



READING MATTERS TO MAINE ◆◆◆

Teaching ALL Children to Read



UNIVERSITY OF
SOUTHERN MAINE

A Reading Matters to Maine Conversation About Reading

Sponsored by Reading Matters to Maine, USM's Language, Literacy & Culture Program, and USM's Special Education Program

Phonemic Awareness: The Impact on Learning to Read and Spell

Presenter: Candice Bray, Sc.D.

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Study Guide

This study guide may be used to help guide note-taking while watching “Phonemic Awareness: The Impact on Learning to Read and Spell” (originally recorded on September 27, 2016). In addition to guided-note taking formats, this study guide also includes reflection questions and activities, which may be discussed among small groups of educators.

Part One – Introduction and Overview

(video segment: beginning to 4:00)

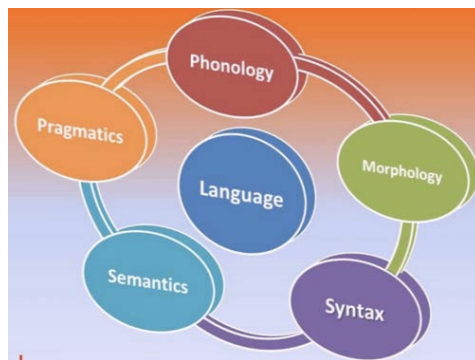
- **Agenda**
 - Introduction and overview.
 - Domains of language.
 - Related processing areas.
 - Phonological processing and phonemic awareness.
 - Teaching phonemic awareness.
 - Specific activities and strategies.
 - Word level, syllable level, and phoneme (sound) level.

Part Two – Domains of Language

(video segment: 4:00 to 5:24)

- **The Five Domains of Language**

- **Phonology:** the _____ system of language.
 - This is the focus of the current presentation.
- **Morphology:** the study of _____ of language and how they are combined in word formation.
- **Semantics:** the study of _____ and word relationships.
- **Syntax:** the system of _____ used in constructing and understanding the form of _____.
- **Pragmatics:** the social use of language; the system of rules for the use of _____.



- **Phonology**

- The study of how _____ are organized and used in languages.
- The phonological system of language includes:
 - An inventory of _____ and their features.
 - Rules that specify how _____ interact with each other.
- Within the domain of phonology, we have _____
_____, as it related to literacy.

Part Three – Related Processing Areas

(video segment: 5:24 to 16:59)

- **Phonological Processing**

- The explicit awareness of the sound structure of language at the

_____, _____, and _____ levels.

- This includes the ability to manipulate (segment, blend, play with) that sound structure.

- This can all be done without _____. It is pure, _____ skill.

- Reflection and/or Group Discussion:

- As part of her presentation, Dr. Bray read a selection from *Giraffe's Can't Dance*, a children's book, authored by Giles Andreae and illustrated by Guy Parker-Rees (Cartwheel Books, 2012).
 - Describe the analogy that Dr. Bray states, comparing music and literacy.

- **Working Memory**

- A system for _____ storing and _____ information required to carry out complex cognitive tasks, such as learning, reasoning, and comprehension.
- Students with working memory deficits may have difficulty “holding on” to sounds, letters, and/or words.
 - When teaching phonological awareness and/or phonemic awareness to a student with a working memory deficit, you will often need to use _____, _____, or _____ to help support working memory.

- **Word Retrieval**

- The mental activity of selecting/retrieving from your memory, words that you know to express what you want to say.
 - *Example: a student may say “automobile” when reading orally and presented with the word “car.”*

- **Rapid Automatized Naming (RAN)**

- The ability to _____ and _____ name common symbols, such as colors, shapes, objects, letters, and digits.
 - *Example: a student is able to read a word that appears in the beginning of a paragraph, but is unable to read it when it appears further down the page.*
- **Double deficit:** when students exhibit difficulties with both _____ and _____ .
 - These students are greatest at risk for challenges with literacy: both with learning to read and with ongoing challenges with automaticity and fluency.

- These students need to work on automaticity as early as possible.
 - *Example: even if the student knows only 4 letter sounds, make flashcards and review those sounds often to build automaticity.*
 - *Example: even if the student knows only 3 high-frequency words, make flashcards and review those words often to build automaticity.*

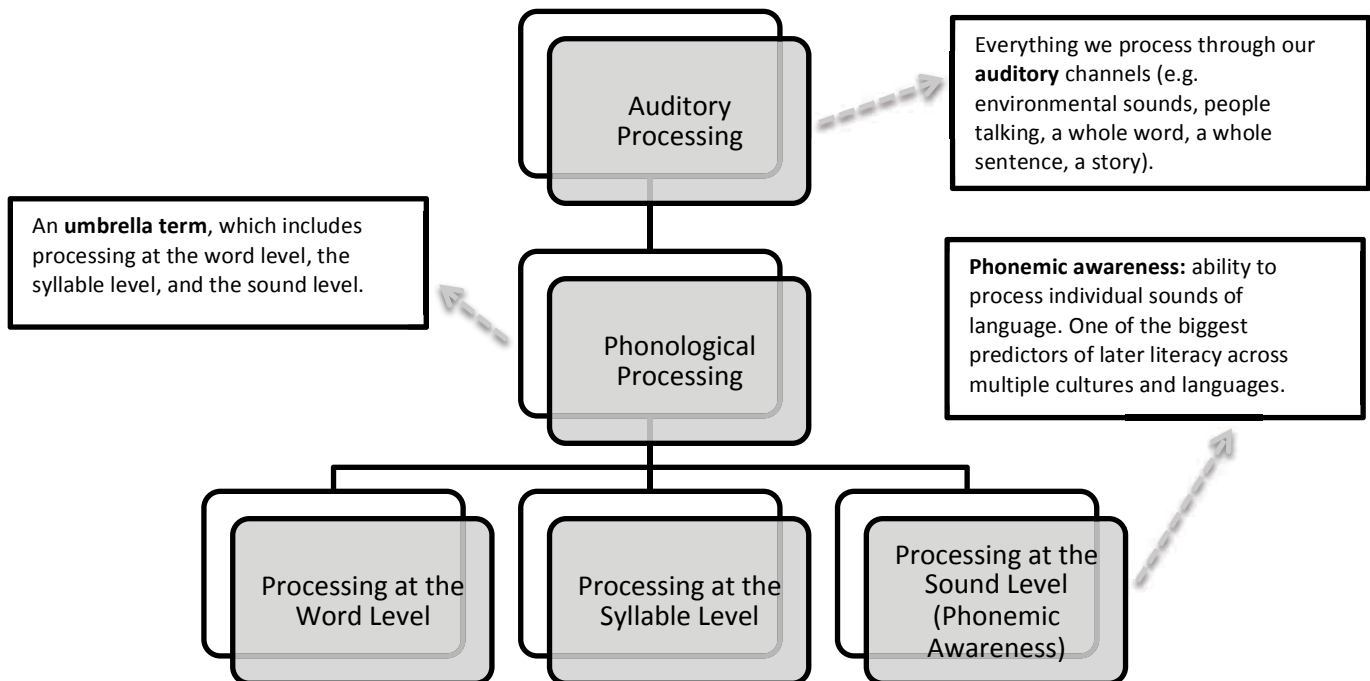
- **Orthographic Processing**

- **Orthography:** the total _____ system of a language – also refers to the spelling patterns. Our print system, our spelling system, our letters.

Part Four – Phonological Processing and Phonemic Awareness

(video segment: 16:59 to 28:06)

- **Auditory Processing: “The Big Circus Tent Analogy”**



- **Phonological Processing**

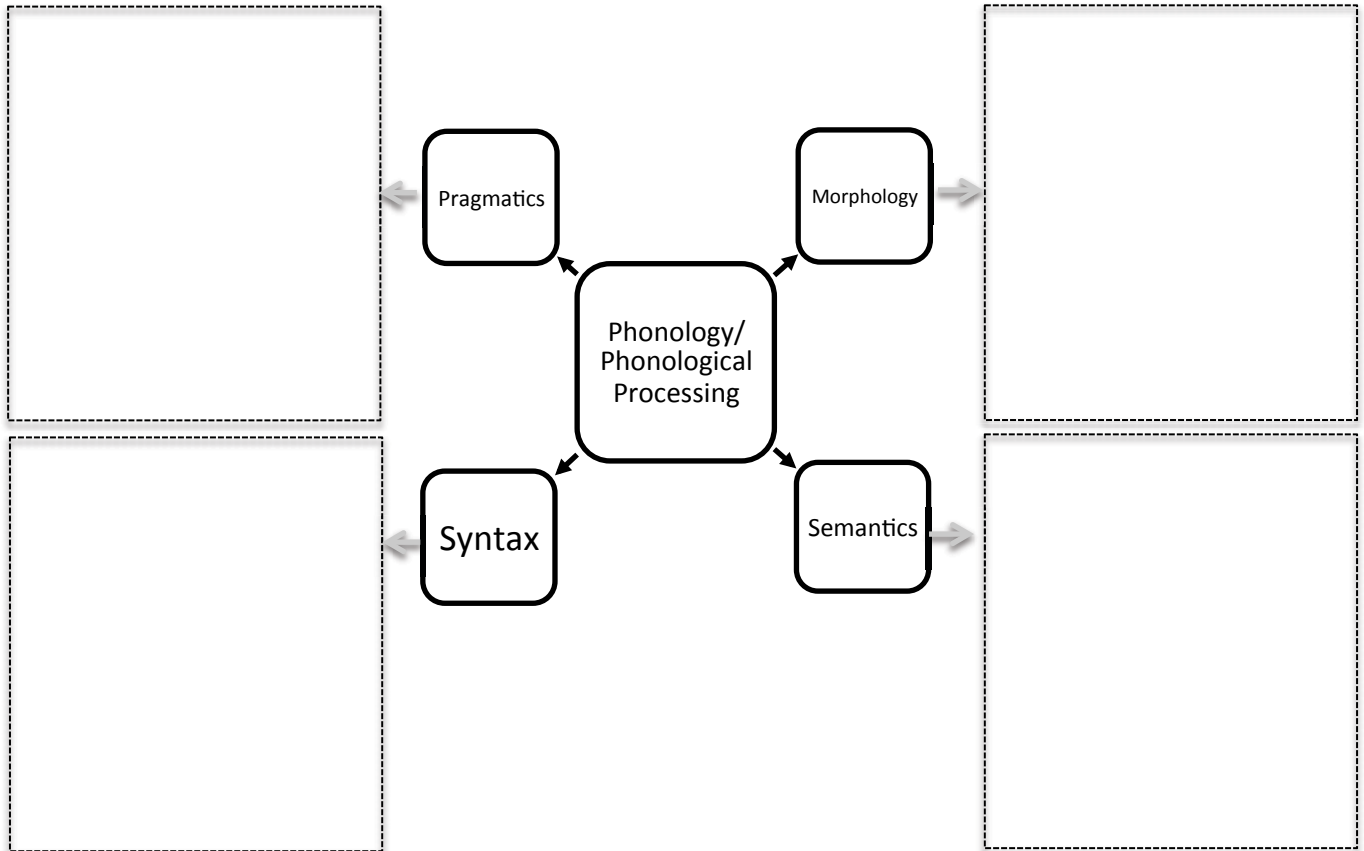
- The explicit awareness of the sound structure of language at the _____, _____, and _____ levels and the ability to manipulate (segment, blend, play with) that sound structure.

- **Phonemic Awareness**

- The ability to process, identify, the individual _____
(phonemes) in spoken words.

- **The Relationship Between Phonological Processing and the Other Domains of Language**

- Use the following graphic organizer to record Dr. Bray’s examples of how difficulties with phonological processing can impact other domains of language.



- **Research Related to Phonemic Awareness**

- “Specifically, the results of the experimental studies led the Panel to conclude that PA training was the cause of improvement in students’ phonemic awareness, reading, and spelling following training. The findings were replicated repeatedly across multiple experiments and thus provide converging evidence for causal claims.” (Report of the National Reading Panel, 2000).
 - Since this report was published, additional research has been published that continues to support the impact of phonemic awareness on literacy. Phonemic awareness continues to be one of the _____ predictors of later reading success.

Part Five – Teaching Phonemic Awareness

(video segment: 28:06 to 40:11)

- **Phonemic Awareness Can be Taught and Learned (28:06)**
 - Without the understanding that words are made up of sounds, students generally have a difficult time learning letter-sound correspondence.
 - Phonemic awareness helps children learn to _____, _____, and develop vocabulary.
 - Phonemic awareness instruction is most effective when children are taught to manipulate phonemes by using _____ of the alphabet.
 - Linking phonemes to letters of the alphabet should be introduced after basic phonemic awareness is developed. The purely auditory skill should be developed first, and then linked to print.

- Reflection and/or Group Discussion:

- Dr. Bray stated, “phonemes are the raw material from which literacy is woven.” Following this statement, she passed out Velcro strips to the group.
 - What do the Velcro strips symbolize?



- **Connecting to Print**

- Once a clear connection has been made to processing _____ of language, you can begin to pair sounds with _____.
- *Example: once a student can identify the initial sounds in words, the teacher may begin to pair those sounds with letters.*

- Explore:

- Dr. Bray mentions a resource, called SPELL-Links. Explore SPELL-Links in greater depth by visiting the following links:
 - **Main website:**
 - <http://www.learningbydesign.com/home.html>
 - **Curriculum overview:**
 - <http://nebula.wsimg.com/d4662c30709d2dd584b9fa02ee22c96a?AccessKeyId=E197AE8D5240BD028530&disposition=0&alloworigin=1>
 - **Sample lessons:**
 - <http://nebula.wsimg.com/d9763a3dfb91e2df123cf14df6d05355?AccessKeyId=E197AE8D5240BD028530&disposition=0&alloworigin=1>

- **All Ages and Don't Stop**

- Assessment and intervention in phonemic awareness is for all ages of anyone struggling with _____.
- Adjust intervention activities based on the age/interests of the person receiving intervention.
- As you teach more advanced phonics and spelling concepts, build in phonemic awareness activities that are aligned with the phonics teaching objectives.

“Faced with an alphabetic script, children’s levels of phonemic awareness on entering school may be the single, most powerful determinant of their success--or failure -- in learning to read.”
– Marilyn Jager Adams

- **Developmental Considerations**

- **Rhyme**

- **Word to word segmentation**

- Single syllable words (*Example: I like you.*)
- Multi-syllable words (*Example: Cookies are delicious.*)

- **Syllable segmentation and blending**

- Compound words (*Examples: cowboy, sunshine, cupcake*)
- 2 syllable words (*Examples: table, picnic, noodle*)
- 3 syllable words (*Examples: vacation, fantastic, avalanche*)

- **Syllable manipulation** (*Example: “say ‘table’ without the /ta/.”*)

- **Phoneme identification**

- Initial (*Example: “what sound do you hear at the beginning of ‘mouse?’”*)
- Final (*Example: “what sound do you hear at the end of ‘dog?’”*)
- Medial (*Example: “what sound do you hear in the middle of ‘cat?’”*)

- **Phoneme segmentation**

- Onset rime (*Examples: bat = /b/ /at/, shut = /sh/ /ut/*)
- Words with 2 phonemes (*Examples: me = /m/ /e/, she = /sh/ /e/, no = /n/ /o/*)
- Words with 3 phonemes (*Examples: sat = /s/ /a/ /t/, chip = /ch/ /i/ /p/*)
- Words with initial blends (*Examples: slip = /s/ /l/ /i/ /p/, trap = /t/ /r/ /a/ /p/*)
- Words with final blends (*Examples: milk = /m/ /i/ /l/ /k/, lost = /l/ /o/ /s/ /t/*)
- Full segmentation of words with 5-6 sounds (*Example: crust = /k/ /r/ /u/ /s/ /t/*)

Most critical skills to teach:

- Phoneme blending
- Phoneme segmentation
 - Full segmentation

- **Phoneme blending**

- Follows a similar sequence as phoneme segmentation. With blending, we are asking the student to state the word based on the sounds he/she hears.

(Example: “blend the sounds together to make a whole word: /p/ /u/ /p/. That’s right: the word is ‘pup.’”)

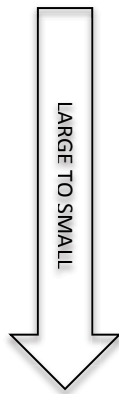
- **Phoneme manipulation** (*Example: “say ‘fit’ without the /f/.”*)

Part Six – Specific Activities and Strategies

(video segment: 40:11 to end)

- **General Teaching Guidelines**

- Keep materials/movements consistent and separate.
 - Students, particularly those who are at-risk for reading difficulties, benefit from _____ and _____ materials/movements across the various levels of phonological awareness.

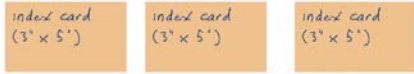




- **Word level:**
 - Manipulative: index cards (one card for each word)
 - Motor movement: clapping (one clap for each word)
 - **Syllable level:**
 - Manipulative: smaller, paper rectangles (one rectangle for each syllable)
 - Motor movement: arm tapping (one arm tap for each syllable)
 - **Phoneme (sound) level:**
 - Manipulative: tiny, plastic discs (one plastic disc for each phoneme)
 - Motor movement: finger tapping (one finger tap for each phoneme)
- Incorporate multi-sensory activities.
 - Visual, auditory, oral, tactile, kinesthetic.
 - Use familiar _____.
 - Begin with sounds they can produce.
 - Begin with a small set. (Example: sort a set of words by 2 different initial sounds, not 5 different initial sounds).
 - Provide _____ support. (Example: manipulatives and motor movements).
 - Stress parts to identify (Example: “what sound do you hear at the beginning of ‘fin’ ‘fffin?’”).
 - Have students repeat word(s). (Example: you say it, they say it, then do it).

Word Level Activities

• Word to Word Segmentation

- **Purpose:** supports students in identifying boundaries between words in sentences.
- **Procedure:** provide students with index cards. Teacher says a sentence. Ask students to repeat the sentence aloud. Students must represent each word of the sentence with an index card, and then they touch each card and say the sentence aloud.

- *Example: I like you.* 
- *Example: The snowman is melting.* 
 - For compound words or multisyllabic words, it can be helpful to place a picture of the word on one of the index cards and remind students: “two parts, but one word.”
- *Example: The dog is jumping.* 
 - A printed word (e.g., “the”) may be added to an index card, once the word is mastered.

• Dashing for Sentences

- **Purpose:** supports word-to-word awareness and provides _____ between words to support _____ planning and memory.
 - May be used for dictation, student writing, and guided writing.
- **Procedure:** teacher says a sentence. Ask students to repeat the sentence aloud. Students must represent each word of the sentence with a big dash, and then they go back and write in each word.
 - *Example: The dog barks at night.* _____ .

Syllable Level Activities

- **Syllable Arm Tapping/Blending**

- **Purpose:** supports students with segmenting syllables within words and blending syllables together to form whole words.
- **General guidelines:**
 - Left hand is the “_____.”
 - Begin segmenting by tapping on right _____ and follow the sequence: wrist-elbow-shoulder-head-shoulder.
 - Blend by “putting it all together” or “zipping it up.”
 - Multisensory and can be used with all ages.
- **Procedure:** teacher says a word. Ask students to repeat the word. Students tap the syllables (wrist-elbow-shoulder-head-shoulder), along with the teacher. Students blend the whole word together (“putting it all together”), along with teacher.
 - For more advanced students, the teacher may then ask: “can you point to the syllable where you heard /eee/?” or “can you point to the suffix?”
 - Be sure to also include single syllable words in your word lists.

Useful **phonics** concept to incorporate into your instruction: **each syllable** must include a **vowel sound**.

- **Reflection and/or Group Discussion:**

- Dr. Bray briefly covered several additional instructional strategies to support students at the syllable level:
 - Graphing by syllables using pictures
 - Graphing by syllables using print
 - Syllable generating
 - Dashing for syllables
 - Haiku and Japanese lantern poetry
- Select one of the instructional strategies above. Answer the following questions:
 - What materials and/or prep work will be necessary?
 - What will the teacher say and do while implementing this strategy?
 - What will the student(s) say and do while participating?

- Activity:
 - Starting at minute marker 57:39, Dr. Bray presents a key for sound awareness (pictured below), and then asks the group to identify how many phonemes are in each of the following words. **Pause the video at minute marker 59:10** and complete this activity. Then, resume the video: the answers are reviewed within the video recording.

KEY FOR SOUND AWARENESS
PHONEME= A SINGLE SOUND

- Single Consonants (except x and q)=
1 phoneme
 - Consonant Digraphs= 1 phoneme each
(sh, ch, th, ph, wh) also ck, mb
 - Trigraphs = 1 phoneme (tch, dge)
 - Vowel Combinations=1 phoneme
This may vary depending on your reading system.

HOW MANY PHONEMES IN EACH?

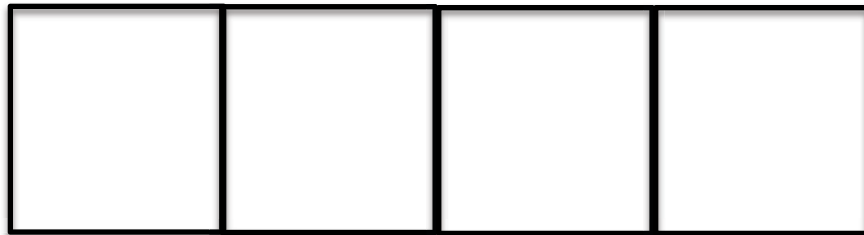
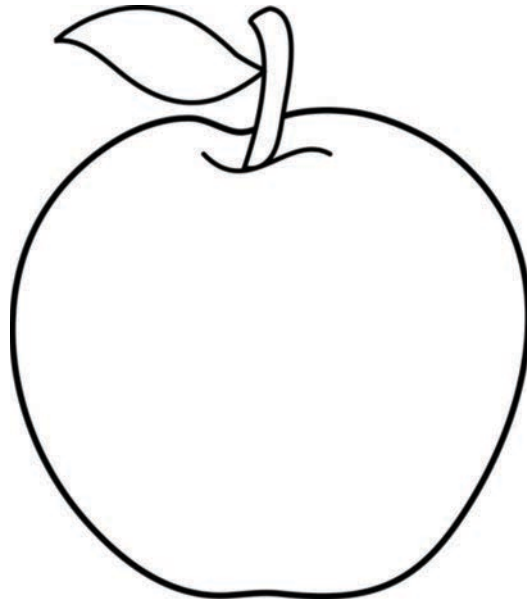
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|---------------|----------------|
| ○ fit_____ | ○ trimmed_____ |
| ○ ax_____ | ○ wanted_____ |
| ○ shrimp_____ | ○ moped_____ |
| ○ baby_____ | ○ budge_____ |
| ○ thing_____ | ○ birches_____ |
| ○ think_____ | ○ trusts_____ |

Phoneme (Sound) Level Activities

- **Initial/Final Sound Identification**
 - **Purpose:** supports students in identifying initial/final phonemes in words.
 - **General guidelines:** stress sound and use _____.
 - **Activities:**
 - What sound do you hear? (*Example: “what sound do you hear at the beginning of fffish?”*)
 - Picture sorts by 2 sounds (*Example: pictures of things that start with /f/ and /m/*)
 - Picture sorts by 3 sounds (*Example: pictures of things that start with /f/ and /m/ and /l/*)
 - Alliteration for initial sounds
 - I spy (*Example: “I spy something that starts with /t/.”*)

- **Elkonin Boxes (or Sound Boxes)**
 - **Purpose:** supports students in segmenting individual sounds within words.
 - **General guidelines:**
 - Use a specific picture or a generic picture to hold the manipulatives. For older students, it’s recommended to use just objects and no pictures.
 - Begin with words with 2 and then 3 phonemes. After that is mastered, introduce words with initial blends. After that is mastered, introduce final blends.
 - Can incorporate morphology and word endings.
 - **Procedure:** teacher says a word. Ask students to repeat the word. Students pull down manipulatives as they say each sound aloud, and then blend the sounds to say the whole word. Students “point and say,” and then blend the sounds to say the whole word again.

- Activity:
 - Starting at minute marker 1:05:10, Dr. Bray begins an interactive demonstration of Elkonin boxes. **Pause the video at minute marker 1:05:10** and cut (or tear out) the red and blue “discs” at the bottom of the page. Then, resume the video and follow along with the group.

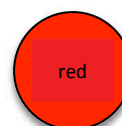
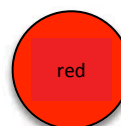
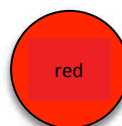


NOTE: before you use different colored discs for vowels and consonants with your students, it is important that they understand the difference between these two types of sounds.

- A vowel is a sound that is made with an open mouth.
- A consonant is a sound that is blocked teeth, lips, or tongue.

First, be sure that students understand the difference between vowel and consonant sounds. Then, consider using the following script for introducing specific colored discs:

“We need a vowel sound for every syllable. Each of the words I’ll say during this activity will have **one** syllable and will need **one** vowel sound. For this special type of sound, we will use the **blue** disc.”



- **Phoneme-Grapheme Mapping**

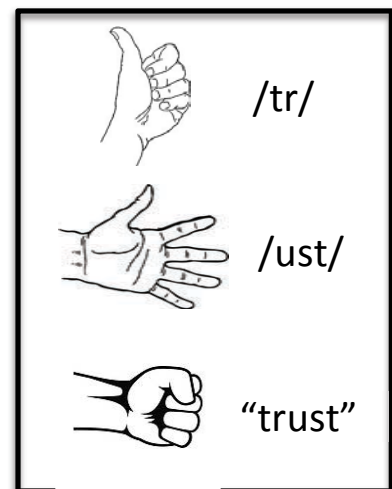
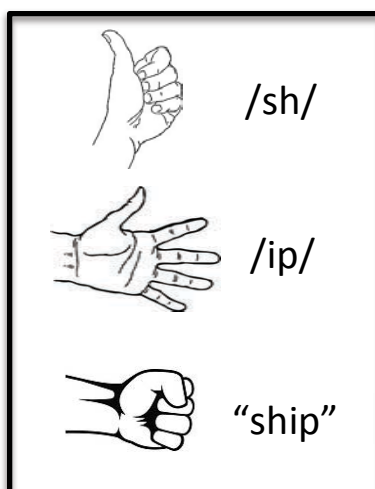
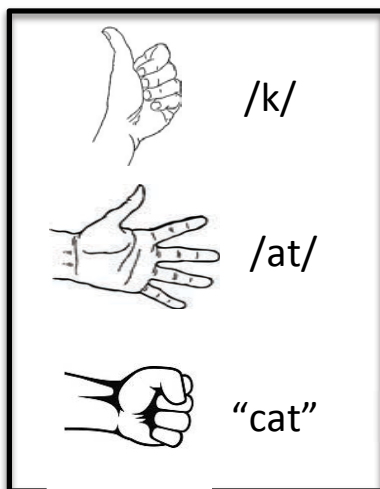
- **Purpose:** improves both _____ and letter-sound knowledge. Supports students' reading spelling, and _____.
- **General guidelines:**
 - Once students have developed awareness of sounds in words and have mastered some letter sounds, students should segment _____ and then add _____.
 - Use the same manipulatives used for Elkonin boxes, and then add letter tiles below them.
- **Procedure:** teacher says a word. Ask students to repeat the word. Students pull down manipulatives as they say each sound aloud. Teacher says "now build it with your letters." Students place corresponding letter tiles below each manipulative.

- **Finger Tapping**

- **Purpose:** supports students in segmenting individual sounds within words.
- **General guidelines:** use your _____ - _____ hand (makes it possible for students to have dominant hand free for spelling/writing). Tap from _____ to right, using thumb.
- **Procedure:** teacher says a word. Ask students to repeat the word. Teacher says "touch and say." Students tap the sounds on their non-dominant hand from left to right, using thumb, while saying each sound aloud. Teacher says, "grab those sounds." Students blend sounds together and say whole word aloud.

- **Blending**

- **Purpose:** supports students with blending sounds together to form whole words.
- **General guidelines:** tasks of blending follow the same developmental _____ as segmenting (*Example: compound words, 2-syllable words, 3-syllable words, 2-phoneme words, 3-phoneme words, 4-phoneme words*).
- **Activities:**
 - Blending puppet
 - Use pictures, objects, and/or motor movements
 - Hand spelling for onset-rime
 - **Onset:** Any letter or letters that come before the _____.
 - **Rime:** the vowel and any final consonants.
 - Put up your thumb (say is onset). Put your other fingers out to form an open hand (say the rime). Pull hand toward body into a fist (blend the whole word together).



- Forward blending
 - *Example: cat = /k/ /ka/ /kat/.*

- **Phoneme Manipulation**

- **Purpose:** supports students with manipulating phonemes within words.
- **General Guidelines:** includes deletion, substitution, and _____ of phonemes. Can be challenging for students with working memory difficulties. Using manipulatives can be helpful.
- **Activities:**
 - Initial sound deletion
 - *Example: "say 'cat' without the /k/." ('at').*
 - *Example: "say 'clap' without the /k/." ('lap').*
 - Final sound deletion
 - *Example: "say 'cat' without the /t/." ('ca').*
 - *Example: "say 'mist' without the /t/." ('mis').*
 - Initial sound addition
 - *Example: "say 'at'". "Now, add /b/ to the beginning." ('bat').*
 - *Example: "say 'pit'". "Now, add /s/ to the beginning." ('spit').*
 - Initial sound substitution
 - *Example: "say 'cat'". "Now, instead of saying /k/, say /f/." ('fat').*
 - *Example: "say 'clap'". "Now, instead of saying /k/, say /s/." ('slap').*

