PART

I

Word Recognition

Think about yourself as a reader. Whether you are reading fiction or fact, or reading for pleasure or information discovery, or to complete a work task or a personal task, as a proficient reader you effortlessly and instantly recognize the majority of the words you encounter. You may not know the meaning of all of them, and while you may even be reading in an unfamiliar context, there is high probability that you will be able to effortlessly pronounce every word in the text (Stanovich et al., 1985). This happens because your brain recognizes the *orthography*. You are aware of the familiar spelling patterns, and your brain also adds the phonology or pronunciation to the word even before adding the meaning (Forster, 2012; Perfetti, 2011).

This matching occurs because you have a large vocabulary of words with familiar meanings that have become your sight vocabulary, and this is combined with efficient decoding skills (van den Broeck & Geudens, 2012). You can use a word's grapheme-phoneme correspondences and morphology to identify the word even when it is contextless. However, when you meet an unfamiliar word, you most likely have both the language comprehension and word recognition skills needed to sound it out and then use the context to recognize its meaning (Cunnings & Clashen, 2007; Frost, 1998).

The end goal of reading instruction is understanding.

The end goal of reading instruction is understanding. To ensure that every student becomes the proficient reader we just described, one who has the language and skills needed to comprehend a wide array of texts, each needs to be exposed to a growing base of language through interaction with many topics and texts. In addition, each must be taught the skills needed to decode and instantly encode or recode written information.

In **Part I** we address the **word recognition skills** needed to ensure that every student becomes a proficient reader. These skills include

- Phonological/phonemic awareness
- Print letter recognition or alphabetics
- Phonics and decoding skills
- Sight word recognition
- Reading fluency

Early reading instruction occurs as children are introduced to the letter names of the alphabet. This begins their entree into an understanding of the alphabetic principle, which is that there is a relationship between letters of the alphabet and the spoken sounds of language. Once children know the names and shapes of the letters, they can be taught the letter sounds and how they are used to spell words. There are many instructional activities that support the sequence of learning letter names, their shapes, and their sounds. In many homes very young children and their caregivers sing the alphabet song, which supports their early learning of the names of the letters. They also play with letter blocks and magnetic letters while identifying the first letters of their names.

As children are learning to name and identify letters, they should also have opportunities to write them. Their writing may include uppercase and lowercase letters or a mixture of both. The goal at this early stage is to ensure that children are beginning to develop the alphabetic principle, which will grow stronger through instruction that continually introduces and reinforces the idea that the sounds of their spoken language are represented in written language.

In this set of modules on word recognition, we also share instructional activities that support children learning letter-sound relationships and opportunities to practice these relationships orally and in writing and reading experiences. In addition to exposure,

children need extensive opportunities to apply their growing letter-sound knowledge. Children will acquire an understanding of the alphabetic principle at different rates because they enter school with different home experiences that have provided different foundational supports. Early instructional differentiation must ensure that all children develop an understanding of the alphabetic principle, which is foundational to becoming a proficient reader (Blachman, 2000).

Also shared in the word recognition modules are discussions about phonological awareness and phonics teaching, with the goal of ensuring that children become skilled readers whose knowledge of written words is bonded in memory. When this bonding occurs, there is no longer a need to decode each word by sounding out and sequentially blending letters (Ehri, 2020). Rather, as children become skilled readers, they can map words into their permanent memory and store thousands of words that are then recognizable instantly and effortlessly by sight. In doing so, with instruction and practice, students develop their reading fluency.

MODULE 2

Phonological Awareness

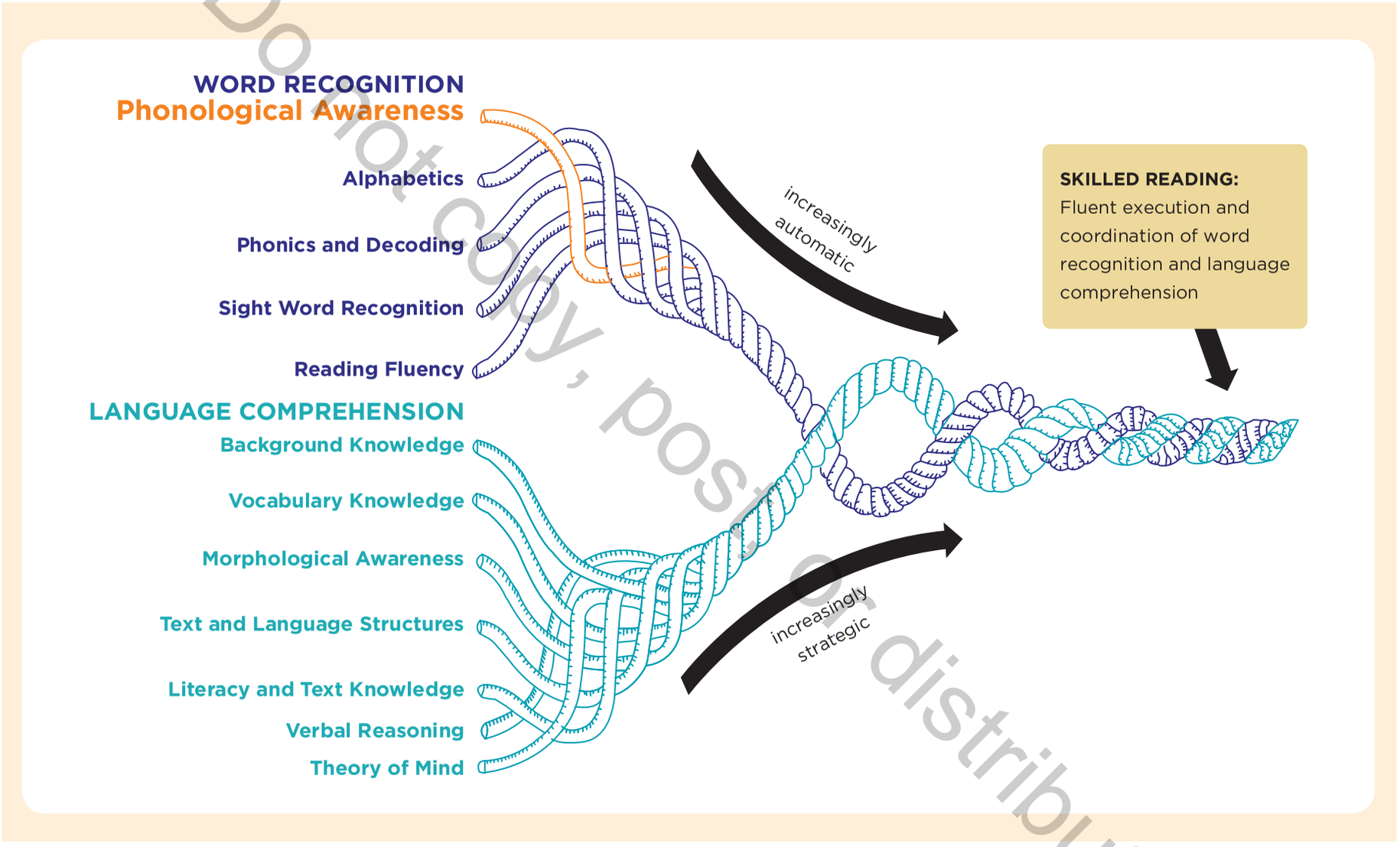
Photo by iStock.com/FatCamera

Look at the children in the picture. Imagine the teacher is saying a word, and then she and the children are clapping the sounds they hear in the word. Each time she says a word like *bat*, *ham*, or *bit,* she asks the children to repeat the word and echo it back to her. Then, together, they repeat the word, and this time clap the letter sounds they hear, such as /b/ /a/ /t/ or /h/ /a/ /m/. Did you notice that this activity did not require the children to know the letter names of the sounds they were hearing?

They only needed to be aware of how many discrete sounds they were hearing in each word and be able to repeat them. The children and the teacher were segmenting the sounds they were hearing in each spoken word. Being able to segment the letter sounds, or phonemes, heard in a spoken word is an early literacy skill that should be developed during preschool, kindergarten,

In this module, we will

- Explore both phonological awareness and phonemic awareness.
- Consider the relationship between phonological awareness and learning to read.
- Identify the relationship between language and phonological awareness.
- Review instructional practices that promote phonological awareness.
- Consider assessments that inform our instructional practice.



Source: Adapted from Scarborough (2002).

and first grade. Being able to do so indicates that the children are developing phonemic awareness, which is the ability to identify the phonemes or sounds they are hearing in words.

Prior to having the children identify by clapping that they were hearing three sounds in each word, this teacher first had the children identify the initial sounds (phonemes) they were hearing in words. For example, she would say the word *bat* and ask the children to repeat the initial sound of /b/. Other phonemic awareness skills involve blending, deleting, and substituting letter sounds in words. These skills involve an awareness of words at a phoneme/letter or sound level. They are all skills associated with phonological awareness, which includes both letter-sound awareness and awareness of larger chunks of words, such as syllables.

Being able to segment the letter sounds, or phonemes, is an early literacy skill that should be developed during preschool, kindergarten, and first grade.

Read each statement and mark **T** if the statement is true and **F** if the statement is false. As you read through the module, you might change your responses. Be prepared to explain your responses and use the text for evidence.

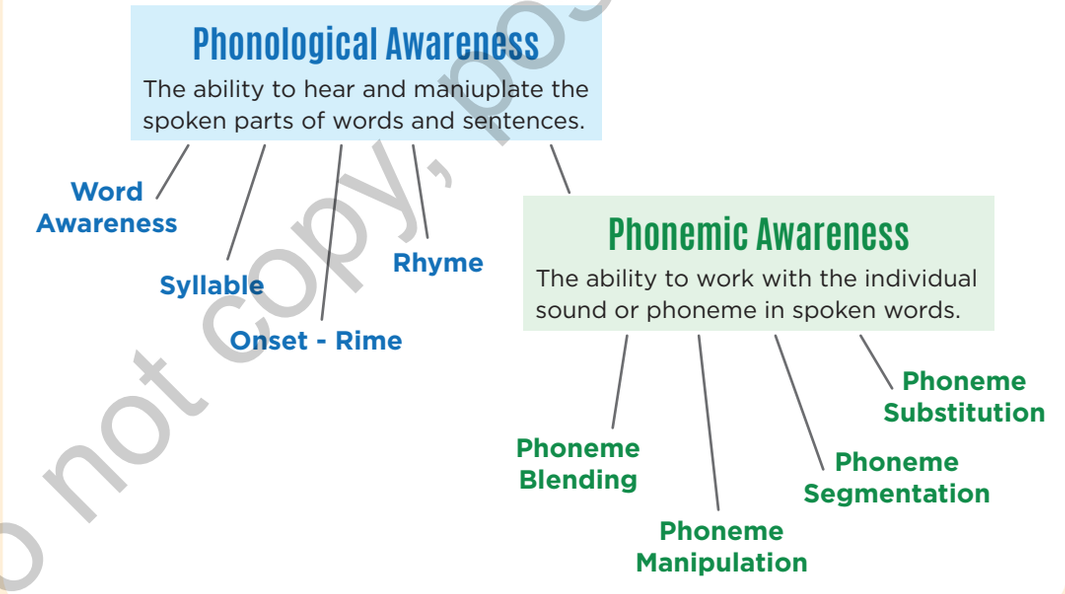
Before Reading	Statements	After Reading
T **F**	1. Phonemic awareness is primarily developed through rhyming.	**T** **F**
Why did you indicate true or false?	Has your thinking changed after reading?	
T **F**	2. Most children have developed phonemic awareness by the end of kindergarten.	**T** **F**
Why did you indicate true or false?	Has your thinking changed after reading?	
T **F**	3. Early phonemic awareness activities are primarily taught and practiced orally.	**T** **F**
Why did you indicate true or false?	Has your thinking changed after reading?	
T **F**	4. Phonemic awareness supports writing and spelling as well as reading.	**T** **F**
Why did you indicate true or false?	Has your thinking changed after reading?	

Untangling Phonological Awareness and Phonemic Awareness

Phonological awareness is an overarching term that describes a person's sensitivity to the parts of speech—syllables, rhymes, and phonemes. A person who is phonologically aware can identify and manipulate units of oral language such as words, syllables, and onsets and rimes. A subset of phonological awareness is referred to as *phonemic awareness,* which more narrowly addresses the specific ability to focus on and manipulate individual sounds (**phonemes**) within a spoken word. Specifically, phonemic awareness, one of the best early predictors of the success a student will have in learning to read (Ehri & Nunes, 2002; National Reading Panel, 2000), involves development of the understanding that there are discrete sounds within spoken words. The International Literacy Association (2019) defines phonemic awareness as "the ability to detect and manipulate the smallest units (i.e., phonemes) of spoken language." For example, recognition that the word *moon* includes three distinct sounds or phonemes is one dimension of phonemic awareness. Individuals with phonemic awareness can blend phonemes to form spoken words, segment spoken words into their constituent phonemes, delete phonemes from spoken words, add phonemes, and substitute phonemes. (See Figure 2.1 for a visual representation of the relationship between phonological and phonemic awareness.)

Phonemic awareness is one of the best early predictors of the success a student will have in learning to read.

Figure 2.1 The Relationship Between Phonological and Phonemic Awareness



Source: © Hanging Around in Primary (2017).

As this definition suggests, being phonologically aware means that one is attuned to how sounds work in words. Phonemic awareness is a crucial dimension of phonological awareness, which specifically focuses on individual sounds. These are constrained skills, meaning that they have a finite number of components. In practice, phonological and phonemic awareness are taught in relation to one another. We don't announce to five-year-olds that "it's phonological awareness time, and later this morning, we'll have phonemic awareness centers!" Rather, lessons often encompass elements of each.

NOTICE AND WONDER

Review Figure 2.1. Did you notice the differences between phonological awareness and phonemic awareness? What implications for instruction might these differences hold?

The research evidence on work with rhymes and alliteration is less compelling than the findings on the importance of developing phonemic awareness in young readers. The National Early Literacy Panel (2008) noted as much when it reported its meta-analysis on the practice. Its results found that work on rhyming, syllable, and alliteration work alone did not have a great degree of impact, compared to work on segmenting and manipulating phonemes. In his review of early literacy research, Reutzel (2015) noted that there are nuances to this finding, stating,

> This is not to suggest, however, that early childhood educators totally abandon rhyme and alliteration activities; rather, it is to point out the transitory value of these activities in relation to the more sustained outcomes associated with phonemic awareness instruction focused on phoneme-level activities. (p. 16)

With that in mind, let's turn our attention to rhyming and alliteration before attending to a deeper exploration of phonemic awareness.

NOTES

Phonological Awareness Instruction

Instruction in phonological awareness of syllables and rhymes can be developed quite naturally for most children through word play activities such as singing songs and chanting poems with rhymes (O'Connor & Vadasy, 2011). During these activities, students' attention can be directed to the idea that if they change the sounds they are saying, they will be changing the words. Other tasks include clapping the sounds of the syllables they hear, tapping the number of words they hear in a spoken sentence, and tongue twisters.

For other ideas useful in teaching these elements of phonological awareness, see the Florida Center for Reading Research's website of other activities at https://www.fcrr.org/student-center-activities.

Phonological awareness can also be developed by reading aloud books with rhymes and alliterations and talking with children about the rhymes they hear. Three such books that are truly enjoyed by children are *How Do Dinosaurs Say Goodnight*? by Jane Yolen and Mark Teague, *There's a Wocket in My Pocket* by Dr. Seuss, and *Brown Bear, Brown Bear* by Bill Martin Jr. and Eric Carle.

The evidence suggests that reading develops best when teachers begin with familiar words and then systematically focus students' attention on smaller and smaller sound segments in these words (e.g., Gillon, 2017):

1. Teachers begin with spoken sentences and focus on the different words within the sentence and then note that some words can be broken into smaller words.
2. Students practice identifying the unique words in sentences as well as the components of compound words.
3. Teachers then turn their attention to syllables and teach students how to identify syllables.
4. Students practice identifying and manipulating syllables in familiar words.
5. Once students can identify the syllables in words, teachers can focus on smaller units within words, which are the onsets and rimes.
    - **Rhyming** involves saying two or more words that have the same ending rimes, such as *bat, rat, cat, mat,* and *flat;* or *see, me*, and *flea*. These rhymes are determined by the sound, not the spelling pattern.
    - **Syllable awareness.** Teacher says words having two or more syllables and asks the children to clap the number of syllables they hear. For instance, children hearing the spoken word *rainbow* clap twice as they say the word.
    - **Syllable blending.** Teacher separately says the syllables in a multisyllable word and asks the children to put the syllables together to make a word. Teacher says *vid-e-o* and asks the children to blend these syllables into one word. Children respond, *video.*
    - **Syllable deletion.** Teacher says the word *dancing* and asks the children to repeat the word without a second syllable. Children respond *dance*. Children asked to omit the sound of *rain* in *rainbow* can answer back *bow*. Other examples: *backpack* repeat without the word *pack* (back); *refinement* repeat without *-ment (refine).*

NOTICE AND WONDER

Notice that the task difficulty level increases when children are asked to blend and delete syllables. Being engaged in syllable awareness and deletion activities with multisyllabic words expands children's spelling skills. Did you notice that working with syllables is important?

Can your students complete these tasks?

_____

_____

How might you develop these skills with your students?

_____

_____

First-grade teacher Alexandria Washington uses several techniques to help her students develop awareness of multisyllabic words. To support students developing this awareness, she stresses that every syllable has a vowel sound. To ensure children understand this, she incorporates additional sound pattern practices that involve a tactile dimension.

Chin Drops. The first practice is called *Chin Drops*. (Your chin drops when you utter a vowel sound. Try it.) She tells her students to hear each syllable in a word. After reminding them that every syllable has a vowel sound, she models how her chin drops down each time she says the vowel sound in a word. Then, inviting them to place their hands under their chins, she says, "Let's say and touch the syllables in some words." Together, they each place one hand under their chin and say a few words: *kite, candy, kitten, swimming, November.* After saying a word, they discuss how many times their chins dropped and how many corresponding syllables the word contains. This tactile activity provides children with a more concrete way to hear and touch the syllables.

The Syllable Jump. A second tactile activity, called *The Syllable Jump,* also concretizes children's understanding that words have sounds and syllables. As the children stand in line for a visit to the library, go to recess, or go home, Ms. Washington asks them questions and invites them to jump their responses. For example, she might ask, "Where are we going?" Children might respond by saying "library" while jumping three times. Another time, the children might say "recess" while jumping two times, and at the end of the school day, the children respond "home" and jump once.

Humming. A third activity Ms. Washington presents involves inviting children to hum a word and to be aware of how often their hum is chunked. "Remember" she says, "each hum represents a syllable in the word, and each syllable has a vowel sound. Let's hum the word *alligator.*" She then invites them to hum a few additional words like *sunshine, dinosaur,* and *caterpillar* to reinforce the concept of hearing syllables.

Not all students need the same amount of practice to grasp this concept, but by using these activities, Ms. Washington is able to ensure that all the students will have time to learn these important concepts.

Phonemic Awareness

Phonemic awareness is a subcomponent of the broader umbrella that is phonological awareness. Readers who possess a full degree of phonemic awareness are able to discern and manipulate the 44 phonemes in the English language. These manipulations of the sounds range from segmentation and isolation of individual sounds to reversals. Young children typically learn to attend first to the initial phoneme in a word, recognizing that *map, moose*, and *Megan* all begin with the same sound. Final sounds follow shortly thereafter, such as when a student accurately identifies that *lamb*, *Mom*, and *time* end with the same sound. Medial sounds are the most challenging, as students must listen for the middle sound, such as short /o/ in the words *pot, mop, dog*, and *sock*.

Phonemic awareness should not be confused with grapheme-phoneme correspondences, which involve the relationship between the sounds and the written letters in words (Vadasy & Sanders, 2021). Sometimes a sound is associated with a single letter, and other times multiple letters make a sound. Consider the /k/ sound which can be made with the letters -c, -k, or -ck as in *cat, kite*, and *dock*. Phonemic awareness involves the individual sound, whereas grapheme-phoneme correspondence involves mapping the sound onto the letters or letter combinations.

There are different facets of phonemic awareness instruction that deepen a child's ability to discern and manipulate the sounds of the language more ably. Further, there is strong evidence about why phonemic awareness development should not be left to chance. Ehri and colleagues' 2001 meta-analysis of 52 studies, performed as part of the National Reading Panel's deliberations, found that phonemic awareness instruction had a significant impact on reading and spelling. Additionally, phonemic awareness instruction is essential for English learners and students in dual immersion programs, because the phonemes of one language do not completely map onto another language (Brown & Copple, 2018). As an example of range, Spanish has 24 phonemes, while !Xóõ (pronounced /kō/ in English), spoken primarily in Botswana, has 112 phonemes.

Being able to notice and manipulate single phonemic sound structures in spoken language indicates early phonemic awareness skills. These skills, primarily developed from preschool through first grade, serve as foundational knowledge for phonics decoding and spelling. Dimensions of phonemic awareness include the following:

- **Sound blending** involves hearing parts of a word and being able to repeat them as a whole word: hearing the phonemes /b/ /a/ /t/ and putting them together as *bat*.
- **Sound segmenting** involves hearing a word as a whole and being able to separate it into its represented phonemes: hearing *bat* and repeating it as /b/ /a/ /t/.
- **Sound deleting** involves being able to hear a word and then repeating it without one of the sounds: hearing *bat* and deleting the phoneme /b/ and saying *at*.
- **Sound substituting** involves hearing a word but, before repeating, changing one phoneme for another: Hearing *bat* but substituting for /b/ with /c/ and saying *cat*.

In sum, the goal of phonemic awareness instruction is to increase children's ability to discriminate between the sounds that compose the words they speak and read. This provides a foundation for them to manipulate these sounds into new spoken words.

TAKE ACTION

The *Yopp-Singer Test of Phonemic Segmentation* (Appendix A) is one assessment that—in addition to being reliable—is easy to administer, score, and analyze. The test should be administered to one child at a time. It takes between 5 and 10 minutes to administer to an individual child. Using the assessment tool found in Appendix A, assess your students and determine the areas of needed instruction.

What does the *Yopp-Singer Test of Phonemic Segmentation* tell you about your students and what might be the next steps in learning for them?

Strengths:

Areas of Focus:

NOTES

Using Elkonin Boxes for Phonemic Segmenting

Elkonin boxes, often called sound boxes, allow learners to isolate the sounds within a word. Sound boxes are squares drawn on paper or a board. There is one square for each sound or phoneme heard in a particular word. The purpose is to slow down the analysis process a bit as the child moves an item, such as a chip or coin, into the space in a box (see Figure 2.2 for an example of sound boxes). As McCarthy (2008) notes, Elkonin boxes "teach the student how to hear the phonemes in words in sequence by connecting the slow verbal stretching of a word's sounds to the simultaneous pushing of tokens into boxes, one for each sound as it is heard" (p. 346). Ross and Joseph (2019) noted in their review of research that the use of these boxes positively impacts students' early reading performance.

As an example, the spoken word *den* requires three squares to represent the three phonemes heard. There may not be a direct correspondence between letters and sounds. For instance, the word /goat/ has three phonemes (/g/oa/t) but four letters. Although commonly used for phonemic awareness, sound boxes can also be used to develop grapheme-phoneme correspondences and spelling knowledge. (At that point they are called word boxes; Keesey et al., 2015).

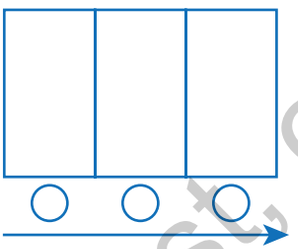
The children in Jeff Ryan's kindergarten class are using Elkonin boxes and plastic tokens to segment the sounds in the words they speak and hear. Mr. Ryan calls these "sound boxes" with his students to reinforce the concept that spoken words are made up of

sounds. Remember, in this lesson, the teacher is focusing only on the phonemes, not the letters that represent those phonemes.

He begins the lesson by sharing with children what they will be doing and explaining why. **"**Today we're going to pull apart the words we speak so we can hear each sound. Let me show you how."

The children listen to Mr. Ryan slowly pronounce the word *hit.* He repeats it several times, now stretching the sound of the word so that each phoneme can be heard: /h/ /i/ /t/. As he does so, he taps his arm from shoulder to wrist in correspondence with all the sounds they are hearing; one tap to represent each sound. "I'm hearing three sounds, so I know I need three sound boxes," he says, drawing them in the document camera. Once he has drawn, he repeats the sounds as he moves the tokens into a box.

Figure 2.2 A Sound Box for a Three-Phoneme Word



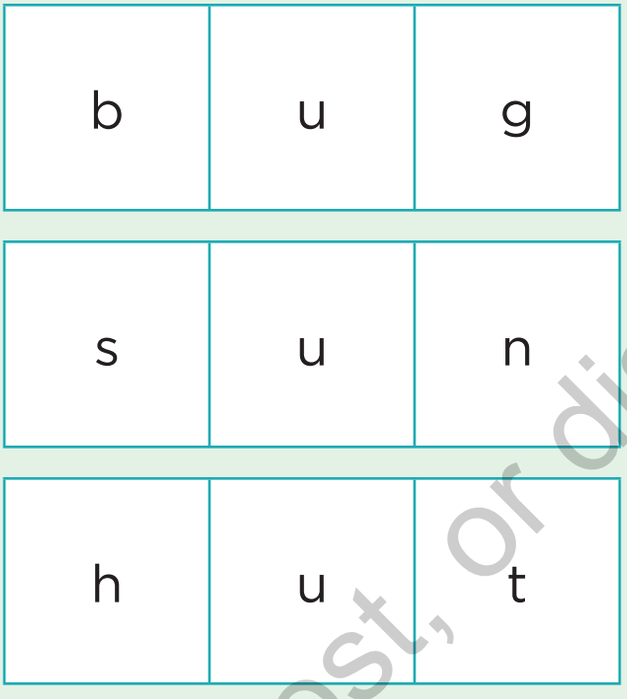
"Now let's try this all together. Listen carefully. I'll again say a word; and then together, at the same time, we'll say the word; and then we'll tap on our arms each sound we hear in the word. Our word is *sit.* Say it with me." Mr. Ryan and his students repeat the word several times, tapping the sounds they hear on their arms. Next, he asks them to tell their elbow partners how many sounds they heard and what those sounds were. Now Mr. Ryan asks the children, using their own sound boxes and tokens, to demonstrate how they move each chip as they repeat the sounds in the word *sit*. Finally, he asks one child to share and demonstrate for the whole class. They practice together a few additional words (*mitt, fit,* and *bit*).

Using sound boxes and tokens helps children see the number of sounds they are saying and hearing in each word. This visual element emphasizes that separate sounds are heard in a spoken word. Mr. Ryan uses this strategy with the whole class when he discusses a new pattern and then continues using it with small groups and individuals until all have mastered a particular sound pattern. When children are working alone, Mr. Ryan encourages them to tap a sound pattern on their arm, which helps them identify how many sounds they are hearing. As they become more proficient in recognizing sound patterns, he moves from one-syllable to multisyllable words. Students should have the auditory skill to recognize sound patterns in multisyllable words by the end of kindergarten (Anthony et al., 2002).

Using Elkonin boxes helps children see the number of sounds they are saying and hearing in each word.

WHAT'S YOUR ADVICE?

Your colleague is using sound boxes to develop students' phonemic awareness. This person projects the word on the whiteboard while reading it aloud. The boxes at students' desks have magnetic letters in the squares, such as the following:



You note that this has moved into a phonics lesson.

What questions might you ask to determine how this colleague has developed students' phonemic awareness?

_____

_____

_____

_____

_____

What data would you recommend be considered to determine students' readiness for this task?

_____

_____

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_____

_____

Phoneme Blending

We blend sounds together to form spoken words. And we need to learn when words start, when they end, and how to recognize the short pauses between them. The blending part requires that children learn to push together the sounds in words, in sequence, to create the word. Blending will come in handy when students are learning to read words and encounter words they do not know. As Al Otaiba et al. (2016) noted, blending supports the overall understanding of the ways words work and can be used to support students through whole-class and small-group instruction.

Rosa Blanco taught her kindergarten students the skill of blending, which involves combining the individual sounds of letters together to make a word. Blending helps children develop their phonemic awareness, but it may be more challenging for multilingual learners, since it requires holding one or more sounds in mind while adding the sounds together in a word. Like Mr. Ryan, Ms. Blanco used Elkonin boxes to teach word blending, and she also used rubber bands to give children a visual for the concept of stretching as they say a word. The rubber band helped them see just how far a word needs to be stretched to hear all its sounds.

Ms. Blanco began by sharing the purpose. "Today we are going to think about words and the sounds we need to put together or blend together to make each word. I am going to show you how to put together or blend separate sounds to make words. I will tap my arm each time I change the sound. Listen to these sounds /f/ /a/ /t/. Then say /ffffaaat/. The word I said was *fat*. I tapped three sounds that I said." She modeled several words until the students understood that she was blending sounds to make words.

As a warm-up, Ms. Blanco began with two-letter words (*at, is, it*) and then progressed to consonant-vowel-consonant (CVC) (fan, man) words. She also chose words that started with consonant sounds that were easy to stretch out, so children would have time to hear each discrete sound (/f/, /l/, /m/). Once children were having success with stretch consonants, she shared words that had stop sounds as initial consonants (*bat, bug, pit*).

When children were demonstrating success, she moved on to blends. She moved from modeling for the children, to having children join her in saying the word using their rubber bands to stretch the word to hear each sound ("say it slowly"), to tapping each sound on their arms, and finally to blending the sounds together ("say it fast"). When she felt that children were beginning to understand the concept of blending sounds to make a word, she had them independently do so while she observed. She encouraged children having trouble tapping while blending to instead raise one finger each time they said a sound. If children needed more practice, she repeated the same words multiple times to provide children the opportunity to hear each sound she was asking them to blend into a word.

FIND THE MISTAKES

Review a student's blended words. The first column is the sounds the teacher made. The words in italics are what the student said.

/b/ /i/ /l/	*bell*
/h/ /a/ /t/	*hat*
/p/ /i/ /t/	*pet*
/s/ /a/ /d/	*sad*
/p/ /i/ /g/	*peg*
/r/ /a/ /g/	*rag*

What error is the student making as they blend words? _____

_____

What could be the next step in their learning? _____

_____

NOTES

Phoneme Deletion

Deleting phonemes helps students deepen their phonemic awareness as they learn to isolate sounds by removing some of them within a word. If this is initially too difficult for students, they can start by deleting syllables in compound words so that they develop an understanding of the task. Phoneme deletion requires that students develop an understanding that sounds can be deleted from a word and when that happens, the remainder of the sounds within the word all remain in place (Rauth & Stuart, 2008).

For some children it is easier to grasp the concept of deletion by introducing compound words and taking away one of the words.

Deletion tasks are more difficult than other phonemic awareness tasks because they require the manipulation of the phonemes in a word. Lewkowicz (1980) suggested that sound deletion activities should not be taught until children can segment and should only include initial and final phoneme sounds in a word. For some children it is easier to grasp the concept of deletion by introducing compound words and taking away one of the words. "I can say *hotdog*. If I take away *dog,* my new word is *hot*." Continue with additional compound words (*baseball, shoelace, zigzag*) until you assess that the children have grasped the concept of deletion. Remember that to get proficient at phonemic awareness activities, children need direct and explicit instruction with lots of repetitions.

In most kindergarten classes, children learn to make new words from ones previously used when blending and substituting phonemes. Teachers like Mr. Ryan and Ms. Blanco offer precise directions to share both the learning intention and the process when they say, "Today we are going to make new words by removing some letters and their sounds in words we already know. I'll show you how. I will say a word, then I will take away or delete a letter and its sound so I can make a new word. You listen to see if you can tell me which sound I deleted. My word is *mat.* It has three sounds, /m/a/t/. When I delete the /m/ sound, my new word is *at.*"

Next, they practice a few additional words with the children to be sure they understand the practice of sound deletion (*cat, bit, fan*). Once they are secure that the children understand the concept of deletion, they offer the next direction.

"Now it is your turn. I'll say a word. Then together we will say its sounds. I will tell you which sound to take away, and then we'll say the new word together. Say *pit,* /p/i/t/. Take away the /p/ sound. What is the word? *It*."

They then practice several additional words with the children. Elkonin boxes can be used to help children visualize phoneme deletion.

You'll also want to explain to the children that while some of the words might be nonsense words because they are not real words we use when we speak, write, or spell, it is okay to create new real and nonsense words by deleting letters and their sounds. Begin by sharing a few words, and with the children delete the first letter and sound (e.g., *bug, jug, dug*). You may want to initially try words with similar phonemic patterns, like *tip, nip, dip*, and *flip,* since phoneme deletion may be initially difficult for some children. Also have children delete the initial letter first, as in *sock* and *rock,* before trying ending sounds. "Say the word *fort.* Now say it without the first /f/ sound." The task of phonemic deleting is often easier if it is presented as a sound-take-away-game. "I can say the sounds in *rat,* /r/a/t. If I take away the sound /r/, I have the word *at.* I can say the word *meat*, /m/e/a/t. If I take away the first sound of /m/, I have *eat.*" Continue to try whole-class and small-group tasks as needed.

Phoneme Manipulation

Being able to manipulate phonemes is a skill that includes the ability to modify, change, or move the individual sounds in a word. Students play around with the sounds in a word to make a new word. And it turns out that their ability to do so is predictive of later reading and writing development (Savage & Carless, 2005). Being able to manipulate phonemes in spoken words is a prerequisite to visually manipulating letters or combinations of letters to eventually read and write. When teaching phoneme manipulation, start by sharing with children what you are going to be doing and why.

"Today we are going to make new words by manipulating or changing some letters and their sounds in words we already know so that we can make new words that are a little different."

Begin to make new words from ones that children have previously used when blending, segmenting, and deleting. Say to the children, "I will say a word; then I will change a sound so I can make a new word. You listen to see if you can tell me which sound changed. My word is *at.* I will put a /b/ sound before /at/. What word do you now hear? Let's add sounds before /at/ to make new words."

Continue sharing additional words and then manipulating the initial phoneme. "I can say the word *at.* What other new words can we make by changing the first sound?" (Continue the pattern using the letters *b, f, h, p, r,* and *s.*)

Continue further by saying additional first sound manipulations. "My word is *un.* If I add /s/, what word do you hear?"

Continue the pattern. What other sounds can you add before *un* to make new words?" (Continue the pattern with *g, n, r,* and *s.*) Note that it's harder to change middle sounds (e.g., *bag, beg, big, bug, bog*). Songs like "Apples and Bananas" provide children with opportunities to change long and short vowel sounds at the beginning, middle, and end of words:

- I like to ate, ate, ate apples and bananas. (long and short *a*)
- I like to eat, eat, eat, eeples and benenes. (long and short *e*)
- I like to ite, ite, ite, ipples and bininis. (long and short *i*)
- I like to oat, oat, oat, opples and bononos. (long and short *o*)
- I like to ute, ute, ute, upples and bununus. (long and short *u*)

TEXT-TO-SELF CONNECTION

How is phonological awareness taught in your classroom?

_____

_____

_____

Using the traffic light scale, with red being not confident, yellow being somewhat confident, and green indicating very confident, how confident are you in your ability to

- Teach phonological awareness instruction in your classroom?

- Use Elkonin boxes, or sound boxes?

- Teach phoneme segmenting and blending?

- Teach phoneme deletion and phoneme manipulation?

Takeaways

- Phonological awareness starts with students' ability to recognize words in sentences, syllables in words, and then sounds within those words.
- Phonemic awareness is an important aspect of word recognition. As Adams (1990) noted, children who lack the skills of phonemic awareness are "severely handicapped in their abilities to master print" (p. 412).
- The sound units (phonemes) in English are not obvious. The 26 letters make about 44 phonemes, and sounds are represented in 250 different spellings.
- Students need to practice focusing on the sounds in words, substituting, deleting, and manipulating those sounds.

PS: Answers to the anticipation guide are F, F, T, T.