

Phonological Awareness Is Child's Play!



Hallie Kay Yopp and Ruth Helen Yopp

"MISS BINDER! MISS BINDER! I HAVE ANOTHER WAY! LISTEN! Old MacDonald had a farm, Me Mi Me Mi Mo!" Four-year-old Josh and his peers burst into giggles as he sings his version of "Old MacDonald's Farm." Then Therese offers "Le Li Le Li Lo," and the group boisterously sings the modified song yet again. Miss Binder smiles and encourages other children to create their own versions.

In the room next door, children enthusiastically participate as their teacher reads aloud *The Hungry Thing* by Jan Slepian and Ann Seidler (1967). When Ms. Mahalingam reads the Hungry Thing's request for "featloaf," the children chorus, "Meatloaf! Meatloaf! The Hungry Thing wants meatloaf!" When she reads that the Hungry Thing wants to be served "Gollipops," the children interrupt the reading to cry, "Lollipops!" Ms. Mahalingam follows the book experiences by helping the children notice that the Hungry Thing replaces initial sounds in words with different sounds, and she extends their learning by inviting them to experiment with substituting the initial sounds in other words.

Both Miss Binder and Ms. Mahalingam had thoughtfully planned these experiences to engage the children in activities that stimulate interest in and experimentation with the sounds of language. They are supporting phonological awareness, a crucial part of reading development.

What is phonological awareness?

Phonological awareness is sensitivity to the sound structure of language. It demands the ability to turn one's attention to sounds in spoken language while temporarily shifting away from its meaning. When asked if the word *caterpillar* is longer than the word *train*, a child who answers that the word *caterpillar* is longer is demonstrating the ability to separate words from their meanings. A child who says the word *train* is longer has not separated the two; a train is obviously much longer than a caterpillar!

Children who can detect and manipulate sounds in speech are phonologically aware. The children who added a sound to E-I-E-I-O demonstrated some phonologi-

Hallie Kay Yopp, PhD, a former teacher of young children, is a professor in the College of Education at California State University, Fullerton, and co-director of the California State University systemwide Center for the Advancement of Reading.

Ruth Helen Yopp, PhD, is a professor in the College of Education at California State University, Fullerton, where she teaches preservice and graduate courses in literacy development. She works closely with practitioners through her involvement in new teacher induction programs.

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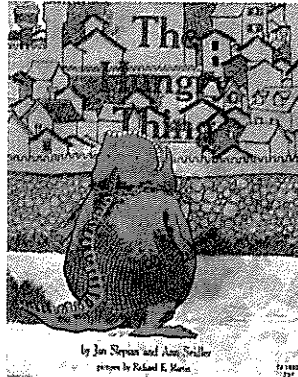
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cal awareness, as did the children who substituted one sound for another when listening to *The Hungry Thing*. While several children were unable to detect and engage in these sound manipulations, they were delighted with the activities nonetheless and benefited from exposure to such language play.

Phonological awareness has two dimensions and progresses from holistic and simple forms of awareness to more complex forms (Treiman & Zukowski 1991; Cisero & Royer 1995; Anthony et al. 2003). One dimension is the *size* of the sound unit being attended to and manipulated. From larger to smaller, the sound units include syllables, onset-rime units, and phonemes. These are described in the sections that follow.

The second dimension is the *type of manipulation* of the sound units and the child's ability not just to recognize the manipulation but also to perform it. Manipulations may include substituting one sound for another in a word (for example, *tookies* for *cookies*), adding or removing sounds from words, blending sounds together to make words, and segmenting words into smaller sound units. (See "Important Understandings about Phonological Awareness.")



Syllable awareness

The ability to discern syllables (that the word *friend* has one syllable, *cubby* has two, *tricycle* has three, and so on) occurs early in the developmental progression of phonological awareness. When our own children were 4, they enjoyed playing word games in which they identified the word that would result if syllables were combined. Driving down the street, one of us might say, "I see a mar—ket," and our children would be delighted to respond, "Market! You see a market! More, Mommy!" "OK. I see a lan—tern." "Lantern, Mom!" Blending the syllables together to form words seemed relatively easy for them; they caught on to the game quickly.

Our children found it more difficult to break words apart to provide the syllable clues. Their ability to segment words into syllables took longer to develop. "Mom, I want to try it. I want to give the broken word. Ready? I see an . . . apple!" they might say, attempting to give the clue but instead blurting out the entire word. They recognized that they had not done something quite right, but they were not sure what it was or what to do about it. Eventually, however, our 4-year-olds could segment words into syllables, and they enjoyed trying to stump us with multisyllabic words: "Guess what I am saying: *Dal—ma—tian*; *mo—tor—cy—cle*; *hel—i—cop—ter*." We called this play with syllables the broken word game.

From larger to smaller, the sound units include syllables, onset-rime units, and phonemes.

Onset-rime awareness

Reflecting on onsets and rimes—smaller units within syllables—is a more complex skill. Onsets are the consonant sounds that precede a vowel in a syllable. For instance, the sound *c* is the onset in the one-syllable word *cat*; *fr* is the onset in *frog*. In the two-syllable word *window*, *w* is the onset in the first syllable (*win*), and *d* is the onset in the second syllable (*dow*). Some syllables have no onsets. *An*, for instance, has no onset; no sound precedes the vowel.

Important Understandings about Phonological Awareness

- Phonological awareness is the ability to attend to and manipulate units of sound in speech (syllables, onsets and rimes, and phonemes) independent of meaning.
- Phonemic awareness is one aspect (and the most difficult) of phonological awareness. It is the ability to attend to and manipulate phonemes, the smallest sounds in speech.
- Phonological awareness includes matching, synthesis (for example, blending, adding), and analysis (for example, counting, segmenting, deleting) of spoken sounds. Analysis tasks are generally more challenging; production is typically more difficult than recognition.
- Phonological awareness and phonemic awareness are different from phonics. Phonics is a means of teaching reading in which the associations between letters and sounds are emphasized.
- Phonological awareness is highly related to later success in reading and spelling.
- Phonological awareness can be taught. Instruction should be child-appropriate and intentional.
- Although instruction should generally progress from larger to smaller units of sound, phonological awareness development is not lockstep and children need not master one level before being exposed to other levels of phonological awareness.
- Concrete representations of sound units (such as chips and blocks) may help make mental manipulations of sounds easier for some children. Pictures and objects may help reduce memory load.

All syllables have a rime unit. Rimes consist of the vowel and any sounds that follow it in the syllable. For example, the rimes in *cat* and *frog* are *at* and *og*, respectively. The rime in the first syllable of *window* is *in*, and the rime in the second syllable of *window* is *ow*. A rime may consist only of the vowel if no consonant follows. Children who identify the onset-rime level of speech can, among other manipulations, blend *mmm—an* together to form the spoken word *man* and separate the *r* from the rime *ipe* to say *rrr—ipe*.

Phoneme awareness

Smaller still—in fact, the smallest unit of speech that makes a difference in communication—are phonemes. These are the individual sounds of spoken language. The number of sounds in speech varies greatly among languages, from as few as about ten phonemes in Múra-Pirahã (spoken in a region of Brazil) to more than 140 phonemes in !Xu (spoken in a region of Africa). English speakers use

In the remainder of this article, sounds are represented by letters between slash marks; for example, /s/ represents the sound at the beginning of the word *soap*. Letter names are represented by capitals.

Why is phonological awareness important in reading development?

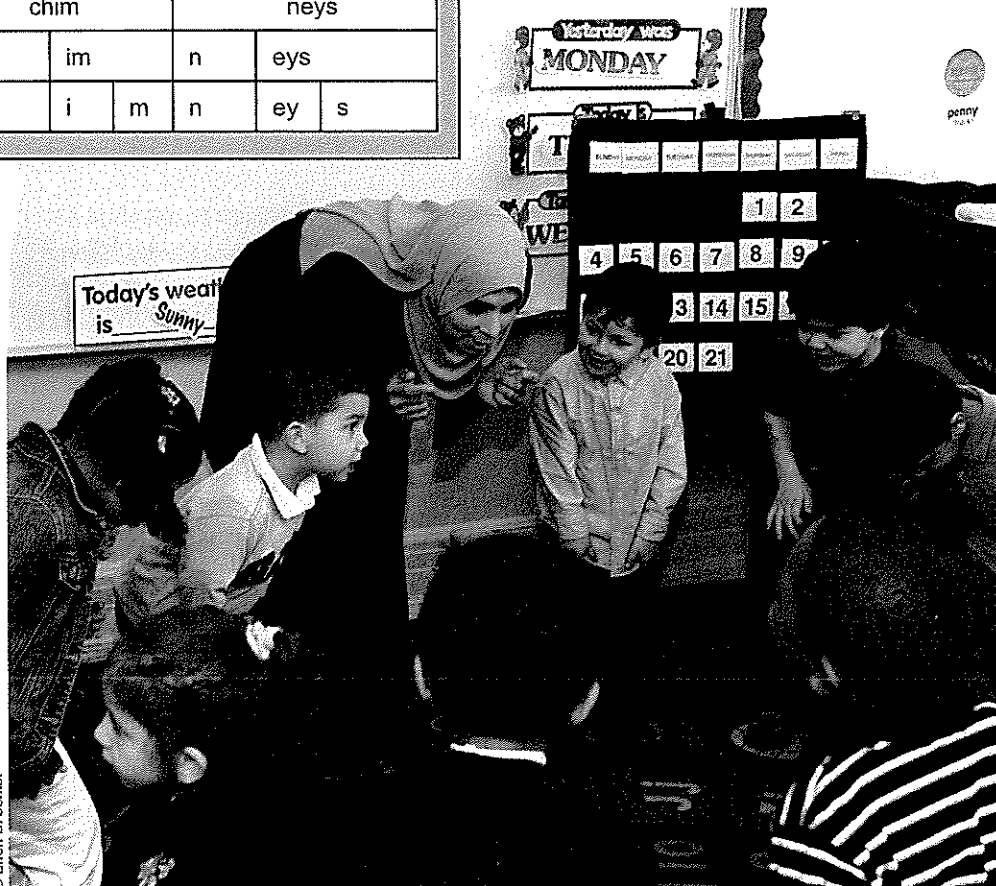
In English—and many other languages—the written language is predominantly a record of the sounds of the spoken language. With a few exceptions, the English language is written out sound by sound. (Exceptions include but are not limited to symbols such as \$, %, #, and &, which represent ideas rather than the sounds of speech; you can't sound out these symbols!) For example, to write the word *cat*, we listen to the individual sounds in the word (the phonemes) and then use the symbols that represent those sounds:

C-A-T. Sometimes sounds are represented by letter combinations rather than a single letter. The three sounds in *fish* (/f/-/i/-/sh/) are written with four letters: F-I-S-H; the combination of S and H represents the single sound /sh/.

We must be able to notice and have a firm grasp of the sounds of our speech if we are to understand how to use a written

Phonological Units						
What are the phonological units in the word <i>chimneys</i> ?						
Word	Chimneys					
Syllables	chim			neys		
Onsets and Rimes	Ch	im	n	eys		
Phonemes	Ch	i	m	n	ey	s

about 44 sounds. Spanish speakers use about 24. Thinking about and manipulating these smallest sounds of speech is the most complex of the phonological awareness skills and is referred to as *phoneme awareness* or *phonemic awareness*. Typically it is the last and deepest understanding of speech that children acquire (Stahl & Murray 1994). It involves knowing that the spoken word *light* consists of three sounds (l-igh-t) and the spoken word *black* consists of four (b-l-a-ck). (See "Phonological Units" for a breakdown showing the syllables, onsets, rimes, and phonemes in the spoken word *chimneys*.)



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Noticing and being able to manipulate the sounds of spoken language—phonological awareness—is highly related to later success in reading and spelling.

system that records sounds. Individuals who are unaware that speech is made up of small sounds—those who don't notice and cannot mentally grab hold of and manipulate them—have difficulty learning to read a written system based on sounds. A child's ability to reflect on language itself, specifically the sounds of language and especially the phonemes, supports the child's understanding of the logic of the written code. That we use symbols to represent small sounds *makes sense* because the English language consists of small sounds. Indeed, in the last several decades a preponderance of evidence has revealed that noticing and being able to manipulate the sounds of spoken language—phonological awareness—is highly related to later success in reading and spelling (see Adams 1990 and Ehri et al. 2001 for reviews). The developmental origins of this awareness can be traced to the preschool period (Lonigan, Burgess, & Anthony 2000; Ehri & Roberts 2006; Lonigan 2006; Phillips, Clancy-Menchetti, & Lonigan 2008).

How can preschool teachers support phonological awareness development?

Young children have a natural propensity to play with language, and the early years are an optimal time to foster and extend their explorations. For instance, in Ms. Garcia's room, the children learned the Spanish chant "Bate, Bate Chocolate," which helps children break down syllables: "Uno, dos, tres, CHO! Uno, dos, tres, CO! Uno, dos, tres, LA! Uno, dos, tres, TE!" Four-year-old Franco later adapted this chant as he played with and named animal figurines, spontaneously chanting, "Uno, dos, tres, O! Uno, dos, tres, SO!" and "Uno, dos, tres, BU! Uno, dos, tres, RRO!" In Mr. Hernandez's room, 3-year-old Jessie pounded a few blocks together and vocalized, "Boom boom bam bam boom boom bim!" Another time, Mr. Hernandez heard Molly singing quietly, "Molly, dolly, polly, jolly, Molly, dolly, polly, jolly." Insightful preschool teachers notice children's spontaneous play with the sounds of language, respond to it, and encourage it, often joining in themselves. Mr. Hernandez, for example, joined Jessie, tapped two blocks together, and chanted, "Zoom zoom zam zam zoom zoom zim! Have you got another way?" He extended Jessie's play with sounds.

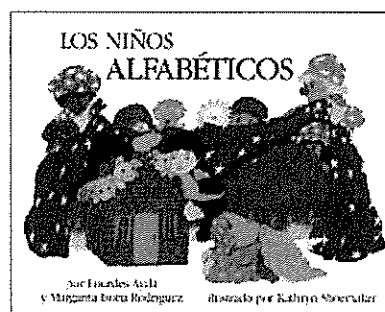
In addition to watching for these spontaneous, teachable moments, Mr. Hernandez deliberately establishes a phonologically rich environment (Torgesen & Mathes 1998) simi-

lar to a print-rich environment. Children learn about print when they see it used in a variety of contexts and for a variety of purposes. So too can children benefit from being surrounded by the sounds of language—as they sing, chant, listen to books, and play games that focus on sound manipulation.

Furthermore, Mr. Hernandez deliberately engages children in activities that target different levels of phonological awareness, planning experiences that move from targeting larger sound units to smaller ones. He models sound manipulations, later guiding the older children to perform them. He considers the type of manipulation, recognizing that blending is typically easier than segmenting. He shows pictures of animals and, after ensuring that the children can identify them, has them point to the one he means when he says /ze-/bra/. In small groups, children play the coin sound game, in which they represent sounds by moving coins or chips, or they play with interlocking blocks, pulling them apart as they segment words into sound chunks.

Below we share five suggestions that preschool teachers can easily implement as they support young children's development of phonological awareness.

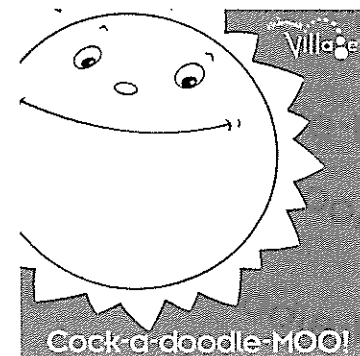
Read aloud books that play with sounds



Preschool teachers can read aloud books that draw attention to sounds (Yopp 1995; Yopp & Yopp 2000). For example, *Los Niños Alfabéticos*, by Lourdes Ayala and Margarita Isona-Rodríguez, uses alliteration and rhyme throughout. Sound

substitution is the focus of *Cock-a-doodle-MOO!* by Bernard Most, which describes a rooster's dismay when he loses his voice. The rooster enlists the aid of a cow to awaken the farm residents. Unable to say "cock-a-doodle-doo," the cow says, "mock-a-moodle-moo," "sock-a-noodle-moo," and other mixed-up versions of the morning greeting.

Reading aloud books like these helps draw even very young children's attention to the sounds of language. Teachers of older preschoolers—ages 4 and 5—may extend the



learning by deliberately focusing on the phonological features. For instance, teachers can encourage children to predict rhyming words or alliterations and to repeat and add to the silly sound manipulations: "The cow said 'Mock-a-moodle-moo!' How silly! We can do this, too. How about 'dock-a-doodle-doo' or 'pock-a-poodle-poo'? Who has another way?"

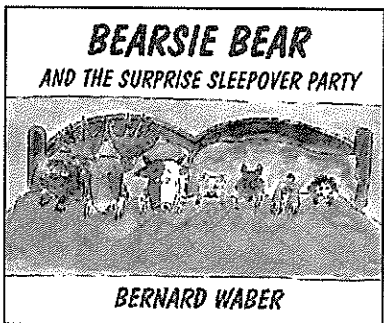
After reading aloud Bernard Waber's *Bearsie Bear and the Surprise Sleepover Party*, Ms. Hansen chuckled with the children in her class about the names of the animals in the story—Moosie Moose, Foxie Fox, Goosie Goose, and others. She repeated the names a few times, then shared a collection of small stuffed animals and encouraged the children to name them. Ms. Hansen placed the animals in a play center, along with the book and a box with blankets. For days, children reenacted the story, created their own

versions, and—most important—repeated and continued to play with the sounds in the animals' names.

Alphabet books are another valuable resource for promoting phonological awareness. Teachers and children talk about sounds (in addition to letters) as they look at and read alphabet books.

When using any book to stimulate phonological awareness in 4- and 5-year-olds, do the following:

- Select a book that makes obvious use of sound play. Read it yourself before reading it to children. This will ensure smooth reading and prepare you to comment on, highlight, explain, and extend the book's language play.
- Comment on the book's language play. Invite children to share their observations about the language and to add their own play with sounds. Appreciate and visibly enjoy children's efforts.
- Read the book several times in a period of a few weeks. Encourage children to participate by chanting along or predicting the sound manipulations as you read.
- Place the book in a readily accessible location for several weeks or longer, and encourage children to revisit the book on their own.
- Share book-related objects that encourage further interaction with the story and that might stimulate additional story-related language play. Model the use of the objects, but appreciate children's creativity.
- Reread the book on subsequent occasions, exploring the language play again.



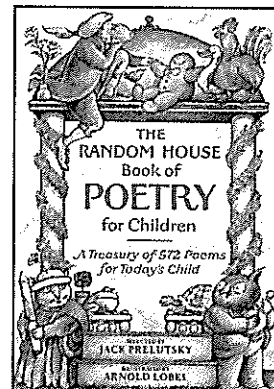
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Share poetry that plays with sounds

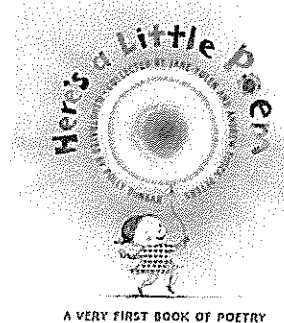
Teachers may share poetry with children and encourage older preschoolers to recite the poems and add to them. For example, after children have heard and chanted "Hickory Dickory Dock" several times, suggest they create a poem titled "Hickory Dickory Dare." Ask the children where the mouse might go. Some children might appropriately substitute the onset by saying "The mouse ran to the fair" or "The mouse ran through the hair." Other children might offer responses such as, "The mouse ran to the store." Chuckle and appreciate this response for its image, but gently guide the child to offer a word that fits the sound pattern. Provide feedback, such as "Good idea! I can picture in my head a mouse running to a store! Let's see if we can use a word that rhymes with *dare*: Hickory Dickory *Dare*, the mouse ran to the *bear*. What else rhymes with *dare*? *Care*? *Share*? Let's try!" Invite enthusiastic children to offer other

variations of the poem: "Hickory Dickory Doo," "Hickory Dickory Dub," "Hickity Dickity Diddle."

Poetry anthologies for young listeners often include poems that play with sounds. Shel Silverstein's collections have many such poems, including one of our favorites, *Falling Up*. Silverstein retells the story of Pinocchio, referring to him as the wooden bloke-io, whose nose grew as he spoke-io, thought life was a joke-io (and got in trouble),



but by the end of the two-page poem everything was okey-dokey-o. *The Random House Book of Poetry for Children*, compiled by Jack Prelutsky, and *Here's a Little Poem: A Very First Book of Poetry*, selected by Jane Yolen and Andrew Fusek Peters, are also good resources for English speakers. *Los Pollitos Dicen/ The Baby Chicks Sing*, by Nancy Abraham Hall and Jill Syverson-Stork, and *Mother Goose on the Rio Grande*, by Frances Alexander, are appropriate for Spanish speakers.



When sharing poetry (or songs) to stimulate phonological awareness in 4- and 5-year-olds, do the following:

- Select a poem that has sound play as a dominant feature.
- Read the poem to the children several times. Be sure to enjoy the poem as you recite it. Keep the sharing oral so the focus is on listening. Display the printed poem later if you wish.
- Encourage children to learn short poems well enough to say them with you. This may take several days and multiple repetitions. With long poems, encourage children to learn a few lines or phrases that they can chant.
- Comment on the language play, drawing attention to obvious alliterations and other sound manipulations (such as the “io” in Silverstein’s “Pinocchio”). Invite children’s responses.
- Encourage, but do not require, the children to be creative with the poem, making their own versions or extensions. Provide prompts, as in the case of “Hickory Dickory Dock.” Write children’s creations on posters, and display them in the room for further sharing. Consider compiling a classroom poetry book. Keep a copy in the library corner, and make copies to send home.
- Revisit poems periodically during the year.

Share songs that play with sounds

Many children’s songs include sound play. “Willoughby Wallaby Woo,” for instance, prompts children to sing their own names, substituting /w/ for the initial sound (the onset) in the first syllable:

Willoughby Wallaby Woo,
An elephant sat on you.

Willoughby Wallaby Wee,
An elephant sat on me!

Willoughby Wallaby Weter,
An elephant sat on Peter.

Willoughby Wallaby Willy,
An elephant sat on Billy.

In “Down by the Bay,” a moose kisses a goose, llamas wear pajamas, and a whale has a polka dot tail. In “The Bee and the Pup,” children sing about a bee-i-ee-i-ee who sat on a wall-i-all-i-all and went buzz-i-uzz-i-uzz. In “Oo-pples and Boo-noo-noos,” children substitute vowel sounds to sing about apples and bananas in silly ways. Children become enthusiastic participants in these playful songs and often improvise original lyrics. Some songs are particularly well



“I was pleasantly surprised to see the direct application of learning to my career. Each and every aspect of the reading, discussion, and homework assignments directly related to what I do with children and families!”

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Kindergarten Teacher
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suitable for this type of play (Yopp 1992; Yopp & Yopp 2002). The recommendations for poetry use apply to the use of songs as well.

Play games that draw attention to sounds

One frequently requested game Miss Son plays with 4- and 5-year-olds is the guessing game "I Spy." She says, "I spy with my little eye something all of you are wearing that begins like this: /sh/." The children look at one another, and several exclaim, "Shoe!" "Yes. Shoe begins with /sh/. Listen: shhhhhhoe," she draws out. Next she says, "I spy with my little eye something on the wall that begins like this: /m/." Guesses from the children include "mirror" and "map." Tommy, noting that Miss Son appears to be looking in the direction of the book corner, says "books." Miss Son gently reinforces the correct responses by exaggerating the initial sound, and she comments that Tommy thought of an object that begins with the sound /b/.

On another day, Miss Son introduces the puppet Ziggy Zebra. She says that Ziggy is silly because he always pronounces names by substituting /z/ at the beginning. Ziggy pronounces Miss Son's name, Miss Zon, and Tommy is called Zommy. Over the next few days, she introduces other puppets: Benny Beetle, who says everyone's name with a /b/ sound at the beginning; Lizzy Ladybug, who says everyone's name with an initial /l/ sound; and so forth. Later, Miss Son will use the puppets to model segmentation of phonemes. A puppet will tell the children it can run

/f/-/a/-/s/-/t/ and ask if the children know what it said. It will say that it likes to eat /p/-/ea/-/s/. The children participate enthusiastically and then use the puppets on their own.

Teachers can create many games that play with sounds (see "Games for Phonological Awareness" for additional examples). In doing so, they should consider the following:

- Select games that stimulate language play among participants.
- Ensure that games are enjoyable (even silly) and stress-free for participants.
- Encourage, but do not require, children to participate. Some will contribute and others will listen.
- Participate in the game and model an interest in and excitement about language.
- Respond positively and enthusiastically to children's attempts to manipulate the sounds of their language.

Involve families

The home, too, provides fertile ground for sound play (Bishop, Yopp, & Yopp 2000). Teachers can share books, poems, songs, and games with families to enjoy with their children at home. This practice communicates to families the value of engaging in what might seem to be silly, nonsensical sound play with their children. Encourage families who speak a language other than English to use

(cont'd on p. 21)

Games for Phonological Awareness

Clapping Syllables

- Explain to children that the game is to clap the beats (or chunks) of the words they speak.
- Begin with clapping the syllables in children's names. For instance, clap three times as you slowly chant "Erica." Clap two times as you say "Kareem." Clap one time as you say "Dan."
- Clap every child's name during a group activity. It is important to slow down and emphasize each syllable.
- Clap all the syllables in other words. Try *table, chair, carpet, bookcase, lunch, paper, playground, basketball*. Clap on a variety of occasions. For instance, clap the names of foods you

are eating for lunch. Let children offer words to clap.

- Say a sentence slowly, and then invite children to repeat the sentence with you while you all clap the syllables ("The children went outdoors" will have six claps).

Guess Which Object

- Hold up two objects. (Photographs or picture cards will also work.) Be sure that the objects begin with different sounds, such as a leaf and a marker. Identify each object with the children to ensure that you all are using the same label.
- Tell the children that the object of the game is for them to guess which of the objects you are thinking of. Let them know that you will give them a clue.

- Tell children the first sound in the word you are thinking of (/l/ if you are thinking of the leaf). Or tell children all the individual sounds of the word ("I'm going to say what I'm thinking of in a funny way. I'm thinking of the /l/-/ea/-/f/"). Or remove the initial sound of the word ("I'm going to leave off part of the word. Do you know what I'm thinking of? It's the *ea*").
- Congratulate children for correct responses. Chuckle with them if you were able to "trick" them.
- Repeat with other objects.
- Offer children the opportunity to be the person who is thinking of the object and provides the clue.