

Fundations[®] K-3 Learning Activities: Alignment to the Science of Reading

The Science of Reading (SoR) is a compilation of evidence from a comprehensive and still growing body of research that consists of tens of thousands of studies about teaching and learning reading. These studies have taken place over the last 40+ years, in multiple countries and languages. To put it simply, the Science of Reading shows us what works in reading instruction. That entails using a Structured Literacy approach, like Fundations, which is effective for all students but especially beneficial for those who struggle.

Fundations is grounded in the Science of Reading. Instruction and practice occur in a systematic, cumulative, explicit, diagnostic, and integrated manner, allowing students to experience greater gains in the skills required for independent reading and spelling. The resource below outlines the Fundations K-3 Learning Activities, the rationale behind those activities (i.e., why we do them), and the research citations that support that rationale (i.e., why they work).

Fundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Alphabetical Order</p> <p>Level K, p. 22-23 Level 1, p. 26-27</p>	<p>Students match the corresponding Letter Tile to the letter squares on their Letter Board. Students then practice naming the letters in alphabetical order.</p>	<p>This activity helps students develop alphabetic knowledge including automatic letter naming and alphabetical order. Even though the letter names are not taught in alphabetical order, this activity provides the practice opportunity for children to begin developing understanding of alphabetical order. Letter identification is an important, fundamental skill for learning to read (Piasta et al., 2022; Sunde et al., 2020).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Dictation/Sounds</p> <p>Level K, p. 24-25 Level 1, p. 28-29 Level 2, p. 28-29 Level 3, p. 32-33</p>	<p>The teacher says a sound. Students repeat the sound, then write the letter(s) that correspond to the dictated sound.</p>	<p>This activity supports the development of the alphabetic principle and helps students solidify both sound-symbol correspondence and letter formation. This is a teaching time, not a testing time. However, teachers may observe student performance and take note for formative assessment.</p> <p>Research supports the suggestion that students benefit most from code-focused phonics instruction to learn the major grapheme-phoneme associations and apply this knowledge to decode and spell words (Ehri, 2020).</p> <p>Attention to letter names, letter sounds, letter shapes, and letter formation is part of effective instruction for alphabet knowledge. Visual and verbal modeling of letter writing improves students’ automaticity of letter writing and word reading ability (Berninger et al., 2006).</p> <p>Research demonstrates that “Instruction that taught phoneme manipulation with letters helped normal developing readers and at-risk readers acquire phonemic awareness better than phonemic awareness instruction without letters” (NICHD, 2000, p. 4). A synthesis of kindergarten reading interventions conducted over 20 years revealed greater effect sizes when letters accompanied phonemic awareness instruction than phonemic awareness alone (Cavanaugh et al., 2004).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Dictation/Words (Single Syllable Words)</p> <p>Level K, p. 26-27 Level 1, p. 30-31 Level 2, p. 30-31 Level 3, p. 34-35</p>	<p>The teacher says a word. Then, students repeat the word, tap out (segment) the individual phonemes, write the word, then mark up the word.</p> <p>Level K example: underline digraphs</p> <p>Levels 1, 2, and 3 examples: digraphs, vowel teams, v-e, syllables, syllable types.</p> <p>For words with a suffix, the teacher says the whole word and students repeat the word. The teacher asks the students if the word contains a suffix. If yes, students say the base word and spell the base word (tapping if necessary) then add suffix. A selected student can spell the word. Eventually, students should repeat the whole word and then say the base word independently.</p>	<p>This activity helps students develop independent spelling and reinforces their understanding of word structure by marking up the word in Levels 1, 2, and 3. The activity focuses on isolating phonemes, the most complex phonemic awareness skill.</p> <p>The skill of isolating phonemes orally first in a spoken word is emphasized in the procedure and is necessary to perform higher-level phonemic awareness skills such as blending, segmenting, and manipulating phonemes, thus efficiently focusing on the complex skill of phoneme segmentation (Kilpatrick, 2015). Segmenting phonemes facilitates decoding and spelling (Brady, 2020).</p> <p>A meta-analysis conducted by Graham and Santangelo (2014) demonstrated strong support for the direct and explicit instruction of spelling as it improved both spelling performance, phonological awareness, and reading skills.</p> <p>Additionally, there is a reciprocal connection between spelling ability and reading words; thus, spelling instruction facilitates word reading and fluency (Graham & Hebert, 2010; Reed, 2012).</p>
<p>Dictation/Words (Multisyllabic Words)</p> <p>Level 1, p. 32-33 Level 2, p. 32-33 Level 3, p. 36-37</p>	<p>The teacher dictates words, students repeat each word and segment the syllables in the words, writing one syllable at a time.</p>	<p>The teacher reinforces the procedure of dealing with one syllable at a time. The procedures used for spelling at this time help students learn to orally break words into syllables first, and then spell one syllable at a time. This simplifies the task of spelling longer words.</p> <p>Instruction that builds on students' reading of monosyllabic words emphasizes syllable types, and incorporates morphemic analysis, assists older students with word-analysis skills and reading multisyllabic words efficiently (Bhattacharya, 2020; Bhattacharya & Ehri, 2004; Kearns & Whaley, 2019; Wilson, 1996).</p>

Fundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Dictation/Words (Spelling Option Procedures)</p> <p>Level 2, p. 34-35 Level 3, p. 38-39</p>	<p>The teacher dictates words; students repeat each word tapping out each sound. Students then identify sounds with spelling options, write out the options and check their dictionary for the correct option.</p>	<p>Teaching the spelling option procedure teaches students how to spell words that have multiple spellings of the same sound.</p> <p>“Like reading, spelling instruction follows a logical sequence that begins with phonemic awareness and then learning which letters represent which specific sounds” (Shaywitz, 2003, p. 202).</p>
<p>Dictation/Trick Words</p> <p>Level 1, p. 34-35 Level 2, p. 36-37</p>	<p>Students practice the spelling of high frequency words (e.g., Trick Words); the teacher dictates words, students repeat the words, and then they write them with two fingers on their desktops while naming the letters aloud. Finally, students write the words on their Dry Erase Writing Tablets or in their Composition Books. Using kinesthetic-tactile memory techniques such as finger writing helps students create visual pictures of the unknown or irregular parts of these words and store them in their memory.</p> <p>The Trick Words taught in a Unit often correspond to the word structure being taught.</p>	<p>High frequency words (called Trick Words in Fundations) are the words that appear most often in print. These high frequency words, whether phonetic or irregular, are used so commonly in English they need to be recognized and spelled quickly and easily, even if their phonemic patterns have not yet been taught. This is a teaching time, not a testing time. However, teachers may observe student performance and take note for formative assessment.</p> <p>Less-skilled readers improve reading rates when they read texts with a greater percentage of known high frequency words and decodable words (Compton et. al, 2004; Hiebert & Fisher, 2007).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Dictation/Sound Alike and Trick Words</p> <p>Level 3, p. 40-41</p>	<p>The teacher dictates words; students repeat and write the words. When dictating sound-alike words and some Trick Words, the teacher will also dictate a sentence to provide meaning and context.</p> <p>For sound-alike words: students identify the correct spelling of the word. The students write the word with two fingers on a desktop, saying the letter names. Using kinesthetic-tactile memory techniques helps students create visual pictures of the unknown or irregular parts of these words and store them in their memory.</p> <p>Students write the word on their Dry Erase Writing Tablets or in their Composition Books. They can check spelling in the Trick or Sound Alike Word Dictionary section of their Student Notebooks, if needed. These kinds of writing/proofreading tasks allow students to use metacognitive strategies to identify learned Trick Words.</p>	<p>Students practice the spelling and meaning of sound alike and high-frequency non-phonetic words. This is a teaching time, not a testing time. However, teachers may observe student performance and take note for formative assessment.</p> <p>Students benefit from using their knowledge of the grapheme-phoneme correspondence and the phonetic pronunciation of words to learn the spelling of some irregular words (Bosman et al., 2006; Hilte & Reitsma, 2006; Ocal & Ehri, 2017). Further, when meaning is paired with phonological and orthographic representation of a word, a stronger connection is made which may facilitate spelling (Hilte & Reitsma, 2011).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Dictation/Sentences</p> <p>Level K, p. 28-29 Level 1, p. 36-37 Level 2, p. 38-39 Level 3, p. 42-43</p>	<p>Students repeat dictated sentences, then independently write the sentences, and finally proofread the sentences. Students scoop sentences into meaningful phrases.</p>	<p>This develops students' auditory memory for retrieving words in sentences. They also develop their sentence writing skills with guidance. Students learn to leave a space between words and that every sentence must begin with a capital letter and end with a punctuation mark. This activity also provides additional practice for spelling decodable words and non-decodable or unfamiliar high frequency words.</p> <p>Orthographic learning contributes to fluent reading and accurate spelling with spelling perhaps having the greater impact on the quality of the stored orthographic representation for reading (Perfetti, 2007). Evidence supports transfer between reading and spelling and spelling practice is valuable for accurate reading (Conrad, 2008).</p> <p>Reviewing students' writing in response to sentence dictation allows teachers to assess development of spelling and other writing mechanics. Effective spelling instruction explicitly teaches students sound-spelling patterns and therefore, an assessment of students' spelling skills can help understand students' grasp of sound-spelling patterns (Joshi, et al., 2008).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Drill Sounds/Warm Up</p> <p>Level K, p. 30-31 Level 1, p. 38-39 Level 2, p. 40-41 Level 3, p. 44-45</p>	<p>Students are directly taught a consistently used keyword to help them remember a letter’s sound. Teachers model letter-keyword-sounds with Large Sound Cards and students repeat the letter-keyword-sound associations. Then, teachers drill again using the Standard Sound Cards.</p> <p>In Level 2, Trick Word Flashcards are also drilled during this activity; in Level 3 Sound Alike Flashcards are also drilled during this activity to practice automatic recognition.</p>	<p>This activity reinforces the alphabetic principle of letter-sound associations and allows students an opportunity to warm up for each lesson by practicing the letters, keywords, and sounds they have learned. This two-to three-minute sound drill is designed to create fast and efficient neurotransmission pathways to access sounds (sound mastery and automaticity of the alphabetic principle of letter-sound associations).</p> <p>Research supports the use of keywords as a memory device to help students associate the letter with the sound it most commonly represents. Findings indicate that orthographic mapping to support sight word reading is facilitated when beginners are taught about articulatory features of phonemes and when grapheme-phoneme relations are taught with letter-embedded picture mnemonics (Ehri, 2014). This activity helps students develop mastery of recognition and identification of all 26 letters and the association of letter name-keyword-and sound for the 26 letters of the alphabet including short vowel sounds. Additionally, the keywords and illustrations serve as scaffolds to support student learning; scaffolds are one of the principles of effective instruction (Rosenshine, 2012). The review and rehearsal of previously taught material are important principles of effective instruction; thus, these warmup drills are important parts of the instructional sequence.</p> <p>Keywords are carefully chosen so that the initial sound can be “pulled off” the word. As described by Duke and Mesmer (2019) in relation to keyword use: Children must be able to separate the first sound in a word from the rest of a word (e.g., to separate the /b/ from the /all/ in <i>ball</i>). Ideally, children develop this skill, called <i>initial phoneme segmentation</i>, during or before the prekindergarten year. However, not all children meet this expectation. Teachers can work on this skill while teaching the alphabet, including alphabet key words.</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Echo/Find Letters</p> <p>Level K, p. 32-33 Level 1, p. 40-41 Level 2, p. 42-43 Level 3, p. 46-47</p>	<p>Students reinforce the skill of matching a letter with a given sound.</p> <p>Specifically, teachers dictate new sounds, some previously taught sounds, and target “trouble sounds.” Students repeat the sound and point to the Letter Tile that has the letter(s) representing the sound.</p>	<p>This activity helps to solidify sound-symbol correspondence and sets the foundation for spelling.</p> <p>Research has demonstrated that phonological awareness combined with letter knowledge leads to improved decoding skills (Petscher et al., 2020). Letter-sound knowledge and phoneme awareness are two causal influences on the development of children’s early literacy skills (Hulme et al., 2012).</p>
<p>Echo/Find Words (Single Syllable Words)</p> <p>Level K, p. 34-35 Level 1, p. 42-43 Level 2, p. 44-45 Level 3, p. 48-49</p>	<p>The teacher dictates a word and students repeat the word. Students must segment sounds and identify the letter(s) that go with each segmented sound. The segmenting is done with finger tapping; students use manipulatives such as their Letter Board and Tiles.</p> <p>For words with a suffix, the teacher says the whole word and students repeat the word. The teacher asks if the word contains a suffix. If yes, students say the base word and build the base word with tiles (tapping if necessary), then add the yellow suffix tile to represent the suffix. Another student spells the word orally and uses it in a sentence. Eventually students should repeat the whole word and then say the base word independently.</p>	<p>The skill of isolating phonemes <i>orally first</i> in a spoken word is emphasized in this procedure, thus efficiently focusing on the most complex phonemic awareness skill of phoneme segmentation.</p> <p>The ability to segment words into single phonemes or to blend phonemes together into words were significantly better predictors of decoding than other multiple skill instruction (NICHD, 2000).</p> <p>Research demonstrates that “Instruction that taught phoneme manipulation with letters helped normal developing readers and at-risk readers acquire phonemic awareness better than phonemic awareness instruction without letters” (NICHD, 2000, p. 4).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Echo/Find Words (Multisyllabic Words)</p> <p>Level 1, p. 44-45 Level 2, p. 46-47 Level 3, p. 50-51</p>	<p>Teachers dictate words and students repeat each word, then name and spell one syllable at a time using the syllable boxes on their Letter Boards.</p>	<p>When students begin reading and spelling words with more than one syllable, the focus shifts from phonemic segmentation to syllabic segmentation.</p> <p>The procedures used for spelling at this time help students learn to orally break words into syllables first, and then spell one syllable at a time. This simplifies the task of spelling longer words.</p> <p>For younger learners, a structured and systematic approach is best for teaching the syllable types along with phonics (Schukraft, 2020).</p>
<p>Echo/Find Words (Spelling Option Procedure)</p> <p>Level 2, p. 48-49 Level 3, p. 52-53</p>	<p>Teachers dictate words and students tap and spell the words with their Letter Tiles, finding all options for a given sound and then choosing the correct option for the word. Students are encouraged to use a spell checker to confirm the correct option.</p>	<p>Students learn to spell words with multiple spellings of the same sounds.</p> <p>The relation between phonological awareness, (or the ability to hear and manipulate sounds in speech), alphabetic knowledge and spelling is well-established (Moats, 2020; NICHD, 2000; Santoro et al., 2006).</p>
<p>Echo/Letter Formation</p> <p>Level K, p. 36-37 Level 1, p. 46-47 Level 2, p. 50-51 (supplemental) Level 3, p. 54-55 (supplemental)</p>	<p>Teachers dictate sounds and students repeat the sound. Students name the letter associated with the sound and write the corresponding letter(s) on their Dry Erase Writing Tablet.</p> <p>In Levels 2 & 3, this is a supplemental activity; additionally in Level 3, cursive letter formation is used.</p>	<p>With guidance and prompting from their teacher, students use their Dry Erase Writing Tablets to develop correct pencil grip and letter formation procedures (in Level 3, it's correct cursive letter formation procedures). This activity also reinforces sound-symbol correspondence and the recognition and identification of all 26 letters (lowercase and uppercase).</p> <p>Accuracy and automaticity of letter writing contributes to spelling and composition; instruction and practice help students develop working memory for composing written language (Berninger et al., 2010).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Guess Which One</p> <p>Level 3, p. 56-57</p>	<p>The teacher reviews previously taught homophones using flashcards for automatic recognition. Then the teacher presents new homophones and teaches different meanings. They dictate sentences and have students identify which “sound alike” is correct. Students write and spell the correct homophone. The sound-alike words and definitions are added to the Student Notebook.</p>	<p>This activity helps students develop vocabulary and spelling skills with homophones by distinguishing differences in meaning from the context of various sentences.</p> <p>Correct use of homophones requires links between the printed words as wholes and their meanings, not just between the sounds and the letters. Therefore, skill in correct usage of homophones is related to orthographic knowledge, which accounts for unique variance in word recognition (Cunningham et al., 2002).</p>
<p>Introduce New Concepts</p> <p>Level K, p. 190-191 Level 1, p. 106-107 Level 2, p. 74-75 Level 3, p. 74-75</p>	<p>Teachers provide explicit instruction for new concepts. Students are directed to add new concepts to their Student Notebook for future reference.</p>	<p>Introduce each new element or structure, model using it to connect and expand ideas, and give students regular opportunities to practice using the introduced element. Scaffold students’ responses to support them. (Baker et al, 2013).</p> <p>“As each new concept is introduced, it is practiced to mastery, first through homogenous practice and then through heterogenous practice” (Birsh & Carreker, 2018, p. 344).</p>
<p>Letter Formation (Individual Letters)</p> <p>Level 3, p. 58-59</p>	<p>Teachers model correct letter formation using verbalizations to aid memory. Students follow the teacher’s verbalization to practice cursive letter formations using the skywriting technique, then on a Dry Erase Writing Tablet or paper</p>	<p>Students practice individual cursive letter formations so they can eventually progress to connective cursive letter formations.</p> <p>“Handwriting automaticity...is a strong predictor of the quality of composition in normally developing and disabled writers. If letter production is automatic, memory space is freed up for higher level composing processes, such as deciding what to write about, what to say and how to say it” (Berninger, 1999, pp. 20-21).</p> <p>Students who become fluent in handwriting are more likely to compose written language fluently (Graham, 2010; Graham et al., 2018).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Letter Formation (Connectives)</p> <p>Level 3, p. 60-61</p>	<p>The teacher models correct letter formation while naming the letters. Students follow verbalizations to practice connective (i.e., cursive) letter formation by tracing first while naming the letters, and then writing independently only when students can successfully form individual, new letters.</p>	<p>Students need to recognize and reproduce letters quickly and effortlessly. This, combined with the automatic association of the letter to its sound(s) for both reading and spelling, will firmly set the foundation for all other literacy instruction.</p> <p>In the early stages of child learning and development, handwriting provides a direct connection or pathway between the brain and the hand for developing literacy. The complex motor processes needed for handwriting, spelling, and compositional writing requires an integration that reinforces language skills in the developing brain. Research has shown that spelling, reading, and writing are reinforced when handwriting is involved (Edwards, 2003; Graham, 2020).</p>
<p>Letter-Keyword-Sound</p> <p>Level K, p. 38-39 Level 1, p. 48-49</p>	<p>Students are directly taught a consistently used keyword (illustrated on the Large Sound Cards) to help them remember a letter’s sound. Using both the Large Sound Cards and the Standard Sound Cards, teachers model the letter-keyword-sound and students repeat the associations.</p>	<p>This activity introduces students to the letter name and sound association with the help of a keyword picture. Students practice sounds with the Large Sound Cards and Standard Sounds Cards daily. As research states, keywords work as a memory device to help students associate the sound relationship to the letter. Findings indicate that orthographic mapping to support sight word reading is facilitated when beginners are taught about articulatory features of phonemes and when grapheme-phoneme relations are taught with letter-embedded picture mnemonics. Additionally, vocabulary learning is facilitated when spellings accompany pronunciations and meanings of new words to activate orthographic mapping (Ehri, 2014). The use of embedded picture mnemonics supports the development of letter-sound knowledge.</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Make it Fun</p> <p>Level K, p. 48 Level 1, p. 60 Level 2, p. 60 Level 3, p. 70</p>	<p>Suggestions for various reinforcing activities are provided in each Unit.</p>	<p>This activity reinforces the Unit concepts or reviews previously taught concepts with a game activity. These activities often focus on letter formation, letter sounds, or phonemic awareness and provide additional opportunities to practice in engaging ways. Additional practice is an important principle of effective instruction (Rosenshine, 2012). When students are engaged in an instructional activity, they are more likely to benefit from reading; high reading engagement is associated with reading proficiency (Guthrie & Klauda, 2015). The outcomes of a recent meta-analysis suggested that intervention studies for students in grades K-5 that incorporated motivational practices typically incorporate motivational supports, such as game-like activities and peer collaboration and this suggestion provides support for incorporating motivational practices into reading interventions (Cho et al., 2023).</p>
<p>My Foundations Journal</p> <p>Level K, p. 93 Level 1, p. 128 Level 2, p. 303 Level 3, p. 95</p>	<p>Students draw and/or write in their My Foundations Journal several times a week. Teachers can have students draw pictures of Echo stories.</p>	<p>The My Foundations Journal provides supplemental writing practice that is not part of the Standard Lesson. Students benefit from additional opportunities to practice writing for development of handwriting and spelling and other mechanics of writing as well as composition (Graham, 2010).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Skywrite/Letter Formation</p> <p>Level K, p. 40-41 Level 1, p. 50-51 Level 3, p. 62-63</p>	<p>The teachers model proper letter formation using the verbalizations. Students repeat verbalizations with the teachers. Then, students use gross motor memory to learn letter formation (in Level 3, students learn cursive letter formation and connections) following their teacher’s verbalizations.</p>	<p>This activity helps students make a multimodal association between the auditory sound of a letter, the grapheme or its visual representation, and the kinesthetic memory of its letter formation. This activity also reinforces sound-symbol correspondence and the recognition and identification of all 26 letters (lowercase and uppercase). Students not only learn lowercase and uppercase letter formation, but they also simultaneously learn to recognize and name letters and the letter-sound correspondence. Recognition of letters and the association of letters and the sounds they represent are important foundational skills and instruction on letter formation should be part of the instruction (Piasta et al., 2022).</p> <p>There is some evidence to support the inclusion of orthographic-free motor activities in handwriting instruction to help students develop handwriting skills; orthographic-free motor activities combined with orthographic coding prior to letter formation instruction may be related to letter formation accuracy (Berninger et al., 2006). Additionally, the development of gross motor skills is necessary to develop fine motor skills (e.g., proximal distal development) and skywriting is one way to strengthen arm muscles.</p> <p>“An extensive and evolving body of research shows that direct and explicit spelling and handwriting instruction is required if all students are to master the mechanics of reading and writing” (Gentry & Graham, 2010, p. 2).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Storytime Level K, p. 48</p>	<p>Activities for Storytime vary and are described in each Unit. Students learn to visualize the story while the teacher sketches main story events.</p>	<p>In Level K, Storytime involves listening, reading, and writing activities designed to help develop students’ awareness of print visualization, understanding of narrative structure and features of informational text, verbal memory, vocabulary knowledge, and comprehension.</p> <p>Students who are exposed to words read aloud seem to gain more word knowledge than those who were not exposed to words in this manner (Wright et al., 2022).</p> <p>Read alouds of high-quality texts have been found to enhance students’ vocabulary and comprehension (Baker et al., 2020; Fien et al., 2011).</p>
<p>Storytime Level 1, p. 60</p>	<p>Storytime includes listening and reading activities with narrative and informational text. Activities for Storytime will be described in each Unit. Students learn to visualize the story and retell what is happening. Teachers prompt students with questioning techniques. During the Storytime learning plan, teachers model fluent reading and students are provided opportunities for practice.</p>	<p>In Level 1, Storytime involves listening and reading activities with narrative and informational text. Storytime is designed to help develop the students’ awareness of print; understanding of story structure; recognition of text structures; cohesion of story events; visualization skill; auditory and reading comprehension; and retelling of a story or facts. Students also focus on vocabulary, punctuation, and reading fluency.</p> <p>Exposure to words in read aloud or independent reading provides increased exposures to words and their meanings; thus, increasing vocabulary knowledge. Integrated word knowledge develops over time with repeated exposure to words and varied practice with text is important for word knowledge development (Castles et al., 2007; Reed et al., 2019).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Storytime</p> <p>Level 2, p. 60</p>	<p>Activities for Storytime will be described in each Unit. However, goals include the following:</p> <ul style="list-style-type: none"> • Students will answer who, what, where, when, how, and why questions to demonstrate understanding. • Students will identify specific sentences and phrases in a text that provide answers to questions. • Students will identify the main topic of a multiparagraph text as well as the focus of specific paragraphs. • Students will use context and word structure cues to identify the meaning of a word. • Students will read with fluency and expression demonstrating comprehension. 	<p>Storytime involves listening and reading activities with narrative and informational text. Storytime is designed to help develop the students' awareness of print; understanding of story structure; recognition of text features; cohesion of story events; visualization skills; auditory and reading comprehension; and retelling of a story or recalling details or facts. Students also focus on vocabulary, punctuation, and reading fluency.</p> <p>Fluency is "reasonably accurate reading, at an appropriate rate, with suitable expression, that leads to accurate and deep comprehension and motivation to read" (Hasbrouck & Glaser, 2012, p. 13).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Student Notebook</p> <p>Level K, p. 42-43 Level 1, p. 71</p>	<p>Students practice letter-keyword-sounds and letter formation using the Student Notebook.</p>	<p>Students use fine motor memory to trace and write letters. This activity also helps to solidify the link between a letter, its sound, and its formation. Opportunities to practice are necessary for skill development (Rosenshine, 2012), and this applies to writing. Further, distributed practice and massed practice both impact working and long-term memory for retrieval with evidence to suggest better recall performance for distributed than massed practice. However, efforts to develop working memory and long-term memory are necessary as they are related—long-term memory recall is dependent on working memory for storage and retrieval (Servant et al., 2018).</p> <p>“An extensive and evolving body of research shows that direct and explicit spelling and handwriting instruction is required if all students are to master the mechanics of reading and writing” (Gentry & Graham, 2010, p. 2).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Teach Trick Words - Reading</p> <p>Level K, p. 44-45 Level 1, p. 52-53</p>	<p>Trick Word instruction is part of a comprehensive word study program which teaches students the alphabetic, syllable, and orthographic structure of words.</p> <p>Phonetically irregular high frequency words and high frequency words with regular sound-spelling patterns not yet introduced in the curriculum, are taught as words to be quickly recognized.</p> <p>Teachers always introduce Trick Words within the context of a sentence to promote automatic and fluent reading and to aid in defining the word when necessary. Students identify the new Trick Word in the sentence. Then, the teacher explicitly points out the “tricky part” of the word, and also discusses the known phonetic word parts. This way, students begin to map these words orthographically.</p> <p>Lastly, the teacher presents the learned Trick Word Flashcards packet for students to read. Students use metacognitive strategies to identify learned Trick Words in writing/proofreading and reading tasks.</p>	<p>These high frequency words, whether phonetic or irregular, are used so commonly in English they need to be recognized and spelled quickly and easily even if their phonemic patterns have not yet been taught. This activity also reinforces capitalization and punctuation and reading with prosody.</p> <p>Less-skilled readers improve reading rates when they read texts with a greater percentage of known high frequency words and decodable words (Compton, Appleton, & Hosp, 2004; Hiebert & Fisher, 2007).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
	<p>There are 27 Trick Words taught in Level K and are selected from common high frequency word lists (e.g., Fry List). Combined with phonetic knowledge, students are learning words that comprise 75% of the 50 most common words.</p> <p>In Level 1, students learn 93 Trick Words for both quick and automatic recognition and for spelling. Some of these words were taught in kindergarten for reading, but not for spelling. This, combined with their emerging phonetic knowledge, will provide mastery instruction for the first 100 words on the Fry List and 94% of the first 100 words on the American Heritage Word Frequency List.</p>	

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Teach Trick Words – Spelling</p> <p>Level 1, p. 54-55</p>	<p>The teacher writes the Trick Word in large print on the board. Then, the teacher reads the word, and the students repeat it. The teacher presents and discusses the “tricky part” of non-phonetic words and the parts of words that follow the spelling that students have learned. This helps students begin to map these words orthographically.</p> <p>Students skywrite and finger write Trick Words saying each letter as they write. Using kinesthetic-tactile memory techniques, such as skywriting and finger writing, helps students create visual pictures of the unknown or irregular parts of these words and store them in their memory.</p> <p>Then, they add the Trick Words to the Trick Word section of their Student Notebooks.</p>	<p>Students learn to spell high frequency words using gross motor memory. These high frequency words, whether phonetic or irregular, are used so commonly in English they need to be recognized and spelled quickly and easily even if their phonemic patterns have not yet been taught.</p> <p>Reading and spelling high frequency words, whether phonetically regular or irregular, helps with fluent reading and writing. Thus, it is beneficial for students to be able to automatically recognize and read all high frequency words as well as accurately spell them. Only 25 words make up about one-third, and 100 words make up about half of all reading material (Graves, 2006).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Trick Words</p> <p>Level 2, p. 54-55 Level 3, p. 64-65 (supplemental)</p>	<p>The teacher presents and discusses the “tricky part” of non-phonetic words and the parts of words that follow the spelling that students have learned. This helps students begin to map these words orthographically.</p> <p>Students skywrite (Levels 2 & 3) and finger write (Level 3) words for quick and automatic recognition saying each letter as they write. Using kinesthetic-tactile memory techniques, such as skywriting and finger writing, helps students create visual pictures of the unknown or irregular parts of these words and store them in their memory.</p> <p>Students write the word on their Gel Word Boards (Level 2 & struggling students in Level 3) and then practice drilling Trick Words with the Trick Word Flashcards.</p> <p>Finally, students add the Trick Words to the Trick Word section of their Student Notebooks.</p>	<p>Students learn non-phonetic words using gross motor memory. These high frequency words, whether phonetic or irregular, are used so commonly in English they need to be recognized and spelled quickly and easily even if their phonemic patterns have not yet been taught.</p> <p>It aids accurate and automatic word recognition as students learn to recognize a string of letters with meaning (Verhoeven & Perfetti, 2011).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Trick Word Practice Level K, p. 46-47</p>	<p>Students identify Trick Words by listening to and repeating the words as they are used in sentences by the teacher. The teacher also writes the sentences on Sentence Frames and scoops them into phrases. Then, a student volunteer identifies the Trick Word in the sentence. Finally, the class names the letters that are “tricky.”</p> <p>Students practice drilling Trick Words with the Trick Word Flashcards. The teacher says each word and students repeat.</p>	<p>Automatic word recognition of Level K Trick Words, combined with students’ emerging phonetic knowledge, will provide mastery instruction for 25/25 of the most common words and 75% of the first 50 words on both the Fry and American Heritage high frequency lists. This activity develops print awareness (sentences are read from left to right), word awareness (identify individual words in a sentence), prosody (echo reading a sentence with phrasing), and reinforces capitalization and punctuation. (Fry & Kress, 2006; Carroll et al., 1971)</p> <p>Reading words in sentences aids accurate and automatic word recognition as students learn to recognize a string of letters with meaning (Verhoeven & Perfetti, 2011).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Word of the Day</p> <p>Level 1, p. 56-57 Level 2, p. 56-57 Level 3, p. 66-67</p>	<p>Teachers make the Word of the Day with Standard Sound Cards to review word structure and discuss vocabulary using questioning techniques. Students tap and blend both new and review words for accuracy. Teacher models marking words to identify sound patterns and word structures. Then teachers use the Word of the Day flashcards to practice automatic reading. Students generate sentences for the Word of the Day and add the word and sentence to their Student Notebook.</p> <p>Teachers make 4-5 (3-5 in Level 3) additional current word examples with the Standard Sound Cards and Syllable and Suffix Frames, as appropriate, to practice decoding. For words with a suffix, students read the base word first, then the whole word. Teachers may discuss how the suffixes change the meaning. For multisyllabic words, students read each syllable. Students can tap the syllable, if needed.</p>	<p>This activity helps students to review the word structure being taught in the current Unit and to discuss a vocabulary word from that Unit.</p> <p>Explicit teaching of individual words is one of the strategies recommended for students to grow in vocabulary knowledge (Honig et al., 2018).</p> <p>Vocabulary instruction must be interwoven into word study work (Murray et al., 2019; Roberts et al., 2008; Wilson & O'Connor, 1995).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Word Play</p> <p>Level K, p. 48</p>	<p>In the beginning of the year, the emphasis is on the understanding that sentences have separate words, and words have separate syllables. In the second half of the year, the students learn that words or syllables have separate sounds. Activities for Word Play are described in each Unit.</p>	<p>Word Play activities teach or reinforce the development of print awareness, phonological awareness, and beginning decoding and spelling skills. Students will also learn key elements of basic sentence structure, including capitalization and punctuation. Understanding that print represents oral language, and that oral language consists of parts such as words, syllables, and phonemes is important foundational knowledge for learning to read and write.</p> <p>Activities aimed to develop oral language focus on helping students understand that print represents oral language. They also help students develop phonological awareness that leads to understanding that words are comprised of individual phonemes—the unit that is most relevant for learning to decode and spell. Phoneme awareness, specifically and in combination with rapid automatic naming and letter-sound knowledge, are strong predictors of reading development and reciprocally, reading growth also predicts growth in these skill areas (Clayton et al., 2020). Further, Brady (2020) explains and clarifies the importance of phoneme awareness and that it is a stronger predictor of later reading skills than is phonological sensitivity (awareness of larger sound units such as words and syllables), so the sooner we have students work with phonemes paired with print, the sooner they may begin to decode.</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Word Play</p> <p>Level 1, p. 60 Level 3, p. 70</p>	<p>This is one of the variable activities to teach and reinforce the development of decoding and spelling skills. In Level 1, teachers use Standard Sound Cards, Suffix Cards, and Syllable Frames to make words. They make each word, have the students tap words (single syllable) or scoop words (multisyllabic) with them, and read words.</p> <p>In Level 3, suggestions for various activities are provided in each Unit.</p>	<p>Word Play activities teach or reinforce the development of decoding and spelling skills. They provide students with additional opportunities to practice skills for decoding words in isolation.</p> <p>Word reading automaticity is based on the number of words recognized by sight and how fluently unfamiliar decodable words are read (Hudson, et al. 2020).</p> <p>Pairing pronunciation of words with the written form of multisyllabic words strengthens the ability to recognize the word. There is strong evidence that phonology plays a significant role in accessing the lexicon in multisyllabic word identification (Lee, 2007). Further, a focus on syllables in monosyllabic words provides a foundation for students to read multisyllabic words.</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Word Talk</p> <p>Level 1, p. 58-59 Level 2, p. 58-59 Level 3, p. 68-69</p>	<p>Word Talk activities are designed to practice decoding and review past concepts and vocabulary. Students decode words made with word part manipulatives (Sound Cards, Syllable and Suffix Frames) and fluently read flashcards. Teachers prompt students to mark words identifying word structures. Then teachers use questioning to discuss word structure and word meaning.</p> <p>The teacher selects 4-5 words from the accumulated Word of the Day Card practice pack. They include 1 or 2 from the current Unit as well as 2-3 from previous Units. Then the teacher makes the word with Standard Sound Cards, Syllable and Suffix Frames, as appropriate. Students decode those words. This is done chorally, or an individual student is called on. A student can come up to the front and “mark it.” The class discusses word structure and the meaning of the word. You may also have students provide a synonym or antonym and use the word in a sentence.</p>	<p>Word Talk activities are designed to practice decoding and review past concepts and vocabulary. This activity helps to develop accuracy and automaticity of word reading. It also solidifies the conceptual understanding of word structure and develops vocabulary. Word reading and vocabulary knowledge contribute to comprehension and while word reading has focused on orthography and phonology, the role of semantics and word structure (syllables and morphology) should be considered to resolve ambiguities and be part of word reading instruction (Georgiou et al., 2023).</p>

Foundations Learning Activity	Learning Activity Description	Research Rationale (i.e., why we do this Learning Activity)
<p>Unit Tests (See the end of each Unit)</p>	<p>Students are assessed on their concept mastery. Foundations Unit Tests use spelling as an effective assessment of sound-symbol correspondence and word recognition. The teacher dictates sound, Trick Words, phonetic words and sentences. Students repeat and then write independently.</p>	<p>Curriculum-embedded assessments are formative assessments that provide information to guide instructional decision making and provide instructors information to make adjustments based on an individual student’s performance. Student performance data may be useful for accelerating lesson progression, particularly for Tier 2 interventions (Simmons et al., 2015).</p> <p>Formative assessments are quick checks of student understanding and application. They provide immediate feedback for both the teacher and students. The teacher can adjust instruction accordingly, and students can self-regulate their learning (Ainsworth & Viegut, 2015; Hattie, 2015).</p>

References

- Ainsworth, L., & Viegut, D. (2015). *Common formative assessments 20: How teacher teams intentionally align standards, instruction, and assessment*. Corwin Press.
- Baker, D. L., Santoro, L., Biancarosa, G., Baker, S. K., Fien, H., & Otterstedt, J. (2020). Effects of a read aloud intervention on first grade student vocabulary, listening comprehension, and language proficiency. *Reading and Writing: An Interdisciplinary Journal*, 33(10), 2697-2724. <https://doi.org/10.1007/s11145-020-10060-2>
- Baker, S. K., Santoro, L. E., Chard, D. J., Fien, H., Park, Y., & Otterstedt, J. (2013). An evaluation of an explicit read aloud intervention taught in whole-classroom formats in first grade. *Elementary School Journal*, 113(3), 331-358.
- Berninger, V. W. (1999). Overcoming the Matthew effect: Aiming reading and writing instruction (and research on instruct) at all levels of language in an active, social, reflective environment. *Issues in Education*, 5(1), 45-53. [https://doi.org/10.1016/S1080-9724\(99\)00020-8](https://doi.org/10.1016/S1080-9724(99)00020-8)
- Berninger, V. W., Abbott, R. D., Swanson, H. L., Lovitt, D., Trivedi, P., Shin-Ju Lin, Gould, L., Youngstrom, M., Shimada, S., & Amtmann, D. (2010). Relationship of word- and sentence-level working memory to reading and writing in second, fourth, and sixth grade. *Language, Speech & Hearing Services in Schools*, 41(2), 179-193. [https://doi.org/10.1044/0161-1461\(2009/08-0002\)2-0663.98.4.879](https://doi.org/10.1044/0161-1461(2009/08-0002)2-0663.98.4.879)
- Berninger, V. W., Rutberg, J. E., Abbott, R. D., Garcia, N., Anderson-Youngstrom, M., Brooks, A., & Fulton, C. (2006). Tier 1 and Tier 2 early intervention for handwriting and composing. *Journal of School Psychology*, 44(1), 3-30. <https://doi.org/10.1016/j.jsp.2005.12.003>
- Bhattacharya, A. (2020). Syllabic vs. morphemic analyses: Teaching multisyllabic word reading to older struggling readers. *Journal of Adolescent and Adult Literacy*, 63(5), 491-497.
- Bhattacharya, A., & Ehri, L. C. (2004). Graphosyllabic analysis helps adolescent struggling readers read and spell words. *Journal of Learning Disabilities*, 37(4), 331-48.
- Birsh, J. R., & Carreker, S. (2018). *Multisensory teaching of basic language skills* (4th ed). Paul H. Brooks Publishing Co.
- Bosman, A. M. T., van Hell, J. G., & Verhoeven, L. (2006). Learning the spelling of strange words in Dutch benefits From regularized reading. *Journal of Educational Psychology*, 98(4), 879-890. <https://doi.org/10.1037/0022-0663.98.4.879>
- Brady, S. (2020). A 2020 perspective on research findings on alphabetic (phoneme awareness and phonics): Implications for instruction. *The Reading League Journal*, 1(3), 20-28.
- Caroll, J. B., Davies, P., & Richman, B. (1971). *The American Heritage word frequency book*. Houghton Mifflin.
- Castles, A., Davis, C., Cavalot, P., & Forster, K. (2007). Tracking the acquisition of orthographic skills in developing readers: Masked priming effects. *Journal of Experimental Child Psychology*, 97(3), 165-182. <https://doi-org.libproxy.uncg.edu/10.1016/j.jecp.2007.01.006>
- Cavanaugh, C. L., Kim, A-H., Wanzek, J., & Vaughn, S. (2004). Kindergarten reading interventions for at-risk students: Twenty years of research. *Learning Disabilities: A Contemporary Journal*, 2(1), 9-21.

- Cho, E., Dahl-Leonard, K., Kehoe, K., Capin, P., Hall, C. & Solari, E. (2023). Motivational Practices in reading interventions for students with or at risk for dyslexia. *Topics in Language Disorders*, 43(2), 119-145. <https://doi.org/10.1097/TLD.0000000000000312>
- Clayton, F. J., West, G., Sears, C., Hulme, C., & Lervåg, A. (2020). A longitudinal study of early reading development: Letter-sound knowledge, phoneme awareness and RAN, but not letter-sound integration, predict variations in reading development. *Scientific Studies of Reading*, 24(2), 91-107. <https://www.tandfonline.com/doi/full/10.1080/10888438.2019.1622546?scroll=top&needAccess=true>
- Compton, D. L., Appleton, A. C., & Hosp, M. K. (2004). Exploring the relationship between text-leveling systems and reading accuracy and fluency in second-grade students who are average and poor decoders. *Learning Disabilities Research & Practice*, 19(3), 176-184. <https://doi.org/10.1111/j.1540-5826.2004.00102.x>
- Conrad, N. J. (2008). From reading to spelling and spelling to reading: Transfer goes both ways. *Journal of Educational Psychology*, 100(4), 869-878. <https://doi.org/10.1037/a0012544>
- Cunningham, A. E., Perry, K. E., Stanovich, K. E., & Share, D. L. (2002). Orthographic learning during reading: examining the role of self-teaching. *Journal of Experimental Child Psychology*, 82(3), 185. [https://doi.org/10.1016/S0022-0965\(02\)00008-5](https://doi.org/10.1016/S0022-0965(02)00008-5)
- Duke, N. K., & Mesmer, H. A. E. (2019). Avoiding instructional missteps in teaching letter-sound relationships, *American Educator*, Winter, 12-16. www.aft.org/ae/winter2018-2019/duke_mesmer.
- Edwards, L. (2003). Writing instruction in kindergarten: Examining an emerging area of research for children with writing and reading difficulties. *Journal of Learning Disabilities*, 36(2), 136-148.
- Ehri, L. C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, and vocabulary learning. *Scientific Studies of Reading*, 18(1), 5-21. <https://doi.org/10.1080/10888438.2013.819356>
- Ehri, L. C. (2020). The science of learning to read words: A case for systematic phonics instruction. *Reading Research Quarterly*, 55(S1) S45-S60 <https://ila.onlinelibrary.wiley.com/doi/10.1002/rrq.334>
- Fien, H., Santoro, L., Baker, S. K., Park, Y., Chard, D. J., Williams, S., & Haria, P. (2011). Enhancing teacher read alouds with small-group vocabulary instruction for students with low vocabulary in first-grade classrooms. *School Psychology Review*, 40(2), 307-318.
- Fry, E., & Kress, J.E. (2006). *The reading teacher's book of lists* (5th ed.). John Wiley & Sons.
- Gentry, J. R., & Graham, S. (2010). *Creating better readers and writers: The importance of direct, systematic spelling and handwriting instruction in improving academic performance*. Saperstein.
- Georgiou, G., Inoue, T., & Parrila, R. (2023). Are vocabulary and word reading reciprocally related? *Scientific Studies of Reading*, 27(2), 160-168. <https://doi.org/10.1080/10888438.2022.2123275>
- Graham, S. (2010). Want to improve children's writing? Don't neglect their handwriting. *American Educator*, Winter 2009-2010, 20-27, 40. <https://www.aft.org/sites/default/files/graham.pdf>

- Graham, S. (2020). The sciences of reading and writing must become more fully integrated. *Reading Research Quarterly*, 55(Suppl 1), S35-S44. <https://doi.org/10.1002/rrq.332>
- Graham, S., Harris, K. R., & Adkins, M. (2018). The impact of supplemental handwriting and spelling instruction with first grade students who do not acquire transcription skills as rapidly as peers: A randomized control trial. *Reading and Writing: An Interdisciplinary Journal*, 31(6), 1273-1294. <https://doi.org/10.1007/s11145-018-9822-0>
- Graham, S., & Hebert, M. (2010). *Writing to read: A report from Carnegie Corporation of New York. Evidence for how writing can improve reading.* Carnegie Corporation. https://media.carnegie.org/filer_public/9d/e2/9de20604-a055-42da-bc00-77da949b29d7/ccny_report_2010_writing.pdf
- Graham, S., & Santangelo, T. (2014). Does spelling instruction make students better spellers, readers, and writers? A meta-analytic review. *Reading and Writing: An Interdisciplinary Journal*, 27(9), 1703-1743.
- Graves, M. F. (2006). *The vocabulary book: Learning & instruction.* Teachers College Press Columbia University.
- Guthrie, J. T., & Klauda, S. L. (2015). Engagement and motivational processes in reading. In P. Afflerbach (Ed.), *Handbook of individual differences in reading: Reader, text, and context.* (pp. 59–71). Routledge.
- Hall, C., Dahl, L. K., Cho, E., Solari, E. J., Capin, P., Conner, C. L., Henry, A. R., Cook, L., Hayes, L., Vargas, I., Richmond, C. L., & Kehoe, K. F. (2023). Forty years of reading intervention research for elementary students with or at risk for dyslexia: A systematic review and meta-analysis. *Reading Research Quarterly*, 58(2), 285-312. <https://doi.org/10.1002/rrq.477>
- Hasbrouck, J., & Glaser, D.R. (2012). *Reading fluency: Understanding and teaching this complex skill.* Gibson Hasbrouck & Associates.
- Hattie, J. (2015). The effective use of testing: What the research says. *Education Week*, 35(10), 28-23.
- Hiebert, E. H., & Fisher, C. W. (2007). Critical word factor in texts for beginning readers. *Journal of Educational Research*, 101(1), 3-11. <https://doi.org/10.3200/JOER.101.1.3-11>
- Hilte, M., & Reitsma, P. (2006). Spelling pronunciation and visual preview both facilitate learning to spell irregular words. *Annals of Dyslexia*, 56(2), 301-318. <https://doi.org/10.1007/s11881-006-0013-3>
- Hilte, M., & Reitsma, P. (2011). Activating the meaning of a word facilitates the integration of orthography: Evidence from spelling exercises in beginning spellers. *Journal of Research in Reading*, 34(3), 333-345. <https://doi.org/10.1111/j.1467-9817.2010.01442.x>
- Honig, B., Diamond, L., & Gutlohn, L. (2018). *Teaching reading sourcebook.* Arena Press.
- Hudson, A., Koh, P. W., Moore, K. A., & Binks-Cantrell, E. (2020). Fluency interventions for elementary students with reading difficulties: A synthesis of research from 2000-2019. *Education Sciences*, 10(3), 1-28. <https://doi.org/10.3390/educsci10030052>
- Hulme, C., Bowyer-Crane, C., Carroll, J. M., Duff, F. J., & Snowling, M. J. (2012). The causal role of phoneme awareness and letter-sound knowledge in learning to read: Combining intervention studies with mediation analyses. *Psychological Science*, 23(6), 572-577. <https://doi.org/10.1177/0956797611435921>

- Joshi, R. M., Treiman, R., Carrecker, S., & Moats, L. C. (2008). How words cast their spell. *American Educator*, Winter 2008-2009. https://www.aft.org/ae/winter2008-2009/joshi_treiman_carreker_moats
- Kearns, D. M., & Whaley, V. M. (2019). Helping students with dyslexia read long words: Using syllables and morphemes. *Teaching Exceptional Children*, 51(3), 212-225. <https://doi.org/10.1177/0040059918810010>
- Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. Wiley & Sons, Inc.
- Lee, C. H. (2007). Phonological activation in multi-syllabic word recognition. *Journal of Psycholinguistic Research*, 36(1), 1-14. <https://doi.org/10.1007/s10936-006-9029-4>
- Moats, L. C. (2020). Teaching reading is rocket science. American Federation of Teachers, *American Educator* Summer 2020. [Teaching Reading Is Rocket Science \(aft.org\)](https://www.aft.org/teaching-reading-is-rocket-science)
- Murray, B. A., McIlwain, M. J., Wang, C., Murray, G., & Finley, S. (2019). How do beginners learn to read irregular words as sight words? *Journal of Research in Reading*, 42(1), 123-136. <https://doi.org/10.1111/1467-9817.12250>
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel: Teaching children to read: Reports of the subgroup*. (NIH Publication No. 00-4754). U.S. Government Printing Office.
- Ocal, T., & Ehri, L. C. (2017). Spelling pronunciations help college students remember how to spell difficult words. *Reading and Writing: An Interdisciplinary Journal*, 30(5), 947-967. <https://doi.org/10.1007/s11145-016-9707-z>
- Perfetti, C. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading*, 11(4), 357-383. <https://doi.org/10.1080/10888430701530730>
- Petscher, Y., Cabell, S. Q., Catts, H. W., Compton, D. L., Foorman, B. R., Hart, S. A., Lonigan, C. J., Phillips, B. M., Schatschneider, C., Steacy, L. M., Terry, N. P., & Wagner, R. K. (2020). How the science of reading informs 21st-century education. *Reading Research Quarterly*, 55(Suppl 1), S267-S282.
- Piasta, S. B., Park, S., Fitzgerald, L. R., & Libnoch, H. A. (2022). Young children's alphabet learning as a function of instruction and letter difficulty. *Learning and Individual Differences*, 93, 1-11. <https://doi.org/10.1016/j.lindif.2021.102113>
- Reed, D. K. (2012). *Why teach spelling?* RMC Research Corporation, Center on Instruction. <https://www.centeroninstruction.org/files/Why%20Teach%20Spelling.pdf>
- Reed, D. K., Zimmermann, L. M., Reeger, A. J., & Aloe, A. M. (2019). The effects of varied practice on the oral reading fluency of fourth-grade students. *Journal of School Psychology*, 77, 24-35. <https://doi.org/10.1016/j.jsp.2019.10.003>
- Roberts, G., Torgesen, J. K., Boardman, A., & Scammacca, N. (2008). Evidence-based strategies for reading instruction of older students with learning disabilities. *Learning Disabilities Research & Practice (Wiley-Blackwell)*, 23(2), 63-69. <https://doi.org/10.1111/j.1540-5826.2008.00264.x>
- Rosenshine, B. (2012). Principles of instruction: Research-based strategies that all teachers should know. *American Educator*, Spring, 12-19, 39.

- Santoro, L. E., Coyne, M. D., & Simmons, D. C. (2006). The reading-spelling connection: Developing and evaluating a beginning spelling intervention for children at risk of reading disability. *Learning Disabilities Research & Practice, 21*(2), 122–133. <https://doi.org/10.1111/j.1540-5826.2006.00212.x>
- Schukraft, S. (2020). The importance of teaching syllable division and decoding strategies. *Journal of Institute of Multisensory Education, IMSE*. <https://journal.imse.com/syllable-division-decoding-strategies/>
- Servant, M., Cassey, P., Woodman, G. F., & Logan, G. D. (2018). Neural bases of automaticity. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 44*(3), 440–464. <https://doi.org/10.1037/xlm0000454>
- Shaywitz, S. (2003). *Overcoming dyslexia*. Alfred A. Knopf.
- Simmons, D. C., Kim, M., Kwok, O., Coyne, M. D., Simmons, L. E., Oslund, E., Fogarty, M., Hagan-Burke, S., Little, M. E., & Rawlinson, D. (2015). Examining the effects of linking student performance and progression in a Tier 2 kindergarten reading intervention. *Journal of Learning Disabilities, 48*(3), 255-270. <https://doi.org/10.1177/0022219413497097>
- Sunde, K., Furnes, B., & Lundetræ, K. (2020) Does introducing the letters faster boost the development of children’s letter knowledge, word reading and spelling in the first year of school?, *Scientific Studies of Reading, 24*(2), 141-158, <https://doi.org/10.1080/10888438.2019.161>
- Verhoeven, L., & Perfetti, C. A. (2011). Morphological processing in reading acquisition: A cross-linguistic perspective. *Applied Psycholinguistics, 32*(3), 457-466. <https://doi.org/10.1017/S0142716411000154>
- Wilson, B. (1996). *The Wilson Reading System instructor manual* (3rd ed.). Wilson Language Training.
- Wilson, B. A., & O’Connor, J. (1995). Effectiveness of the Wilson Reading System used in public school training. In C. McIntyre & J. Pickering (Eds.), *Clinical studies of multisensory language education for students with dyslexia and related disorders* (pp. 247-254). International Multisensory Structured Language Education Council.
- Wright, T. S., Cervetti, G. N., Wise, C., & McClung, N. A. (2022). The impact of knowledge-building through conceptually-coherent read alouds on vocabulary and comprehension. *Reading Psychology, 43*(1), 70–84. <https://doi.org/10.1080/02702711.2021.2020187>