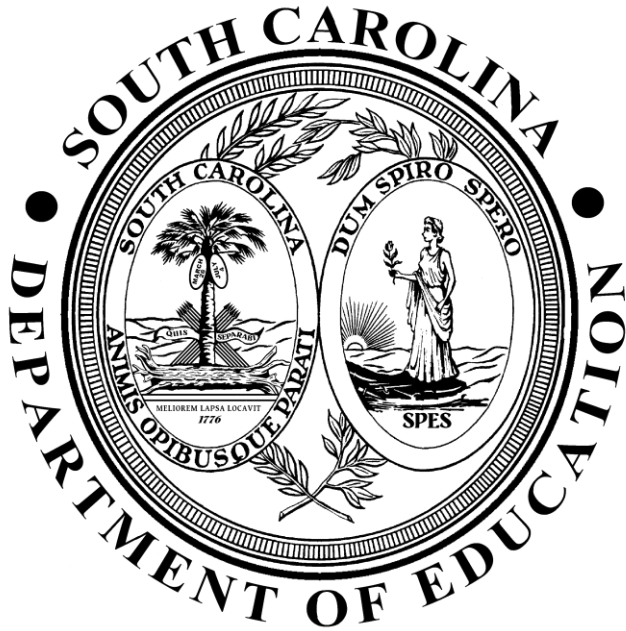


STATE OF SOUTH CAROLINA
DEPARTMENT OF EDUCATION



Foundations of Literacy Support Document for
the *2024 South Carolina College- and Career-
Ready English Language Arts Standards*

January 30, 2024

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Overview of the *Foundations of Literacy Support Document*

The *Foundations of Literacy Support Document* was developed as a joint effort between the Office of Assessment and Standards, the Office of Special Education Services, and the Office of Early Learning and Literacy to support the understanding and instruction of the Foundations of Literacy strand of the *2024 South Carolina College- and Career-Ready English Language Arts Standards (2024 SC CCR ELA Standards)*. This document was developed as a response to needs expressed across the state of South Carolina to provide support in instruction of the Foundations of Literacy strand and how to target intervention for students as they develop the foundational literacy skills necessary to demonstrate reading and writing success.

This document contains an overview of the Foundations of Literacy strand, an overview of each standard within the Foundations of Literacy strand, and assessment support for the Foundations of Literacy strand.

Overview of the Foundations of Literacy Strand

The Foundations of Literacy strand contains four standards:

1. Phonological and Phonemic Awareness;
2. Concepts of Print;
3. Decoding and Encoding Phonics Skills; and
4. Fluency.

The development of foundational standards and indicators was informed by an extensive review of research that supports the impact of foundational literacy skills on students' educational success. Adams (1990) and Stanovitch (1986) affirm the impact of foundational literacy skills by explaining that a student's level of phonemic awareness is considered the most effective predictor of success in learning to read. According to the *What Works Clearinghouse Guide, Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd*, for students to develop literacy, students need instruction in two related sets of skills: foundational reading skills and reading comprehension skills (Foorman, et al., 2016). The Foundations of Literacy strand outlines foundational reading skills, while the Overarching Expectations and Applications of Reading outline reading comprehension skills.

Extensive research supports that phonemic awareness can be developed through instruction and that doing so accelerates children's subsequent reading and writing achievement significantly (Ball & Blachman, 1991; Blachman, Ball, Black, & Tangel, 1994; Bradley & Bryant, 1983; Byrne & Fielding-Barnsley, 1991, 1993, 1995; Castle, Riach, & Nicholson, 1994; Cunningham, 1990; Lundberg et al., 1988; Wallach & Wallach, 1979; Williams, 1980).

The Foundations of Literacy skills articulate a continuum of learning. If students are not prepared to master grade-level indicators, educators should refer to previous grade-level skills for guidance and instructional support. Additionally, they should consider universal screener results to inform remediation. The Foundations of Literacy serve as building blocks, building foundational knowledge required for reading skills and comprehension progression.

Reading instruction is comprised of many components and to support effective instruction, one must understand the intention of reading prevention or intervention. Foorman and Torgeson (2001) state:

The components of effective reading instruction are the same whether the focus is prevention or intervention: phonemic awareness and phonemic decoding skills, fluency in word recognition and text processing, construction of meaning, vocabulary, spelling, and writing. Findings from evidence-based research show dramatic reductions in the incidence of reading failure when explicit instruction in these components is provided by the classroom teacher.

The intention of the *Foundations of Literacy Support Document* is to support effective tier-1 instruction of the Foundations of Literacy strand and the identification of areas of focus for tier-2 and tier-3 instruction to support successful grade-level reading outcomes.

Standard 1: Phonological and Phonemic Awareness

Phonological awareness is one of the six key components of comprehensive literacy instruction according to Every Student Succeeds Act (ESSA). Phonological awareness is more closely related to success in reading than intelligence (Torgesen, 1997) and phonemic awareness is the strongest single predictor of word reading difficulties (Pennington, et al. 2012; Snowling, 2000). In fact, among poor readers, 70-80% have difficulty with accurate and fluent word recognition that originates with weaknesses in phonological processing (Fletcher, Lyon, & Fuchs, 2007). That is because proficiency with phonemic awareness provides the underlying framework for reading (decoding) and writing (encoding) (Trehearne, 2003).

The purpose of phonemic awareness instruction is to improve students' word reading and spelling skills (Lane & Contesse, 2022), the most important of which are blending and segmenting. Phonemic awareness also plays a central role in developing automatic word recognition (Dixon et al., 2002; Duff and Hulme, 2012; Ehri, 2005, 2014; Laing & Hulme, 1999; Torgeson 2004; Torgesen et al., 2003; van den Broeck & Geudens, 2012; van den Broeck & van den Bos, 2010). Instruction in phonological awareness moves along a continuum of large units of sound (an awareness of words, syllables, onset and rime, rhyme) to small units of sound (phonemes and the identification, segmenting, blending, and manipulation of phonemes). Phonemic awareness instruction that calls attention to how the mouth looks and feels when producing specific sounds is particularly effective in promoting decoding (Boyer & Ehri, 2011; Castiglioni-Spalten & Ehri, 2003). For example, helping students become aware of whether the vocal folds are vibrating (meaning the sound is a voiced sound such as /b/, /d/, and /g/) or turned off (meaning the sound is voiceless such as /s/, /f/, and /k/).

Phonemic and phonological awareness is universal to all languages. However, not all languages and dialects have the same phonology. Additionally, not all languages and dialects have the same phonemes. For example, there are 11 sounds in English that do not appear in Spanish (e.g., /th/, /sh/, and /v/) and 19 sounds in English that do not appear in Korean. As such, explicit instruction in the phonemes and phonemic awareness for multilingual learners and students from culturally and linguistically diverse backgrounds is necessary for students to read texts that are written in General American English.

Vocabulary within this standard:

Term	Definition
Alliterative Spoken Words	The repetition of the first phoneme of each word spoken aloud (e.g., “Harry the happy hippo hula-hoops with Henrietta”).
Graphemes	A sound or phoneme represented by a symbol(s) or letter(s).
Onsets and Rimes	In a syllable , the onset is the initial consonant or consonants, and the rime is the vowel and any consonants that follow it (e.g., in the word “sat”, the onset is /s/, and the rime is /at/; in the word “flip”, the onset is /fl/ and the rime is /ip/; in “camel”, the onset is /c/ and the rime is /amel/; “camel”; “camel” has the same onset as “cat”, but it has a different rime: /-at/; in “breezy”, the onset is /br/ and the rime is /eezy/: “br-eezy”; “breezy” has the same rime as “wheezy”, but it has a different onset: /wh/).

Term	Definition
Phonemes	The smallest unit of sound within the English language system; a phoneme combines with other phonemes to make words.
Phonemic Awareness	One of the five essential components for reading instruction and a subcategory of phonological awareness where the focus is on the awareness of individual sounds (phonemes) in spoken words.
Phonological Awareness	Awareness of all levels of the speech sound system including word, syllable, onset and rime, and phoneme.
Phonological Processing	Phonological processing is the use of the sounds of one's language (i.e., phonemes) to process spoken and written language (Wagner & Torgesen, 1987). The broad category of phonological processing includes phonological awareness , phonological working memory, and phonological retrieval.
Syllable	<p>A segment of a word that has one vowel sound, which may or may not be followed or preceded by a consonant.</p> <p>Syllable Types:</p> <ul style="list-style-type: none"> • Closed: Has a short vowel sound that is spelled using one vowel and ends in a consonant (e.g., hat, dish, bas/ket). • Open: Has a long vowel sound that is spelled with one vowel and ends in that vowel (e.g., me, e/qual, pro/gram, mu/sic). • Vowel-consonant-e (VCe): Has a long vowel sound and ends with a consonant +e (e.g., like, milestone). • Consonant-le: Has a consonant +le at the end of a word and is unstressed when vocalized (e.g., candle, juggle). • Vowel-r: Has a vowel that is followed by letter r and creates distinct sounds like ar, er, ir, or, and ur (e.g., star, corner). • Vowel teams: Has a group of two or more vowels that represent a long, short, or other vowel sound (e.g., count, rainbow).

Standard 2: Concepts of Print

Concepts of print concern the awareness of how print works. Concepts of print include knowledge of what books, print, and written language are, and how they function. Concepts of print encompasses understandings that allow the reading process to take place including:

- understanding that print communicates a message;
- knowledge about book orientation and directionality of print;
- difference between sentences, words, and letters; and
- knowledge of the alphabetic system and the difference between letters and words.

In the *2024 SC CCR ELA Standards*, indicators within the concepts of print include book parts, identifying letters and words, and page and text orientation.

Vocabulary within this standard: *

Term	Definition
NA	NA

*There are no terms in the glossary that support this standard.

Standard 3: Decoding and Encoding Phonics

Research supports the conclusion that phonics instruction is crucial for students. By 8 years of age, the correlation between spelling ability and reading achievement is of the order of .89 to .92, suggesting a very close (but not perfect) association between the two processes (Westwood, 1979). As such, poor reading and poor spelling are directly connected (Adams, 2011; Gentry & Graham, 2010; Moats, 2005; Reed, 2012). Phonics instruction begins with instruction of the alphabetic principle since knowledge of letters and their associated sounds is a strong predictor of later reading development (Adams, 1994) and is essential in early reading development (Piasta & Wagner, 2010).

A critical understanding of the alphabetic principle is that there is not a one-to-one correspondence in English as there are 26 letters and 44 phonemes. Therefore, phonics instruction must include the expected and allowable patterns for the letters and letter sequences that represent all 44 sounds (e.g., the /j/ sound can be represented by the letter “j,” the letter combination “ge,” and the letter combination of “dge”). Part of learning letter-sound correspondence is also learning some graphemes only appear in certain positions of words (e.g., in English, words do not start with “ck”). Accurate knowledge of the expected and allowable letter sound correspondences (connecting graphemes and phonemes) is essential to early literacy development (Ehri, 2014; Kim et al., 2013; Piasta & Wagner, 2010) and is the basis for proficient decoding and encoding (Lane & Contesse, 2022).

According to Every Student Succeeds Act (ESSA), comprehensive literacy instruction, including phonics, must be explicit and systematic. Lane and Contesse (2022) describe explicit instruction as meaning that the instruction is clear, direct, unambiguous, includes frequent checks for understanding, does not assume mastery, does not leave learning to chance or to be independently discovered by the learner, and follows the “I do, We do, You do” principle of instruction. It is important to point out that sight word instruction is not explicit instruction. Clarification of the term “sight word” is important as all words (e.g., regular, irregular, and high frequency) have the potential to become recognized instantly and automatically when students understand the expected and allowable patterns for combining letters to represent sounds. In situations where a word has some irregularity, it is best to teach the parts of the word that are phonetically regular and the irregular parts to be learned “by heart” (also referred to as the “heart word” method). For example, in the word “said,” the “s” and “d” are phonetically regular, it is the “ai” that must be learned “by heart”.

Lane and Contesse (2022) describe systematic instruction as instruction logically sequenced to build on prior knowledge, ensuring the prerequisite skills are acquired before new skills are introduced (Castles et al., 2018; Ehri, 2020), connecting new learning to previously learned skills and concepts moving along a continuum of easier to more challenging skills in manageable steps. A carefully designed scope and sequence of skills is essential for systematic phonics instruction (Earle & Sayeski, 2017). This process ensures all phonic patterns are explicitly taught and assists teachers with expectations for which patterns should be mastered by a certain grade.

The most expected patterns for letter-sound correspondence include:

- **Final doubled consonant (FLOSS pattern):** Words that end in final “f,” “l,” “s,” and sometimes “z” that follow an accented short vowel or are in a one-syllable word is doubled (e.g., “stuff,” “doll,” “dress,” and “fuzz”);
- **-ck pattern:** There are four ways to spell the phoneme /k/ (“k,” “c,” “-ck,” and “ch”). The letters “ck” are only used at the end of a word or syllable immediately after an accented short vowel.
- **When “c” and “g” make their other sound:** When the letters “c” or “g” are followed by the letters “i,” “y,” or “e” they make their other (soft) sound (e.g., “city,” “cent,” and “fancy” vs. “can,” “cup,” and “coat” as well as “gym,” “gel,” and “giant” vs. “goal,” “gain,” and “gum”);
- **Doubling pattern:** When adding the morphemes “-ed” or “-ing” to the end of a root word, the final consonant is doubled in words with one vowel and one final consonant. For example, the word “stop” has one short vowel “o” and one final consonant “p”. Therefore, the final consonant (“p”) is doubled before adding either “-ed” (as in “stopped”) or “-ing” (as in “stopping”); and
- **Drop the “e” pattern:** In words that end in a silent “e,” the “e” is dropped before adding the suffix (e.g., “hope” to “hoping,” “bake” to “baking,” and “smile” to “smiling”). The “e” is kept if it is needed for the final consonant to retain its sound (e.g., “encourage” to “encouragement” and “trace” to “traceable”).

Morphologically complex words make up more than half of the words in English. (Anglin, 1993; Nagy & Anderson, 1984) and 60-80% of written words from third grade onward are multi-morphemic words (Anglin, 1993). This includes Greek and Latin roots which make up about 60% of all English words. In vocabulary related to sciences and technology, the percentage increases to over 90%. Morphology is closely connected with phonics because there are expected patterns for how morphemes are allowed to be added to a word.

Explicit and systematic instruction in the patterns for adding morphemes is important because the way the morphemes sound in a word (as represented by phonemes) does not always match how the word is spelled (graphemes). For example, “picks” and “fix,” “made” and “played,” “passed” and “past,” “trees” and “freeze,” “tents,” and “tense”). As mentioned in the section on phonological and phonemic awareness, this is especially important for multilingual students and students who speak with a dialect as General American English morphemes are not present in all languages. For example, in Arabic, French, Spanish, and Vietnamese, the possessor follows the object, and possessive morphemes are not used (e.g., “This is the car of the man.” vs. “the man’s car”).

Vocabulary within this standard:

Term	Definition
Consonant Blends	Consecutive consonants that keep their individual sounds when put together (e.g., /b/ /l/ in “blink”).
Decode	The act of sounding out a word using knowledge from graphemes .
Digraph	A single sound that is represented by two letters; neither letter acts alone to represent the sound (e.g., th, sh, ch, wh, ph, ng (“sing”) gh (“cough”).

Term	Definition
Encode	The act of scribing a word from speech to print.
Grapheme	A sound or phoneme represented by a symbol(s) or letter(s).
Morpheme	<p>The smallest meaningful unit of language.</p> <ul style="list-style-type: none"> • Derivational Morpheme: An affix—a group of letters added before the beginning (prefix) or after the end (suffix)— of a root or base word to create a new word or a new form of an existing word. • Inflectional Morpheme: An affix—a group of letters added before the beginning (prefix) or after the end (suffix)— added to a noun, verb, adjective, or adverb to assign a particular grammatical property to that word such as: tense, number, possession, or comparison; these do not change the essential meaning or the grammatical category of a word.
Phonics	The allowable and expected patterns for how letters can be sequenced to represent the sounds (phonemes) of spoken language.
Sight Words	Any word that is instantly recognizable. All words have the potential to being recognized instantly and automatically (regular, irregular, and high frequency) when explicitly taught.
Schwa Syllables	A vowel sound that can be heard in an unstressed syllable and is often heard as the short /i/ as in bit or the short /u/ as in cup (e.g., parrot, above).
Syllable	<p>A segment of a word that has one vowel sound, which may or may not be followed or preceded by a consonant.</p> <p>Syllable Types:</p> <ul style="list-style-type: none"> • Closed: Short vowel sound spelled using one vowel and ends in a consonant (e.g., hat, dish, bas/ket). • Open: Long vowel sound spelled with one vowel and ends in that vowel (e.g., me, e/qual, pro/gram, mu/sic). • Vowel-consonant-e (VCe): Long vowel sound and ends with a consonant +e (e.g., like, milestone). • Consonant-le: Consonant +le at the end of a word and is unstressed when vocalized (e.g., candle, juggle). • Vowel-r: A vowel that is followed by letter r and creates distinct sounds like ar, er, ir, or, and ur (e.g., star, corner). • Vowel teams: Group of two or more letters that represent a long, short, or other vowel sound (e.g., count, night, rainbow).
Trigraph	A single sound shown by three letters; no letters act alone to represent the sound (e.g., /tch/ in “match”).
Variable Vowel Teams	Two or more letters that make a vowel sound (e.g., ue, oo, ie, ea).
Vowel Diphthongs	Single vowel sounds that glide in the middle and the mouth position shifts during the production of the single vowel sound (e.g., /ou/ and /oi/).

Standard 4: Fluency

Fluency is the ability to read a text accurately, at an appropriate rate, and with expression. Fluent reading builds stamina for reading lengthy and complex texts. Fluency is a critical gateway to comprehension. Fluent reading frees mental resources to process meaning.

To understand what they read, children must be able to read fluently whether they are reading aloud or silently. When reading aloud, fluent readers read in phrases and add intonation appropriately; their reading is smooth and has expression.

As readers enter upper elementary grades, fluency becomes increasingly important. The volume of reading required in the upper elementary years increases significantly. Students whose reading is slow or labored will have trouble meeting the reading demands of their grade level (Hasbrouck, 1998).

In the *2024 SC CCR ELA Standards*, fluency expectations fall into three indicators: high-frequency words, oral reading, and decoding strategies that support fluent reading.

Vocabulary within this standard:

Term	Definition
Accuracy	In fluency, reading words in text with no errors.
Automaticity	In fluency, reading without attention or direct effort to decoding.
Expression	In fluency, reading in a way that includes appropriate emotion, pauses, and/or emphasis on important words.
High-Frequency words	Words that statistically show up with a high percentage rate in written text.
Intonation	In fluency, the pattern of variation (rise and fall) in pitch during a spoken utterance.

Assessments and the Foundations of Literacy

Universal Screeners

Act 213 requires all districts and charter schools to conduct universal screening and report the results to the South Carolina Department of Education (SCDE). The SCDE collects this required data in two ways:

- The Universal Screening field in PowerSchool
- An end-of-year survey gathering district-level data.

The SCDE approved Universal Screeners can be found [here](#).

According to the U.S. Department of Education (2017):

Universal screening is a critical first step in identifying students who are at risk for experiencing reading difficulties and who might need more time in instruction or different instruction altogether. Screening is conducted to identify or predict students who may be at risk for poor learning outcomes. Universal screening assessments are typically brief and conducted with all students from a grade level. They are followed by additional testing or short-term progress monitoring to corroborate students' risk status. Universal screening can be used for all academic subjects and for social and behavior assessment.

The purpose of universal screeners is to identify students who are at risk of academic difficulties and prevent those difficulties as soon as possible by implementing appropriate instruction and evidence-based intervention for all who are at risk of experiencing academic difficulties. These quick, standardized guides are intended to be administered three times a year to identify students who are at, above, or below the benchmark. Universal screeners can also inform individualized instruction, as well as be combined with additional data to indicate if additional diagnostic data is needed.

Digging Deeper with Tier-2 and Tier-3 Diagnostic Assessments

When students present certain characteristics in their universal screener data results, it can be beneficial for teachers to administer additional assessments to target tier-2 and tier-3 support.

For students who demonstrate phonological or phonemic awareness concerns, teachers might consider administering a phonological awareness diagnostic assessment like the Phonological Awareness Screening Test by David Kilpatrick, Phonemic Awareness Skills Screener by Heggerty, or the Phonological Awareness Assessment by Really Great Reading. Intervention resources for this area can also be found at the Florida Center for Reading Research.

For students who present with phonic concerns, teachers might consider administering a phonics diagnostic assessment like the CORE Phonics Survey by the Consortium on Reading Excellence or the LETRS Phonics and Word-Reading Survey by Lexia LETRS. Intervention resources for

this area can also be found at the Florida Center for Reading Research or LETRS General Phonics Lesson Plan.

For students who present fluency concerns, teachers might consider administering an oral reading fluency assessment like the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). While oral reading fluency rates are often prescribed in the interim assessments adopted by individual districts, suggested oral reading fluency rates can be found in Appendix A.

Administering these assessments helps to provide the teacher with more insight into the student's needs for the teacher to provide more targeted support. For more information, please refer to the [SCDE MTSS Support Document](#) and the [SCDE MTSS Decision Tree](#).

Instructional Considerations

Word Chains

Word chains strengthen both phonics and phonemic awareness skills. Instructional word work activities using manipulative letters is a powerful tool for supporting students as they develop an understanding of the alphabetic principle (Lane et al., 2009; Pullen & Lane, 2016).

Just as manipulative objects can be used in mathematics instruction to make abstract concepts more concrete, manipulative letters can make abstract concepts such as sound segmentation and blending more concrete (Lane & Contesse, 2022). In a word chain, one sound at a time is changed. For example, “cat” to “hat” to “hit” to “hip”. It is important only one sound is changed at a time and the focus is on the sound change as represented by letters. A word chain with a consonant or vowel digraph is a focus on each sound, not the individual letters. For example, with “boat” to “bit,” it is the middle sound that is represented by the letters “oa” that is changed to the letter that represents the /i/ sound.

Example word chain:

- 1) Begin with the word “team” (pull out the letters representing /t/ /ea/ /m/).
- 2) Change it to “beam” (take off the “t” and replace it with “b”).
- 3) Change the /m/ to /t/. What word did you get? (/b/ /ea/ /t/).
- 4) Change “beat” to “beast” (add an “s” in front of the “t”).
- 5) Change /ea/ to /oa/. What is the new word? (“boast”)
- 6) Change /b/ to /k/ (take off “b” and replace with “c”).
 - a. Note: Remember the focus is on the sound, so if the student uses a “k” instead of “c” they are technically correct but ask them if that word “looks right” (show the difference between “coast” vs. “koast”).
- 7) Now take out the letter that makes the /s/ sound. What is the new word? (“coat”)

Sound Wall vs. Word Wall

Sound walls serve as anchors when learning how the sounds of English are represented by letters. Evidence supporting the use of a sound wall includes evidence that instruction in articulatory gestures (i.e., the movements necessary to produce phonemes) increases students' phonemic awareness and grapheme-phoneme knowledge (Boyer & Ehri, 2011; Fälth et al., 2017; Galazka et al. 2021). Sound walls support students in retaining and learning to read unfamiliar words independently by matching the student's pronunciation of a sound, including what the mouth looks like during pronunciation, to the letter(s) that represent the sound.

In contrast to a word wall, a sound wall includes all graphemes that represent the phoneme as well as all 44 phonemes in the English language because word walls may obscure or omit graphemes. For example, under the letter "c" on a word wall, there could be words such as "can," "cent," and "child". Only one of those adheres to the "c" making the /k/ sound pattern. Therefore, if a student is hoping to use a word wall to help them spell a word such as "chin," they are likely to look (incorrectly) under the letter "t," as it is a common mistake made based on the articulatory posture of the mouth (which feels similar to the /t/ sound). Instead, it is more logical to have a sound wall that includes the different ways /s/ can be represented by graphemes (including "c" when followed by the letters "i," "y," or "e"), the different ways /k/ can be represented (including when "c" is followed by a consonant, or the vowel letters "a," "o," and "u") and another section for the ways the /ch/ sound can be represented.

Blocks, Cubes, and other manipulatives

Use of counting cubes, crackers, cereal, rocks, blocks, squares of felt, or any other manipulative helps students develop phonemic awareness by pointing to one item for each sound. It is important not to use letter tiles because the goal is to develop visual images of what letters go with each sound and why. For example, when pointing to blocks for a word like "brave," students should point to four blocks: /b/ /r/ /a/ /v/. The teacher then can provide guided questioning such as "what would go at the end of the word to help the letter 'a' say its name and not its sound?" The student could recognize the need to include an "e" at the end.

Assessment of Word Knowledge

Monitoring students' growth is an essential part of skill development, and effective progress monitoring assists with determining which students may need extra support (Lane & Contesse).

However, assessments that only ask students to write a dictated word do not equate with the challenge of reading and spelling in connected texts. Therefore, assessment of word knowledge should include a variety of ways to demonstrate the application of word knowledge such as stating the pattern(s) that were studied that week (e.g., "The pattern this week was -ck endings."), writing single words to dictation, selecting the appropriately spelled word out of a choice of 3-4 possible spellings, finding the incorrectly spelled word in a sentence and correctly writing the word, and writing the word in a sentence (which may be dictated or not). In addition, it is more

beneficial for students to receive spelling tests back with any misspelled words having the correct spelling beside them. This keeps the focus on the word(s) as opposed to the total number misspelled or the letter grade.

Another way to monitor spelling and determine the type of difficulty the student is having with spelling is to look at a sample of student writing. Knowing the type of error can help identify and support the type of additional instruction or intervention the student may need. Spelling errors can be based on poor phonological awareness, phonics knowledge, knowledge of morphemes, errors based on meaning, or poor mental imagery for words and can be described as follows:

- **Phonological Awareness:** Errors related to phonological awareness occur when the sounds in a word are misrepresented, missing, or out of place (e.g., “gril” for “girl” or “sop” for “stop”);
- **Morphology:** Errors related to knowledge of morphemes occur when the morpheme is not applied correctly (e.g., “walkt” for “walked” or “runing” for “running”);
- **Phonics:** Errors related to poor phonics knowledge occur when a word has all the sounds represented correctly, but the words are still incorrect (e.g., “qkit” for “quit” or “ran” for “rain”);
- **Meaning:** Errors based on meaning occur when the word that is written has the incorrect meaning which is related to knowledge of homograph or heteronym errors (e.g., “bear” for “bare” or “there” for “their”); and
- **Mental Imagery:** Errors related to poor mental imagery occur when a word has all the sounds correctly represented and the word does follow an expected phonic pattern, but the word does not “look right” (e.g., “brane” for “brain” or “cidy” for “city”).

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Appendix A: Oral Reading Fluency Norms
2017 Hasbrouck & Tindal Oral Reading Fluency Data

Grade	Percentile	Fall WCPM*	Winter WCPM*	Spring WCPM*
1	90	--	97	116
	75	--	59	91
	50	--	29	60
	25	--	16	34
	10	--	9	18
2	90	111	131	148
	75	84	109	124
	50	50	84	100
	25	36	59	72
	10	23	35	43
3	90	134	161	166
	75	104	137	139
	50	83	97	112
	25	59	79	91
	10	40	62	63
4	90	153	168	184
	75	125	143	160
	50	94	120	133
	25	75	95	105
	10	60	71	83
5	90	179	183	195
	75	153	160	169
	50	121	133	146
	25	87	109	119
	10	64	84	102
6	90	185	195	204
	75	159	166	173
	50	132	145	146
	25	112	116	122
	10	89	91	91

* WCPM = Words Correct Per Minute

Students scoring 10 or more words below the 50th percentile would be “below average”.