalizing?theme=print.
3. Go to the Florida Center on Reading Research web site (www.fcrr.org) and download an activity that teaches phonemic awareness in kindergarten. Make the activity, and practice it with a partner.

Tutoring Assignments

1. Assess your student on his or her ability to segment and blend three-phoneme words using a list of words from the core reading program or from an assessment your instructor provides.
2. Select, prepare, and teach phonemic awareness using an activity found on the FCRR web site that is appropriate to the needs of your student. Assess your student's progress, and plan what you need to do next in phonemic awareness.
3. Create a word sort for older students who struggle to hear sounds in words because they confuse voiced and voiceless pairs (e.g., /f/ and /v/).
4. Select a children's book with rhyming words and/or alliteration that you could read aloud. Make a list of all the rhyming words and all the alliterative phrases. Read the story to your student, emphasizing rhymes and alliteration.
5. Plan a follow-up lesson systematically and explicitly, teaching the concept of rhyming and the concept of alliteration, using the lesson plan format provided. Be prepared to share the lesson plan and your reflections about the lesson you taught in class.