

Florida Assessments for Instruction in Reading Aligned to the Language Arts Florida Standards

FAIR – FS

Grades K through 2

Administration Manual

©2014 State of Florida, Department of Education. All rights reserved. Printing, copying, and distributing is permitted for use in the administration of the Florida Assessments for Instruction in Reading aligned to the Florida Standards (FAIR-FS) only. Use for any other purpose is strictly prohibited without the expressed written consent of the Florida Department of Education.

Table of Contents

Overview	5
Background and Research Foundation for FAIR-FS	6
Flow of tasks for Grades K through 2 assessment	9
Grades K – 2 Alignment of FAIR-FS Tasks with Language Arts Florida Standards (LAFS).....	10
Computer-administration of tasks	11
Screening Tasks	14
Alphabetics.....	15
<i>Phonological Awareness</i>	16
<i>Letter Sounds</i>	17
<i>Word Reading</i>	17
<i>Spelling</i>	18
Oral Language	19
<i>Vocabulary Pairs</i>	19
<i>Following Directions</i>	19
Comprehension	20
<i>Listening Comprehension</i>	21
<i>Reading Comprehension</i>	22
<i>Sentence Comprehension</i>	24
Grade-Level Diagnostic Tasks.....	26
Kindergarten	26
<i>Print Awareness</i>	26
<i>Letter Name Knowledge</i>	27
<i>Letter Sound Knowledge</i>	27
<i>Phonological Deletion: Word Parts/Initial Sound</i>	28
<i>Letter Sound Connection</i>	28
<i>Word Building: Consonants & Vowels</i>	29
Grade 1.....	30
<i>Letter Sound Knowledge</i>	30
<i>Phonological Blending</i>	31
<i>Phonological Deletion</i>	32
<i>Word Building: Consonants & Vowels</i>	33

<i>Word Building: CVC/CVCe & Blends</i>	34
Grade 2	35
<i>Phonological Deletion</i>	35
<i>Word Building: CVC/CVCe & Blends</i>	35
<i>Multisyllabic Word Reading</i>	36
Scoring and Reports	38
Probability of Literacy Success (PLS)	38
Ability Scores	39
Percentile Ranks	39
Error Analysis for Spelling	41
Considerations for Students with Disabilities	44
Directions for Paper and Pencil Administration	44
Communicating with Parents about FAIR-FS	47
For More Information	47
References	48
Appendix A: Frequently Asked Questions – For Advanced Users	50
K-2 Administration	50
Computer Adaptive Testing	51
Scoring and Score Implications	52

Overview

The *Florida Assessments for Instruction in Reading* aligned to the *Florida Standards* (FAIR-FS) are screening and diagnostic tools that provide reliable information to teachers. This information is intended to guide instructional decision-making for individuals and groups of students. The FAIR-FS is a comprehensive assessment system designed to accomplish three key goals:

- to predict students' literacy success
- to diagnose weaknesses
- to help teachers set instructional objectives

Because FAIR-FS is administered three times a year, the results can be used to monitor growth in literacy skills and to set and revise instructional objectives.

The purpose of this administration manual is to describe, in depth, the development of, and the strong empirical basis for the content of the FAIR-FS Grades K through 2 (K-2).

Audience

This administration manual provides a detailed orientation to the assessment content and answers a variety of questions that may be considered **by an advanced user** (e.g., literacy coach, district assessment coordinator, MTSS coordinator, school psychologist, etc.). Advanced users may also find a more in-depth description of the psychometrics of the assessment in the technical manual, available in August 2014.

Users looking for a more basic understanding of administration of the FAIR-FS may wish to skim this manual or refer to specific components of the online professional development course. Users looking for click-by-click directions on accessing the assessment system and FAIR-FS reports should reference your district's professional development resources and/or the online professional development courses.

Organization

For several decades, educators and psychologists have posed questions like "What makes some students so successful in learning to read?" and "What are the essential building blocks to ensuring that *all* students learn how to read?" The FAIR-FS is a by-product of research designed to answer those broader questions. The FAIR-FS was not created to serve only as a predictor of success on an end-of-year grade level assessment. Therefore, this administration manual begins with an exploration of the deep research foundation of the FAIR-FS. Next, administration of each of the tasks, in order, is described. Finally, each of the score types and the critical function of matching score profiles to instructional decisions are detailed.

Background and Research Foundation for FAIR-FS

The tasks included in the screening portion of the FAIR-FS are based on the latest research literature on the components of reading comprehension and the format of the assessment has been specifically designed to yield a more precise and efficient assessment. Below is a summary of the key research that serves as the foundation for the screening assessments.

Learning to Read

Learning to read requires the orchestration of knowledge and skills in numerous domains, including phonological awareness, alphabet knowledge, and concepts about print and oral language. An enormous body of research has been accumulated to guide schools in how to help students acquire the knowledge and skills they need. What is abundantly clear from research (e.g., Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Mathes et al., 2005; Simmons et al., 2008) and from consensus documents (National Research Council, 1998; National Institute of Child Health and Human Development, 2000) is that explicit instruction in the alphabetic principle (i.e., how written letters match to the sounds in English) is necessary to learn to decode and to prevent reading difficulties. However, mastery of the alphabetic principle must be coupled with construction of meaning—at the word, sentence, and text level—if comprehension is to occur (Foorman & Connor, 2011; Rayner, Foorman, Perfetti, Pesetsky, & Seidenberg, 2001).

Inter-relations Between Reading and Oral Language

Oral language skills (such as syntax and vocabulary) are crucial to the construction of meaning of printed/written language and must also be addressed in assessment and in instruction. Although studies of oral language skills find differing results in the way oral language affects reading comprehension outcomes, all studies support the importance of oral language skills throughout schooling. Studies indicate that, beyond third grade students' reading comprehension is determined by their decoding abilities AND oral language skills (Storch & Whitehurst, 2002). Other more recent studies of reading comprehension provided significant evidence that both reading accuracy (i.e., decoding skill) and oral language skills predict performance on outcome measures like FCAT and should be targets for instruction (Mehta, Foorman, Branum-Martin, & Taylor, 2005; Foorman, Petscher, Schatschneider, & Wagner, 2012). Evidence suggest that oral and written language skills are so interrelated with reading skills that they form a single construct and, hence, deserve equal attention instructionally.

Text Complexity

Most reading researchers agree that reading is an interaction between reader, text, and the purpose for reading (RAND Reading Study Group, 2002). Much is known about individual differences between readers at the elementary level but less about such differences at the secondary level. Research on text complexity has been informed by Kintsch's research on macro-structure (e.g., Kintsch & Rawson, 2005) and by Perfetti's work on micro- and macrostructure (Perfetti, Landi, & Oakhill, 2005). Perfetti's model of text complexity captures both the word identification processes of phonological-orthographic (sound-letter) mapping and word meanings of the learning to read phase as well as the comprehension processes involving general and linguistic knowledge. Perfetti contrasts the literal meaning of the textbase, which is primarily linguistic (e.g., propositions derived from words in clauses and sentences) from the mental or situation model that the reader constructs inferentially through the interaction between various text features and characteristics of the reader (e.g., prior knowledge). To make the text coherent the reader must construct propositions based on inferences extracted from the

sentences (Foorman, Arndt, & Crawford, 2011). Linguistic elements that affect a text's cohesion include factors such as narrativity, word concreteness, syntactic simplicity, referential cohesion, and deep cohesion (Graesser, McNamara, & Kulikowich, 2011). Referential cohesion refers to word and pronoun overlap across text. Deep cohesion refers to the degree to which causal, logical, and temporal connectives are present. As appealing as these natural language processing factors are, there are many methodological problems to be solved before agreed upon factors are defined and convincingly shown to predict students' comprehension of text. Nonetheless, these factors have instructional utility beyond the readability formulae based on word frequency and sentence length.

Assessing Reading for Understanding

Assessing students' ability to read and understand what they've read requires a systems approach that includes multiple components (Foorman & Ciancio, 2005; Foorman, Fletcher, & Francis, 2004; O'Reilly, Sabatini, Bruce, Pillarisetti, & McCormick, 2012):

- universal screening
- classroom-based formative assessments
- interim assessments administered multiple times a year to assess progress
- outcome assessment

The **purpose of screening** is to provide a general estimate of students' reading abilities. Based on screening results, students at risk of failing the end-of-year outcome assessments are identified. Then, further diagnostic assessments are administered to identify their strengths and weaknesses and to set instructional objectives. Typically the outcome is a gold standard measure of reading achievement and the cut point for passing (somewhere between the 40th and 50th percentile, depending on policy decisions) determines who receives further diagnostic assessment.

The **purpose of formative assessment** is strictly for informing day-to-day instruction and is not validated for high stakes decision-making purposes. Teachers conduct formative assessments in the context of classroom instruction to "...make students' thinking visible to both their teachers and themselves so that instructional strategies can be selected to support an appropriate course for future learning" (National Research Council, 2001, p. 4). Because formative assessments are specific to each teacher's enacted curriculum, data are informal and are not aggregated above the classroom level.

The **purpose of interim assessments** is to answer the question of whether students are learning from instruction and making progress in the learning progressions associated with a particular content domain (Perie, Marion, Gong, & Wurtzek, 2007). Interim assessments are typically valid and reliable measures of skill progressions that are uniform across the district or state and can be aggregated above the classroom level to inform district or state policy regarding instruction. In order for assessments to serve this policy role, it is important that they reliably measure the state standards (Torgesen & Miller, 2009) and many do not (Brown & Coughlin, 2007; Douglas & Harkness, 2011).

An **outcome assessment** is typically given one time per school year in order to determine whether students have achieved grade-level performance or improvement. These assessments may be created locally (e.g., end-of-course exams), mandated by a state agency (e.g., Florida Standards Assessment), or universally-available, norm-referenced published tests of achievement (e.g., Stanford Achievement Test or Iowa Test of Basic Skills).

Florida Assessment for Instruction in Reading 2009-2014 (FAIR 2009)

The FAIR 2009 took the systems approach outlined above and was validated as a screening and interim

assessment administered three times a year (Foorman, Torgesen, Crawford, & Petscher, 2009). In the K-2 system the teacher administered the 3-5 minute screening to individual students and received a Probability of Reading Success score (based on prediction to the SAT-10) that directed students to further diagnostic inventories. In the 3-12 system, the screening was a computer-adaptive assessment of reading comprehension that predicted to the Florida Comprehensive Assessment Test in Reading (FCAT 2.0). There were two diagnostic tasks: a Maze task that assessed text reading efficiency in 6 minutes and a Word Analysis task that assessed spelling in about 6 minutes (Foorman & Petscher, 2010). Additionally, there was a toolkit with passages leveled by Lexiles for measuring fluency, vocabulary, and comprehension and scaffolded discussion templates for teachers to use in leading classroom discussion about a text.

New to FAIR-FS

Implementation of the FAIR 2009 system over several years yielded several technical reports (posted on the FCRR website under Technical Resources <http://www.fcrr.org/FAIR/index.shtml>). Based on the data analyzed from the FAIR 2009, significant enhancements to the system were developed and studied as part of two research grants from the U.S. Department of Education's Institute of Education Sciences (IES) to Florida State University under the direction of Primary Investigator: Dr. Barbara Foorman.

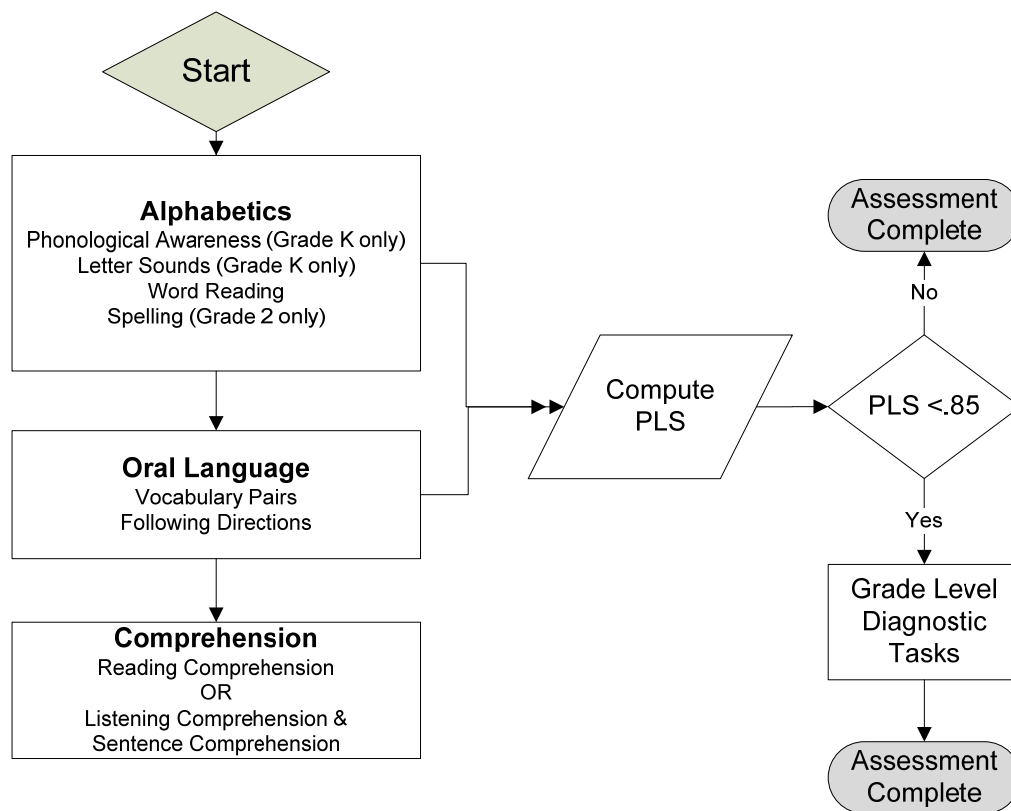
Institute of Education Sciences, USDOE (\$4,447,900), entitled "Assessing Reading for Understanding: A Theory-Based, Developmental Approach," subcontract to the Educational Testing Service for five years (R305F100005), 7/1/10-6/30/15 (Foorman, PI on subcontract).

Institute of Education Sciences, USDOE (\$1,499,741), entitled "Measuring Reading Progress in Struggling Adolescents," funded for four years, R305A1003013/1/10-2/28/14 (Foorman, PI).

Based on the discoveries within these two projects, a new assessment was created for screening and diagnosis. FCRR employed the most recent research on component skills of reading and advanced statistical procedures, to create highly reliable and valid measure of each important component reading skill. This new assessment that was developed independently by the FCRR is being licensed to the Florida Department of Education as the computer-adaptive components of the FAIR-FS.

In the K-2 system, studies indicated that measures of phonological awareness (blending and deletion), encoding (spelling), decoding (word reading), and oral language (vocabulary pairs, sentence comprehension, and following directions) were stronger predictors of performance on outcome measures, (i.e., SAT-10) than the FAIR 2009 tasks. Therefore, the FAIR-FS K-2 includes a broader measure of vocabulary than the FAIR 2009 and two additional oral language tasks (Following Directions and Sentence Comprehension). For descriptive data, the FAIR-FS K-2 system has more listening comprehension passages and a wider range of reading comprehension passages to span a wider range of text complexity. Although the FAIR-FS will take more time to administer due to the new tasks, the large amount of reliable, valid, and precise information that is provided in a relatively short period of time outstrips the utility of any other screening assessment. In addition, the variety of tasks and items on the K-2 FAIR-FS map onto the Language Arts Florida Standards (LAFS).

Flow of tasks for Grades K through 2 assessment



*Note: PLS = Probability of Literacy Success

		Screen						Diagnostic			
FS strand	FS Clusters	Alphabets	Vocabulary Pairs	Following Directions	Spelling	Listening/ Reading Comprehension	Sentence Comprehension	Letters & Sounds	Phonological Blending	Phonological Deletion	Word Building
Foundational Skills	Print Concepts										
	Phonological Awareness	✓							✓	✓	✓
	Phonics & Word Recognition	✓			✓		✓				✓
	Fluency					✓					
Reading Standards for Literature	Key Ideas & Details					✓					
	Craft & Structure					✓		✓			
	Integration of Knowledge & Ideas					✓					
	Range of Reading					✓					
Reading Standards for Informational Text	Key Ideas & Details					✓					
	Craft & Structure					✓		✓			
	Integration of Knowledge & Ideas					✓					
	Range of Reading					✓					
Writing*	Research to Build & Present Knowledge (standard #8)					✓					
Speaking & Listening	Comprehension & Collaboration			✓		✓	✓				
	Presentation of Knowledge & Ideas			✓		✓					
Language	Conventions	✓			✓			✓			✓
	Vocabulary Acquisition and Use		✓			✓					

*Note: The majority of the standards in the writing strand of the LAFS are not directly represented in the FAIR-FS tasks. However, the strongest predictor for all writing outcomes in the elementary grades are handwriting and spelling (Abbott, Berninger, & Fayol, 2010; Wagner et al., 2011).

Computer-administration of tasks

The FAIR-FS is computer-administered in order to reduce the amount of paper and manipulative materials needed for assessment, to increase standardization of administration, and to more efficiently identify students' abilities through computer-adaptive functionality.

Administration Considerations

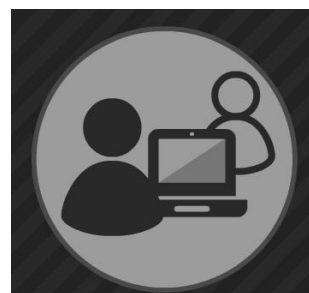
All K-2 screening assessment tasks and K-2 diagnostic assessment tasks are administered via computer with an external mouse. Only the Reading Comprehension and Print Awareness tasks require paper materials. The Reading Comprehension task requires a copy of the 26 Reading Comprehension passages. The hard copies of the passages may be printed, laminated and re-used, and shared among classroom teachers. **However, they should not be used for instruction or independent reading; they are for FAIR-FS assessment purposes only.** Print Awareness requires the use of a book. It can be any book that is available in the classroom.

Teachers will not need any other non-computer materials to administer the assessment. All instructions will be available on the screen; however, access to this administration manual may be helpful during assessment.

The introduction screen of each task provides notes to the teacher as a reminder of the actions needed for each particular task. Several tasks require the students to use the mouse or keyboard to give a response and the other tasks require a verbal answer from the student and the teacher uses the mouse to record the response. Included on the introduction screen is an icon indicating which type of administration is needed for each task.

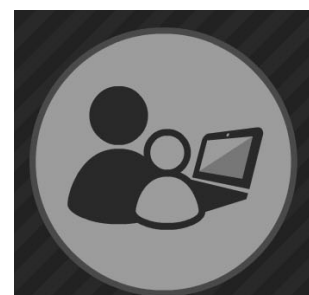
The icon with the computer screen facing the teacher and away from the student indicates that the teacher should orient the computer screen so that it is not viewable by the student. These tasks will require a verbal response from the student, and the teacher will see instructions on the screen regarding where to click to indicate the student's correct or incorrect response. The following tasks use this format:

- Phonological Awareness
- Listening/Reading Comprehension
- Print Awareness
- Phonological Blending
- Phonological Deletion



Teacher Task: Only the assessor sees the screen and uses the mouse.

The icon with the computer screen facing both the teacher and the student indicates that the screen needs to be viewable by the student and requires either the student or the teacher to click to indicate the correct response. The following tasks require students to see the screen AND use the mouse (the computer automatically scores the response).



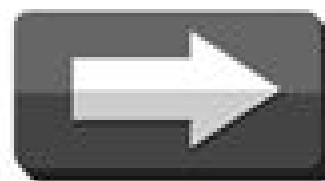
Student uses the mouse

- Vocabulary Pairs
- Following Directions
- Sentence Comprehension
- Spelling (response typed with keyboard)
- Word Building (all Word Building tasks)

The following tasks require the student to see the screen and to give a verbal response. The teacher will click to indicate the student's correct or incorrect response.

Teacher uses the mouse

- Letter Sounds
- Word Reading
- Letter Name Knowledge
- Letter Sound Knowledge
- Letter Sound Connection
- Multisyllabic Word Reading



After the student provides the verbal response for each item, the teacher will use the arrow (as pictured above) to indicate the correctness of the student's verbal response. The arrow will be located at the bottom right-hand corner of the screen and is used to advance to the next item on all other tasks.

If the student has provided a correct response, the teacher will click the top half of the arrow (anywhere above the midline). A second click on the top half of the arrow will confirm the selection and move to the next item. If the student has provided an incorrect response, the teacher will click the bottom half of the arrow. A second click on the bottom half of the arrow will confirm the selection and move to the next item. If the student self-corrects, or if the teacher accidentally selects the wrong half of the arrow with the first click, the teacher may click on the other half of the arrow to change the selection. Clicking a second time on the same area will confirm the response and advance to the next item.

Computer-adaptive functionality

To maximize the precision of information provided to educators, parents, and students, while also minimizing the amount of time students spend taking assessments, most tasks (Letter Sounds, Phonological Awareness, Word Reading, Vocabulary Pairs, Following Directions, and Sentence Comprehension) have a computer-adaptive format. The term computer-adaptive is not to be confused with computer-administered. Assessment tasks can be administered on computer, but they may or may not have adaptive functionality. Computer-administered assessment systems that utilize a fixed-item format generally have a large number of items ranging from easier (low ability) items to very difficult (high ability) items. In a computer-adaptive format, the number of items and the difficulty of those items

administered to a particular student differ depending on the student's ability at the time he/she is assessed, and not the student's grade level. The student's performance on previous items determines which items are presented subsequently. Each task in the FAIR-FS was researched and created to identify a student's ability more efficiently and accurately with each skill utilizing the computer-adaptive format.

Advantages of a computer-adaptive format include:

- shorter administration time for each task so that more skills can be reliably assessed
- ability to more accurately assess students who are performing above grade level and below grade level
- potential reduction of frustration for students performing above grade level by providing harder items to those students
- potential reduction of frustration for students performing below grade level by providing easier items to those students
- increased reliability of measurement for **all** students by calculating a standard error of measurement for each student after each item is administered

For additional information regarding the computer-adaptive functionality in the FAIR-FS, refer to the technical manual.

Screening Tasks

Once a student is rostered in the PMRN/FAIR-FS system, all screening tasks will be administered to the student in the order presented in the table below. The screening assessment was designed to be administered in a one-on-one format (one adult to one student). Unless otherwise specified, all directions for tasks will be read to the student and teacher through the audio. Many of the tasks also require a teacher or trained paraprofessional to indicate the correctness of the student's response. In a few of the tasks (i.e., Letter Sounds, Word Reading, Listening Comprehension), the teacher may need to provide a prompt during administration. If a student responds incorrectly to the first 8 items, the task will discontinue. The score report will indicate the tasks that were discontinued for a particular student.

Technology Requirements:

Computer (preferably laptop) :

- Access to the internet
- A mouse (not a touchpad)
- Speakers (internal or external)

This set of screening tasks was designed to serve two purposes:

- to provide a reliable estimate of student's abilities in teachable skills that contribute to success in reading comprehension
- to provide a probability of success on specified end-of-year outcome measures for each student

The screening tasks represent three research-based components of reading: Alphabetics (decoding and encoding), Oral Language (including vocabulary), and Comprehension.

Alphabetics Tasks	Kindergarten			First Grade			Second Grade		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Phonological Awareness	✓	✓	✓						
Letter Sounds	✓	✓							
Word Reading			✓	✓	✓	✓	✓	✓	✓
Spelling							✓	✓	✓
Oral Language Tasks	Kindergarten			First Grade			Second Grade		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Vocabulary Pairs	✓	✓	✓	✓	✓	✓	✓	✓	✓
Following Directions	✓	✓	✓	✓	✓	✓	✓	✓	✓
Comprehension Tasks	Kindergarten			First Grade			Second Grade		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Listening	✓	✓	AVL	AVL	AVL	AVL	AVL	AVL	AVL
Sentence	✓	✓	AVL	AVL	AVL	AVL	AVL	AVL	AVL
Reading			AVL	✓	✓	✓	✓	✓	✓

AVL = available

Alphabetics

All alphabetic tasks in the screening portion of the assessment are computer-adaptive, meaning that students will be administered items targeted to their individual ability levels. The tasks were chosen specifically for each grade based on research indicating which developmental skills are predictive of future reading success. In Kindergarten pre-alphabetic skills are measured by the Phonological Awareness and Letter Sounds tasks. The Phonological Awareness task is administered at fall, winter, and spring assessment periods. The Letter Sounds task is administered in the fall and winter assessment periods. These two early indicators of students' understanding of the alphabetic principle (Letter Sounds and Phonological Awareness) are highly predictive of later abilities to decode text and directly implicate areas for further explicit instruction (Foorman et al., 1998). Since some students are able to read by the end of

Kindergarten, students in Kindergarten will take both Phonological Awareness and Word Reading in the spring assessment period.

In grades 1 and 2, decoding, as measured by the Word Reading task, is an important indicator of reading success. In grade 2, encoding, as measured by the Spelling task, is also included in this section.

Phonological Awareness

The Phonological Awareness task is a computer adaptive task that requires students to listen to a word that has been broken into parts and then blend them together to reproduce the full word. This task is not timed.

- A recorded voice pronounces the word parts or phonemes (sounds) to increase the reliability of the administration.
- The student responds verbally.
- The teacher then indicates whether the student's response was correct or incorrect.



Examples of the correct and incorrect icons are pictured to the right.

Time estimate	1 minute
Audio	Directions and all items will be delivered via audio.
Directions	"Listen as I say some words. If I say <i>pig tail</i> , I know the word is pigtail."
Practice items	"What would the word be if I say <i>cup cake</i>?" If correct: "Yes, the word is cupcake." If incorrect: "Listen again. <i>cup cake</i> is the word cupcake." "What would the word be if I say /d/ /og/¹?" If correct: "Yes, the word is dog." If incorrect: "Listen again. /d/ /og/ is the word dog."
Scoring	The teacher will indicate the correctness of the student's oral response by selecting 'correct' or 'incorrect' on the computer screen.
Stop rule	If the student misses the first 8 items, the computer will automatically move to the next task.
Report output	Phonemic Awareness Ability Score and Percentile Rank

¹ In this manual, slashes indicate word parts and not phonetic spellings.

Letter Sounds

The Letter Sounds task is computer-adaptive. On the screen (computer monitor), the student is presented with a letter (both uppercase and lowercase). Students will be asked to provide the consonant sounds, short vowel sounds, and sounds of common consonant diagraphs. This task is not timed.

- The student will pronounce the sound of the presented letter or diagraph.
- The teacher will click to indicate the student's correct or incorrect pronunciation of the letter sound.

Time estimate	1 minute
Audio	Directions will be delivered via audio. There is no audio for items.
Directions	"You will see some letters on the screen. Tell me the sound the letter makes."
Practice item	None
Prompt	For vowels, if student provides the long sound, say to the student "That's one sound that letter can make, tell me a different one." For consonants, if the student provides the letter name, repeat the direction, "Tell me the <i>sound</i> the letter makes."
Scoring	The teacher will indicate the correctness of the student's oral response by clicking the top half of the "next" arrow for a correct response (e.g., the short sound for a vowel) and the bottom half of the "next" arrow for an incorrect response.
Stop Rule	If the student misses the first 8 sounds, the computer will automatically move to the next task.
Report output	Letter Sounds Ability Score and Percentile Rank

Word Reading

Word Reading is a computer-adaptive task administered to all students in grades 1 and 2 at each assessment period and to Kindergarten students at the spring assessment period. This task is not timed. On the screen (computer monitor), the student is presented with a word.

- The student pronounces the word.
- The teacher clicks to indicate if the student correctly read the word.

Time estimate	Less than 1 minute
Audio	Instructions will be delivered via audio. There is no audio for items.
Directions	"Let's see if you can read some words one at a time. Try to read each word and do the best you can."

Practice item	None.
Prompt	Encourage the student to take a guess if he/she is spending too much time on one word.
Scoring	The teacher will indicate the correctness of the student's oral response by clicking the top half of the "next" arrow for a correct response and the bottom half of the "next" arrow for an incorrect response.
Stop Rule	If the student misses the first 8 words, the computer will automatically move to the next task.
Report output	Word Reading Ability Score and Percentile Rank

Spelling

The Spelling task will be administered to all grade 2 students. This task is not timed. In order to reduce frustration, this task (as well as the rest of the screening tasks) is computer adaptive, limiting the number of words that are too easy or too difficult. The student will be administered a minimum of 8 words and a maximum of 30 words. In addition to the ability score and percentile rank, the student's misspellings will be listed on the student profile. An error analysis guide will be available for scoring the spelling errors with specific instructional recommendations targeted to the error type (e.g., morphological, orthographic, phonological).

- The computer will pronounce a word and use it in a sentence.
- Students will type to spell the word.

Time estimate	3 minutes
Audio	Instructions and all items will be delivered via audio.
Directions	"I want you to spell some words. Listen carefully as each word and sentence are played aloud. Some of the words will be easy and some may be hard. Do your best to spell each word correctly by typing your answer on the keyboard. If you can't find a key, like the apostrophe, ask for help."
Practice item	None; Task will discontinue if the first 8 words are misspelled.
Scoring	The computer will capture and score the student's response.
Stop Rule	If the student misses the first 8 words, the computer will automatically move to the next task.
Report output	Spelling Ability Score and Percentile Rank Student's misspellings

Oral Language

Vocabulary Pairs

The Vocabulary Pairs task requires students to match words that are semantically related. This task is administered at all three assessment periods in each grade level and is not timed.

- Three words will appear on the screen and are pronounced by the computer.
- The student will click on the two words that go together best (e.g., *dark, night, swim*).

Time estimate	2 minutes
Audio	Instructions and all items will be delivered via audio.
Directions	"Look at the boxes on the screen. Two of these go together. I will name each one, and you will click on the two that go together best."
Practice items	"Listen carefully as I name each one: <i>cow, orange, pig</i>. Which two go together best?" If correct: "Yes, cow and pig go together best because they are both animals." If incorrect: "Listen again: cow, orange, pig." Pause. "Cow and pig go together best because they are both animals." "Let's try another one. Which two words go together best: <i>blue, triangle, yellow</i>. " If correct: "Yes, blue and yellow go together best because they are both colors." If incorrect: "Listen again. Blue, triangle, yellow." Pause. "Blue and yellow go together best because they are both colors."
Scoring	The computer will capture and score the student's response.
Stop Rule	If the student misses the first 8 items, the computer will automatically move to the next task.
Report output	Vocabulary Pairs Ability Score and Percentile Rank

Following Directions

The Following Directions is a computer-adaptive task that requires students to listen and attend as they hear single and multi-step directions. This task is administered at all three assessment periods in each grade level and is not timed.

- An array of objects will appear on the screen and a set of audio instructions will play.
- Students respond to the directions by clicking on or moving the specified objects on the computer screen (e.g., put the square in front of the chair and then put the circle behind the chair).

Time estimate	2 minutes
Audio	Instructions and all items will be delivered via audio.
Directions	"Look at the pictures on the screen: this is a cat, this is a book, this is a hat, this is a block, and this is a plane. You will hear a sentence and I want you to click the picture named. Listen carefully because you will only hear the sentence once. Let's try one."
Practice items	"Click the book." If correct: "Yes, you clicked the book." If incorrect: "Watch this...this is the book." "This time I want you to click the pictures in the order you hear them. Click the heart, then click the plane." If correct: "Yes, you clicked the heart, then you clicked the plane." If incorrect: "Watch this...this is the heart and this is the plane." "For this item, you will have to move a picture. Let's try one. Put the cat on the line." If correct: "Yes, you put the cat on the line." If incorrect: "Watch this...I put the cat on the line."
Scoring	The computer will capture and score the student's response.
Stop Rule	If the student misses the first 8 items, the computer will automatically move to the next task.
Report output	Following Directions Ability Score and Percentile Rank

Comprehension

The alphabets and oral language tasks provide information on the reading skills that are most important for predicting the development of expected grade-level outcomes for students at each grade level (i.e., word reading in Kindergarten and comprehension in grades 1 and 2). Teachers often request a measure of reading comprehension or listening comprehension in order to see how students approach comprehension questions. Because performance on comprehension questions from passages in grades K-2 does not have strong reliability and because Sentence Comprehension predicts best for lower-performing students, these tasks are not part of the calculation of the student's Probability of Literacy Success (PLS). However, the information provided may be useful for teachers to have for all students.

Listening Comprehension

This task consists of one passage read by the teacher from the computer screen and five questions read to the student.

Kindergarten students will be administered a Listening Comprehension passage at the fall and winter assessment periods. Kindergarten students with a higher ability level (i.e., achieve a PLS greater than 0.85) at the spring assessment will be administered a Reading Comprehension passage instead of Listening Comprehension. A Listening Comprehension task will also be available to students in Grade 1 and Grade 2 who meet the stop rule on the lowest level Reading Comprehension passage.

The passage and instructions will appear on the computer monitor and be viewable only by the teacher. The teacher will read the directions to the student and when the student is ready to listen carefully, the teacher will begin reading the passage to the student at a comfortable rate (approximately 2 to 3 words per second). The assessment was designed for the teacher to read the passage instead of an audio file. Although an audio file would provide more standardization, a live teacher reading a story is more likely to gain the attention, motivation, and interest of a student in early elementary school.

Once the teacher has finished reading the passage, the teacher clicks the “show questions” button and will ask the student a series of five questions—three explicit and two inferential. The screen will list possible correct responses and the teacher will click to indicate if the student provided a correct or an incorrect response (an example of the correct and incorrect icons are pictured below).



There are 10 available Listening Comprehension passages that are ordered in difficulty based on the average difficulty of the questions associated with each passage. Due to the limited attention, working memory, and listening abilities of K-2 students, the passages are short (i.e., 250 words or less). The readability of Listening Comprehension text is slightly higher than Reading Comprehension passages, so the two sets of passages (Listening Comprehension and Reading Comprehension) should not be considered interchangeable.

Time estimate	5 minutes
Audio	There is no audio for this task. The screen will display instructions for the teacher to say.

Directions	(Listening Comprehension) “Listen while I read __ (title) __. When I’m finished, I will ask you a few questions. Ready? Listen carefully.”
Practice item	None
Scoring	The teacher will indicate the correctness of the student’s oral response by selecting ‘correct’ or ‘incorrect’ on the computer screen.
Stop Rule	None
Report output	Listening Comprehension Raw Score and Percentile Rank

Reading Comprehension

The Reading Comprehension task consists of the student orally reading a passage from a hard copy with the teacher marking errors on the computer screen and asking five comprehension questions.

Depending on the student’s reading ability level (i.e., PLS), the computer will alert the teacher which Reading Comprehension passage best aligns to the student’s reading ability. Placement into a passage will be determined by the computer based on the student’s aggregate score from the alphabetics and oral language tasks. The teacher will locate that passage from among the printed 26 Reading Comprehension passages. The passages represent a range of reading ability levels; students are not restricted to a particular grade level. For example, a first grade student with a higher ability level (PLS) will be given a more difficult passage than a first grade student who is performing at grade level.

The hardcopy of the passage will be placed in front of the student, while an electronic version of the same passage will be on the computer monitor and viewable only by the teacher. The teacher will read the directions to the student and when the student begins reading the first word, the teacher will click a “begin timing” button. As the student reads the passage, the teacher will mark miscues (words skipped and/or the words not pronounced correctly). As words are decoded incorrectly or skipped, the teacher will click on the miscues, changing the text from regular text to italics. If the teacher improperly clicks on a word or the student self-corrects, the teacher will click on the word a second time, returning the word to the original font. As the teacher progresses through the text, clicking on words, the application will track the total number of words read, the number of miscues, and the specific words that were miscued by the student. Directions for the task are embedded in the application. Rules for marking errors are included here:

Errors	Not Errors
Mispronunciations (including leaving off –s, –ed, and –ing; reading “talk” for talked)	Insertions of words (reading “big, bad dog” instead of “bad dog”)
Omissions (leaving out a word)	Self-corrections

Substitutions (reading “beg” for “big”)	Repetitions (re-reading a word or phrase)
Reversals (reading “Tom said” instead of “said Tom”) *This counts as 2 errors; one point for each word.	Loss of place (e.g., skipping a line) *Redirect the student to correct place and keep the stopwatch running.
Hesitations longer than 3 seconds *Provide the word, mark as incorrect, and move on.	Misarticulation or dialect * f → th fumb → thumb * w → r wabbit → rabbit * da → the, warsh → wash
Proper nouns (any capitalized word) *If the student hesitates for 3 seconds or mispronounces the proper noun, provide the word and count as an error <u>the first time only</u> .	Multiple misreads of the proper noun do <u>not</u> count as errors

If the passage is too difficult for the student to read (i.e., students cannot decode the words), the computer will discontinue administration of the passage and move to a less difficult passage. If the student has four miscues in the first line of text, the application will display a pop-up message indicating that the student has missed four words in the first line, the timer will stop, and the application will move to a different passage. As a second check to prevent frustration with difficult text, the application will display a pop-up message if the student miscues 10% of the words in the text. If this occurs, the timer will stop and a less difficult passage will be delivered. The stop may occur at any time when the student is reading the passage. If a stop rule is reached, the teacher will tell the student to stop reading and try a different passage.

Once the student has finished reading the last word of the passage, the teacher clicks the “stop timing” button and will ask the student a series of five questions—three explicit and two inferential. The screen will list possible correct responses, and the teacher will click to indicate if the student provided a correct or an incorrect response. The teacher could also use the keyboard to select ‘1’ for correct or ‘2’ for incorrect. The student may refer back to the hardcopy of the passage at any time.

If the student is not successful reading the least difficult passage, the computer application will move to the listening comprehension task for all grades levels: 2nd grade, 1st grade, and Kindergarten.

Time estimate	5 minutes
Audio	There is no audio for this task. The screen will display instructions for the teacher to say.
Directions	(Reading Comprehension) “I would like you to read out loud for me. When you’re done, I’ll ask you some questions about what you

	read, so please read carefully. The title of the story is __ (title) __."
Practice item	None
Scoring	The teacher will indicate the correctness of the student's oral response by selecting 'correct' or 'incorrect' on the computer screen.
Stop Rule	Four or more miscues in the first line; Number of miscues reaches 10% of the total word count
Report output	Percentage of words read correctly (accuracy) Number of words read correctly per minute (fluency) List of miscued words Reading Comprehension Raw Score (RCRS)

There are 26 available Reading Comprehension passages. Half the passages are informational and half are narrative. Due to the limited attention, working memory, and listening and reading abilities of K-2 students, the passages are short (i.e., 250 words or less). All passages have been qualitatively determined to be at the kindergarten to fourth grade range.

The report output will include accuracy, fluency, and comprehension. Accuracy will be expressed as the percentage of words read correctly. Fluency will be the number of words the student read correctly divided by the time that the student took to read the entire passage, which becomes the number of words correct per minute (wcpm). Additionally, a list of the words the student miscued will be on the report. The comprehension score is a raw score indicating how many (out of three) explicit questions were answered correctly and how many (out of two) implicit questions were answered correctly.

Sentence Comprehension

This computer-adaptive task consists of having the student select which of four pictures on a computer screen (computer monitor) depicts the sentence read aloud (e.g., click on: "The dog is under the table"). This measure assesses a student's syntactic abilities and ability to comprehend at the sentence level. This task will provide more information about students who are non-readers.

Time estimate	2 minutes
Audio	Directions and all items will be delivered via audio.
Directions	"Look at the pictures on the screen. You will hear a sentence and I want you to click the picture that best goes with the sentence. Let's try one."
Practice items	"Click on <i>The baby is crying.</i> " If correct: "Yes, that picture goes best with <i>The baby is crying.</i> "

	If incorrect: "Watch this...this picture goes best with <i>The baby is crying.</i>" "Let's try another one. Click on <i>The girl is eating dinner by herself.</i>" If correct: "Yes, that picture goes best with <i>The girl is eating dinner by herself.</i>" If incorrect: "Watch this...this picture goes best with <i>The girl is eating dinner by herself.</i>"
Scoring	The computer will capture and score the student's response.
Stop Rule	If the student misses the first 8 items, the computer will automatically move to the next task.
Report output	Sentence Comprehension Ability Score and Percentile Rank

Grade-Level Diagnostic Tasks

The computer will calculate a Probability of Literacy Success (PLS) for each student based on the screening assessment. The teacher will administer the Grade-Level Diagnostic Tasks to students who are below a PLS of .85. The diagnostic inventory is administered on the computer, but the items are NOT computer adaptive. The number and order of the items is fixed for each task. The tasks are ordered in developmental sequence and represent important pre-requisite skills at each grade level. The results of the diagnostic tasks will assist teachers in targeting/differentiating instruction to each student's level of skill development. To prevent frustration, the diagnostic assessment will end if the student correctly responds to less than 80% of the items in a specific task. In other words, the stop rule for the inventory is scoring below 80% on a task. Most tasks will have 5 items, with the exception of Letter Names and Letter Sounds, Phonological Deletion and Multisyllabic Word Reading. A criterion for mastery of 80% correct will be set for each task. Scores from previous assessment periods would be automatically carried forward in the PMRN so that students need not repeat tasks they previously mastered within a grade level.

Kindergarten

Print Awareness

The Print Awareness task consists of 5 items that measure a student's basic familiarity with the features of print. This task is included because it maps onto the LAFS Reading Foundational Skills for Kindergarten. However, it is optional because the scoring is subjective and the task is, therefore, impossible to use for predicting reading outcomes in Kindergarten.

Time estimate	2 minutes
Audio	There is no audio for this task. The screen will display directions for the teacher to say.
Directions	Select a storybook with text and illustrations on two facing pages. The pictures should be at the top of the page with several lines of text at the bottom. Be sure that at least one sentence begins and ends on the targeted book page. Avoid pages with dialogue. Choose a book unfamiliar to the student. Ask the student to perform the 5 items on the computer screen.
Practice item	None
Scoring	The teacher will indicate the correctness of the student's oral response by selecting 'correct' or 'incorrect' on the computer screen.
Report output	Print Awareness Raw Score

Letter Name Knowledge

The Letter Name Knowledge task will evaluate students' recognition of each letter of the alphabet. Knowledge of all 26 letters (both uppercase and lower case) will be administered so that teachers can target instruction to individual letters that the student does not know.

Time estimate	1 minute
Audio	Directions will be delivered via audio. There is no audio for items.
Directions	"You will see some letters on the screen. Tell me the name of the letter."
Practice item	None
Scoring	The teacher will indicate the correctness of the student's oral response by clicking the top half of the "next" arrow for a correct response and the bottom half of the "next" arrow for an incorrect response.
Report output	Letter Name Knowledge Raw Score and a list of incorrect letters

Letter Sound Knowledge

The Letter Sound Knowledge task is administered as part of the screening assessment for all kindergarten students during the first two assessment periods. It is administered during the end-of-the year diagnostic assessment only to those students with a PLS below .85. In the diagnostic assessment 29 letter sounds (includes digraphs ch, sh, and th) will be administered.

Time estimate	1 minute
Audio	Directions will be delivered via audio. There is no audio for items.
Directions	"You will see some letters on the screen. Tell me the sound the letter makes."
Practice item	None
Prompt	If student provides the name of the letter instead of the sound, say to the student "That's the name of the letter, can you tell me the sound?" If the student produces the correct short vowel sound, mark it as correct.
Scoring	The teacher will indicate the correctness of the student's oral response by clicking the top half of the "next" arrow for a correct response and the bottom half of the "next" arrow for an incorrect response.
Report output	Letter Sound Knowledge Raw Score and a list of incorrect sounds

Phonological Deletion: Word Parts/Initial Sound

The Phonological Deletion task examines the student's emergent ability to manipulate words and phonemes, a prerequisite for the Word Building tasks. A recorded voice will say a word aloud and ask students to pronounce the word without a part of the word (e.g., *backpack* without saying *back*) or the initial sound of a word (e.g., *cat* without /k/).

Time estimate	1 minute
Audio	Directions and all items will be delivered via audio.
Directions	Face the computer screen away from the student for this task.
Practice items	"Let's see if you can change some words. Say <i>bedtime</i>." (Pause for student response.) "Now say <i>bedtime</i> without saying <i>bed</i>." If correct, say: "Yes, <i>bedtime</i> without saying <i>bed</i> is <i>time</i>." If incorrect, say: "Listen again...<i>bedtime</i>. <i>Bedtime</i> without saying <i>bed</i> is <i>time</i>." "Say <i>blueberry</i>." (Pause for student response.) "Now say <i>blueberry</i> without saying <i>berry</i>." If correct, say: "Yes, <i>blueberry</i> without saying <i>berry</i> is <i>blue</i>." If incorrect, say: "Listen again...<i>blueberry</i>. <i>Blueberry</i> without saying <i>berry</i> is <i>blue</i>." "Say <i>mat</i>." (Pause for student response.) "Now say <i>mat</i> without saying /m/." If correct: "Yes, <i>mat</i> without saying /m/ is <i>at</i>." If incorrect: "Listen again...<i>mat</i>. <i>Mat</i> without saying /m/ is <i>at</i>."
Scoring	The teacher will indicate the correctness of the student's oral response by selecting 'correct' or 'incorrect' on the computer screen.
Report output	Phonological Deletion: Word Parts/Initial Sound Raw Score

Letter Sound Connection

The Letter-Sound Connection task requires a two-part response. A recorded voice will say a word aloud and ask the student to identify the first sound of the word and then to identify the name of the letter that goes with the sound.

Time estimate	1 minute
Audio	Directions and all items will be delivered via audio.
Directions	See practice items.

Practice items	Initial Sounds: "Listen carefully. What is the FIRST sound you hear in the word <i>sock</i>?" If correct, say: "Yes, the FIRST sound in <i>sock</i> is /s/." If incorrect, say: "Listen again...<i>sock</i>. The FIRST sound in <i>sock</i> is /s/." "Click the letter that makes the /s/ sound." If correct, say: "Yes, the letter that makes the /s/ sound is s." If incorrect, say: "Listen again... /s/. The letter that makes the /s/ sound is s." Final Sounds: "Listen carefully. What is the LAST sound you hear in the word <i>man</i>?" If correct: Yes, the last sound in <i>man</i> is /n/. If incorrect: Listen again...<i>man</i>. The last sound in <i>man</i> is /n/. "Click the letter that makes the /n/ sound." If correct: Yes, the letter that makes the /n/ sound is n. If incorrect: Listen again.../n/. The letter that makes the /n/ sound is n.
Scoring	The teacher will indicate the correctness of the student's oral response by clicking the top half of the "next" arrow for a correct response and the bottom half of the "next" arrow for an incorrect response.
Report output	Initial Letter Sound Connection Raw Score Final Letter Sound Connection Raw Score

Word Building: Consonants & Vowels

In the Word Building tasks, the computer will display an array of letters across the top of the screen and a word (e.g., *cop*) at the bottom of the screen. The computer models moving a letter from the array to the bottom row to create a new word (e.g., *hop*). The student is then instructed to make another word pronounced by the computer (e.g., *top*). There are three different types of items in this task: (i.e., initial consonants, final consonants, and medial vowels), and students will respond to five items of each type. There will be one set of instructions before this task begins.

Time estimate	3 minutes
----------------------	-----------

Audio	Directions and all items will be delivered via audio.
Directions	Orient the screen so that the student can clearly see it and use the mouse. Several letters will appear at the top of the screen as well as a word at the bottom. Items will continue to be administered via audio.
Practice items	"Let's build some words. To build them, you may need to change, take away or add a letter to make a new word. You will build the new words under the line. " "This is the word <i>cop</i>. If I take away the letter <i>c</i> and put <i>h</i> in its place, I make the word <i>hop</i>. Now you move the letters. Make the word <i>hop</i>." If correct: "Yes, you made the word <i>hop</i>." If incorrect: "Watch this. If I take away the letter <i>c</i> and put <i>h</i> in its place, I make the word <i>hop</i>." "This word is <i>hop</i>. Make the word <i>top</i>. " If correct: "Yes, you made the word <i>top</i>." If incorrect: "Watch this. If I take away the letter <i>h</i> and put <i>t</i> in its place, I make the word <i>top</i>. " "This is the word <i>pan</i>. Make the word <i>pad</i>." If correct: "Yes, you made the word <i>pad</i>." If incorrect: "Watch this. If I take away the letter <i>n</i> and put <i>d</i> in its place, I make the word <i>pad</i>."
Scoring	The computer will capture and score the student's response.
Report output	Word Building: Initial Consonant Raw Score Word Building: Final Consonant Raw Score Word Building: Vowel Raw Score

Grade 1

Letter Sound Knowledge

On the computer screen, the student is presented with a letter (both uppercase and lowercase), and the teacher will click to indicate whether the student's pronunciation of the letter sound is correct or incorrect. Students will be asked to provide the consonant sounds, short vowel sounds, and sounds of common consonant digraphs. Twenty-nine sounds will be administered.

Time estimate	1 minute
Audio	Directions will be delivered via audio. There is no audio for items.
Directions	"You will see some letters on the screen. Tell me the sound the letter makes."
Practice item	None
Prompt	For vowels, if student provides the long sound, say "That's one sound that letter can make. Tell me a different one." If the student produces the correct short vowel sound, mark it as correct. For consonants, if the student provides the name of the letter instead of the sound, say "That's the name of the letter. Can you tell me the sound?"
Scoring	The teacher will indicate the correctness of the student's oral response by clicking the top half of the "next" arrow for a correct response and the bottom half of the "next" arrow for an incorrect response. For the letters 'c' and 'g', either the soft or hard sound is acceptable.
Report output	Letter Sound Knowledge Raw Score and a list of incorrect sounds

Phonological Blending

The Phonological Blending task requires students to listen to a word that has been broken into word parts or phonemes and then blend them together to reproduce the full word. A recorded voice will pronounce the word parts/phonemes in order to increase the reliability of the administration. The teacher will then indicate whether the student's response was correct or incorrect.

Time estimate	1 minute
Audio	Directions and all items will be delivered via audio.
Directions	"Listen as I say some words. If I say <i>pig tail</i> , I know the word is pigtail."
Practice item	"What would the word be if I say <i>cup cake</i>?" If correct: "Yes, the word is cupcake." If incorrect: "Listen again. <i>Cup cake</i> is the word cupcake." "What would the word be if I say /d/ /og/?" If correct: "Yes, the word is dog." If incorrect: "Listen again. /d/ /og/ is the word dog."

Scoring	The teacher will indicate the correctness of the student's oral response by selecting 'correct' or 'incorrect' on the computer screen.
Report output	Phonological Blending Raw Score

Phonological Deletion

The Phonological Deletion task examines the student's emergent ability to manipulate word parts and phonemes, a prerequisite for the Word Building tasks. There are two different types of items in this task: initial sounds and final sounds. A recorded voice will say a word aloud and ask students to pronounce the word without the initial sound or the final sound. Students will respond to 10 items in each category. There will be one set of instructions before this task begins.

Time estimate	3 minutes
Audio	Directions and all items will be delivered via audio.
Directions	Face the computer screen away from the student for this task.
Practice item	"Let's see if you can change some words. Say <i>bedtime</i>." (Pause for student response.) "Now say <i>bedtime</i> without saying <i>bed</i>." If correct, say: "Yes, <i>bedtime</i> without saying <i>bed</i> is <i>time</i>." If incorrect, say: "Listen again...<i>bedtime</i>. <i>Bedtime</i> without saying <i>bed</i> is <i>time</i>." "Say <i>blueberry</i>." (Pause for student response.) "Now say <i>blueberry</i> without saying <i>berry</i>." If correct, say: "Yes, <i>blueberry</i> without saying <i>berry</i> is <i>blue</i>." If incorrect, say: "Listen again...<i>blueberry</i>. <i>Blueberry</i> without saying <i>berry</i> is <i>blue</i>." "Say <i>mat</i>." (Pause for student response.) "Now say <i>mat</i> without saying /m/." If correct: "Yes, <i>mat</i> without saying /m/ is <i>at</i>." If incorrect: "Listen again...<i>mat</i>. <i>Mat</i> without saying /m/ is <i>at</i>."
Scoring	The teacher will indicate the correctness of the student's oral response by selecting 'correct' or 'incorrect' on the computer screen.
Report output	Phonological Deletion: Initial Raw Score Phonological Deletion: Final Raw Score

Word Building: Consonants & Vowels

In the Word Building tasks, the computer will display an array of letters across the top of the screen and a word (e.g., *cop*) at the bottom of the screen. The computer models moving a letter from the array to the bottom row to create a new word (e.g., *hop*). The student is then instructed to make another word pronounced by the computer (e.g., *top*). There are three different types of items in this task (i.e., initial consonants, final consonants, and medial vowels), and students respond to five items of each type. There will be one set of instructions before this task begins.

Time estimate	3 minutes
Audio	Directions and all items will be delivered via audio.
Directions	Orient the screen so that the student can clearly see it and use the mouse. Several letters will appear at the top of the screen as well as a word at the bottom. Items will continue to be administered via audio.
Practice items	"Let's build some words. To build them, you may need to change, take away or add a letter to make a new word. You will build the new words under the line. " "This is the word <i>cop</i>. If I take away the letter <i>c</i> and put <i>h</i> in its place, I make the word <i>hop</i>. Now you move the letters. Make the word <i>hop</i>." If correct: "Yes, you made the word <i>hop</i>." If incorrect: "Watch this. If I take away the letter <i>c</i> and put <i>h</i> in its place, I make the word <i>hop</i>." "This word is <i>hop</i>. Make the word <i>top</i>. " If correct: "Yes, you made the word <i>top</i>." If incorrect: "Watch this. If I take away the letter <i>h</i> and put <i>t</i> in its place, I make the word <i>top</i>. " "This is the word <i>pan</i>. Make the word <i>pad</i>." If correct: "Yes, you made the word <i>pad</i>." If incorrect: "Watch this. If I take away the letter <i>n</i> and put <i>d</i> in its place, I make the word <i>pad</i>."
Scoring	The computer will capture and score the student's response.
Report output	Word Building: Consonants Raw Score Word Building: Vowels Raw Score

Word Building: CVC/CVCe & Blends

This set of Word Building tasks assesses students' understanding of long and short vowels, the CVCe spelling pattern and blends. The student is given a word with a short vowel (e.g., *nap*) and is asked to make a word with a long vowel sound (e.g., *nape*). Students may also be asked to transform a word with a long vowel into a word with a short vowel (e.g., *nape* to *nap*). Students also manipulate letters and sounds that are part of a consonant blend (e.g., make the word *split* into *split*). There will be one set of instructions before this task begins.

Time estimate	3 minutes
Audio	Directions and all items will be delivered via audio.
Directions	Orient the screen so that the student can clearly see it and use the mouse. Several letters will appear at the top of the screen as well as a word at the bottom. Items will continue to be administered via audio.
Practice items	"Let's build some words. To build them, you may need to change, take away or add a letter to make a new word. You will build the new words under the line." "This is the word <i>hop</i>. If I put the letter <i>e</i> at the end, I make the word <i>hope</i>. Now you move the letters. This word is <i>hope</i>. Make the word <i>hop</i>." If correct: "Yes, you made the word <i>hop</i>." If incorrect: "Watch this. If I take away the letter <i>e</i>, I make the word <i>hop</i>." "This word is <i>set</i>. If I place the letter <i>n</i> between <i>e</i> and <i>t</i>, I make the word <i>sent</i>. Now you move the letters. This word is <i>sent</i>. Make the word <i>send</i>." If correct: "Yes, you made the word <i>send</i>." If incorrect: "Watch this. If I take away the letter <i>t</i> and put <i>d</i> in its place, I make the word <i>send</i>." "This word is <i>send</i>. Make the word <i>spend</i>." If correct: "Yes, you made the word <i>spend</i>." If incorrect: "Watch this. If I put the letter <i>p</i> between the letters <i>s</i> and <i>e</i>, I make the word <i>spend</i>."
Scoring	The computer will capture and score the student's response.
Report output	Word Building: CVC/CVCe Raw Score Word Building: Blends Raw Score

Grade 2

Phonological Deletion

This task examines the student's emergent ability to manipulate phonemes, a prerequisite for the Word Building tasks. There are two different types of items in this task: initial consonants and final consonants. A recorded voice will say a word aloud and ask students to pronounce the word without the initial sound or the final sound. Students will respond to 10 items in each category. There will be one set of instructions before this task begins.

Time estimate	3 minutes
Audio	Directions and all items will be delivered via audio.
Directions	Face the computer screen away from the student for this task.
Practice item	"Let's see if you can change some words. Say <i>bedtime</i>." (Pause for student response.) "Now say <i>bedtime</i> without saying <i>bed</i>." If correct, say: "Yes, <i>bedtime</i> without saying <i>bed</i> is <i>time</i>." If incorrect, say: "Listen again...<i>bedtime</i>. <i>Bedtime</i> without saying <i>bed</i> is <i>time</i>." "Say <i>blueberry</i>." (Pause for student response.) "Now say <i>blueberry</i> without saying <i>berry</i>." If correct, say: "Yes, <i>blueberry</i> without saying <i>berry</i> is <i>blue</i>." If incorrect, say: "Listen again...<i>blueberry</i>. <i>Blueberry</i> without saying <i>berry</i> is <i>blue</i>." "Say <i>mat</i>." (Pause for student response.) "Now say <i>mat</i> without saying /m/." If correct: "Yes, <i>mat</i> without saying /m/ is <i>at</i>." If incorrect: "Listen again...<i>mat</i>. <i>Mat</i> without saying /m/ is <i>at</i>."
Scoring	The teacher will indicate the correctness of the student's oral response by selecting 'correct' or 'incorrect' on the computer screen.
Report output	Phonological Deletion: Initial Raw Score Phonological Deletion: Final Raw Score

Word Building: CVC/CVCe & Blends

This set of Word Building task assesses students' understanding of long and short vowels, the CVCe spelling pattern and consonant blends. The student is given a word containing a short vowel (e.g., *nap*) and is asked to make a word with a long vowel sound (e.g., *nape*). Students may also be asked to transform a word with a long vowel into a word with a short vowel (e.g.,

nape to *nap*). Students also manipulate letters and sounds that are part of a consonant blend (e.g., make the word *spit* into *split*). There will be one set of instructions before this task begins.

Time estimate	3 minutes
Audio	Directions and all items will be delivered via audio.
Directions	Orient the screen so that the student can clearly see it and use the mouse. Several letters will appear at the top of the screen as well as a word at the bottom. Items will continue to be administered via audio.
Practice items	"Let's build some words. To build them, you may need to change, take away or add a letter to make a new word. You will build the new words under the line." "This is the word <i>hop</i>. If I put the letter <i>e</i> at the end, I make the word <i>hope</i>. Now you move the letters. This word is <i>hope</i>. Make the word <i>hop</i>." If correct: "Yes, you made the word <i>hop</i>." If incorrect: "Watch this. If I take away the letter <i>e</i>, I make the word <i>hop</i>." "This word is <i>set</i>. If I place the letter <i>n</i> between <i>e</i> and <i>t</i>, I make the word <i>sent</i>. Now you move the letters. This word is <i>sent</i>. Make the word <i>send</i>." If correct: "Yes, you made the word <i>send</i>." If incorrect: "Watch this. If I take away the letter <i>t</i> and put <i>d</i> in its place, I make the word <i>send</i>." "This word is <i>send</i>. Make the word <i>spend</i>." If correct: "Yes, you made the word <i>spend</i>." If incorrect: "Watch this. If I put the letter <i>p</i> between the letters <i>s</i> and <i>e</i>, I make the word <i>spend</i>."
Scoring	The computer will capture and score the student's response.
Report output	Word Building: CVC/CVCe Raw Score Word Building: Blends Raw Score

Multisyllabic Word Reading

The Multisyllabic Word Reading task will evaluate the student's ability to decode words with various combinations of the six syllable types.

Time estimate	Less than 1 minute
----------------------	--------------------

Audio	Directions will be delivered via audio.
Directions	“Let’s see if you can read some words one at a time. Try to read each word and do the best you can.”
Practice item	None
Scoring	The teacher will indicate the correctness of the student’s oral response by clicking the top half of the “next” arrow for a correct response and the bottom half of the “next” arrow for an incorrect response.
Report output	Multisyllabic Word Reading Raw Score

Scoring and Reports

A detailed individual student report will be made available for teachers and parents. This score report will include the profile of student scores from screening data, as well as diagnostic data, if administered. Scores will be listed as percentile ranks and ability scores for each of the computer-adaptive tasks (i.e., Letter Sounds, Phonological Awareness, Word Reading, Vocabulary Pairs, Following Directions, Spelling, and Sentence Comprehension). To improve interpretation of scores, graphical representations will be provided to show ability scores in relation to grade level performance. For the diagnostic tasks, a percentage of items correct will be listed, and if the student was not administered certain tasks (due to previous mastery of those tasks), “mastery” will be indicated on the report. Data from the screening tasks will continue to be aggregated at the classroom and school level to facilitate systems level problem data-based decision-making and instructional resources.

The content of the computer-adaptive tasks and the background analyses conducted were targeted to those two specific purposes. Technical reports describing the reliability and validity of FAIR-FS scores in predicting various outcome assessments will be released as the data become available. The data from the score reports are not reliable or valid for any other purposes and were not designed to inform any other types of decision-making. Specifically, the FAIR-FS was NOT designed for accountability, retention, or special education determination. The FAIR-FS scores, used in isolation, will not provide reliable and valid scores for these types of decisions. The explanations below describe the purposes for which each score type is provided.

Probability of Literacy Success (PLS)

The Probability of Literacy Success score indicates the likelihood that a student will receive a passing score on the high-stakes outcome measure to which the FAIR-FS is aligned. The PLS is used to determine which students are at-risk for meeting grade level expectations by the end of the school year. In addition to providing a precise probability of reaching grade level outcomes, the PLS is color-coded:

- red = the student is at high risk and needs supplemental and/or intensive instruction targeted to the student’s skill weaknesses
- yellow = the student may be at risk and educators may consider differentiating instruction for the student and/or providing supplemental instruction
- green = the student is likely not at risk and will continue to benefit from strong universal instruction.

This score is based on an aggregate of the individual student’s Alphabetics, Vocabulary, and Following Directions scores.

In order to predict a student’s likelihood of achieving grade level expectations, grade level expectations must be defined quantitatively. This definition is often quantified differently state to state or district to district. Choices of the assessment and cut points quantifying grade level achievement also change from year to year. Given the variability of different schools and districts’ choice of assessments and cut points, the original PLS formula in the FAIR-FS is calculated to predict to a commonly-accepted cut point (40th percentile) of a gold standard reading comprehension assessment (Stanford Achievement Test, Tenth

Edition [SAT-10] and the Stanford Early School Achievement Test [SESAT]). Technical reports describing the sensitivity, specificity, and negative predictive power of the PLS in predicting any other outcome tests will be released as the data become available.

Examples: A PLS of .50 predicts that the student has a 50% chance of achieving the passing score or higher on the outcome assessment.

This score is included to answer the following **questions**:

- Which students are at-risk for not meeting grade-level expectations at the end of the school year?
- What is the likelihood that a particular student will meet grade-level expectations by the end of the school year?
- For grade level aggregate reports: is the current implementation of the curricula working for a majority of our students?

Ability Scores

Each computer-adaptive task has an associated ability score. The ability score provides an estimate of a student's development in ability for a particular skill. This score is sensitive to changes as student's ability with the skill increases or decreases. Ability scores in the grades K-2 system of the FAIR-FS span the development of each of the important skills: Alphabetics, Vocabulary Pairs, Following Directions, and Sentence Comprehension. The range of the developmental scale for each task is from 0 to 850, with a mean of 500 and standard deviation of 100. This is the score that should be used to determine the degree of growth in a skill for each student. Furthermore, this score is not grade-specific.

Graphs showing the mean ability score, as well as the interquartile range for each task at each grade level, are included in the professional development materials.

Example 1: A first grade student with a score of 400 on Vocabulary Pairs and a second grade student with a score of 400 on Vocabulary Pairs demonstrate the same degree of vocabulary development.

Example 2: A student with a score of 300 on Word Reading at one assessment period and a score of 400 at another assessment period is demonstrating one standard deviation (100 points) of growth.

The ability score is included to answer the following **questions**:

- Has the student's score changed since last year or the previous assessment period?
- Where is the student in the developmental continuum in acquiring a particular reading skill?

Percentile Ranks

Percentile Rank scores will also be provided with each task/ability score. These scores compare the individual student's performance to a particular group of other students (i.e., grade level peers in Florida). This score ranges from 1 to 99 at each grade level and is based on a representative sample of

students from Florida. The percentile rank informs which **specific** skills are strengths and weaknesses for individual students.

Example: A second grade student with a percentile rank of 55 performed better than 55% of other Florida second graders in a representative sample.

This score is included to answer the following **questions**:

- Which skills are relative weaknesses for a student?
- Which skills are relative strengths for a student?
- Which skills need targeted intervention in order to improve the student's likelihood of success?

Error Analysis for Spelling

Effective spelling instruction can be targeted to individual students or groups of students based on teachers' understanding of what students already know about words and what they are ready to learn. This section will describe how to analyze misspellings and utilize the results for spelling instruction, which will improve both spelling and reading skills.

Just as phonics instruction helps students learning to read, learning spelling patterns helps students efficiently learn how to spell most of the regular English spellings and enhances their reading abilities. Spelling patterns are common letter combinations in written English that represent spoken English. Spelling patterns also provide a general direction of spelling instruction. Traditional spelling instruction focuses on drill of misspelled words, but this approach seldom produces sustained improvements in students' spelling. Instead, a confluence of research literature suggests that analyses of specific errors can guide next steps in instruction. Educators can analyze students' application of phonological knowledge, orthographic knowledge, and morphological knowledge.

Phonological knowledge is the ability to identify the sounds of a language and to manipulate the sequence of those sounds within a spoken word. Students demonstrate phonological knowledge through oral responses by recognizing, segmenting, and manipulating sounds in words. Examples include identifying the first or last sound in a word, segmenting the phonemes in a word, and replacing individual sounds in a word to make a new word.

Orthographic knowledge refers to the understanding of how spoken language can be represented in written form. Students demonstrate orthographic knowledge when they match a sound to a written letter or grouping of letters. For example, in the English language, the /t/ sound is represented by the letter 't' and the vowel sound in *spoon* is represented by the letters 'oo'.

Some English words are pronounced the same (sound the same) but may be spelled differently (e.g., right and write).

On the other hand, some spelling patterns are the same in print, but sound differently in different words (e.g., "ea" in reason and measure).

Morphological knowledge refers to the understanding of how morphemes (i.e., the smallest meaningful parts of words) contribute to word meaning and rules for combining morphemes. Students demonstrate morphological knowledge when they recognize and represent each unit of meaning in a word and adjust spelling patterns according to the origin of the word and/or to serve different grammatical purposes.

Morphological knowledge includes understanding of both inflectional and derivational morphemes. An inflectional morpheme indicates number, tense, possession, or comparison, but it does not change the part of speech (e.g., students add 's' to the word 'house' to make the plural form 'houses'). A derivational morpheme changes the word's part of speech (e.g., the students changes the word 'happy' into 'happiness'). Free morphemes can stand alone, while bound morphemes must be connected with other morphemes (e.g., the 's' in 'balls' is a bound morpheme, and 'ball' is a free morpheme).

Students may learn the meaning of common Greek and Latin root words (morphemes) that are used in various forms throughout stories they read in class.

Although it seems like the letter-sound correspondences in English contain many exceptions to the rules, teaching students the orthographic and morphological rules in English will account for almost all of the spelling patterns students will encounter. Half of all English words can be spelled accurately with the letters that predictably represent their sound patterns (i.e., the spelling is orthographically regular) and another 34 percent of English words contain only one unexpected incident based on the sound-letter correspondences alone. By understanding the word meaning and origin of a word (i.e., morphological knowledge), students will be able to spell up to 96 percent of English words (Hanna, Hanna, Hodges, & Rudorf, 1966).

Teachers can take the three steps below to decipher a spelling error and determine areas to focus their instruction:

1. Check if all the sounds in a word are presented. Any sound that is not represented might be due to incomplete phonological knowledge. For example, students who spelled “joint” as “gont” might not hear the second sound in the diphthong “oi”. Another example would be spelling “bridge” as “bij”. The misspelling might seem totally wrong at first, but it actually captures most of the sounds in the word except /r/ sound in the blend *br*. On the other hand, young students might even use more letters to spell than required. This is another sign showing that the students do not apply their phonological knowledge well enough in spelling. This type of error suggests that this student may benefit from continued explicit instruction in phonological awareness (e.g., orally segmenting and blending words).
2. Check if each of the presented sounds is spelled following the English spelling rules. If a rare or wrong spelling is used, it shows the lack of orthographic knowledge. For example, the /k/ sound can be spelled as c, ck, and k in the English spelling system. Students who spell “cake” as “cace” successfully use the correct number of letters to represent all the sounds (i.e., /k/, /ai/, and /k/) and even use the correct orthographic rule of placing the letter ‘e’ after the consonant to create a long vowel sound. However, the second c in “cace” can only be pronounced as /s/ before e and cannot be pronounced the same way as the first /k/ sound in “cace”. As another example in the FAIR-FS Spelling task, a student might spell “cone” as “ckone”. Although ck can be perfectly pronounced as /k/ in many cases, the ck spelling pattern is rarely used at the beginning of a word in the English spelling system.
3. The English spelling system has morphological functions that make many sound-letter correspondences seem peculiar. Some spelling rules can only be explained by applying our morphological knowledge. For example, by adding ‘s’ or ‘es’ a base word is changed to a plural noun. Students who spell “stories” as “storys” might not have learned about the rule for forming plural words. Another example in the FAIR-FS Spelling task is that students might misspell the plural form of calf as “calfs” instead of “calves” because they have not learned the f to ves rule.

Most basal reading curricula contain a developmentally appropriate scope and sequence for learning the orthographic and morphological rules that guide understanding of the spelling patterns in English words. Based on the type of errors in individual student's spelling, teachers can identify skills in which students need to become more proficient and/or specific rules that require more review. Keep in mind that the Spelling task in Grade 2 of the FAIR-FS system is computer-adaptive and was designed to also detect advanced abilities of students who may have acquired untaught spelling pattern rules simply through exposure to the words in text or speech.

Considerations for Students with Disabilities

The purpose of the FAIR-FS assessment is to help teachers identify instructionally-relevant strengths and weaknesses in the component skills of reading that predict future success in reading comprehension for individual students. The developers of the FAIR-FS recommend that teachers, IEP teams, Section 504 coordinators, and special education coordinators consider the intended purpose of this assessment and the limitations of non-standard administration of the FAIR-FS when determining testing accommodations and/or the non-standard paper and pencil administration of the FAIR-FS.

For some students with disabilities, the Florida Assessments for Instruction in Reading aligned with the Florida Standards may not be an appropriate instrument. For example, it is unlikely that this instrument would be appropriate for students with significant sensory, cognitive, or language deficits. For other students with disabilities, the computer administration of the FAIR-FS with specific accommodations may be appropriate. Appropriate accommodations may include, but are not limited to, the following:

- All tasks in the K-2 FAIR-FS, except for the fluency portion of the Reading Comprehension task are untimed, so students may take as much time as the assessment administrator allows.
- The K-2 FAIR-FS is administered in a one-on-one format and can be administered in a location determined by the assessment administrator.
- Repetition of instructions may occur during the administration of the practice items; however, repetition of the items represents a non-standard administration.

When the assessments are administered in ways different from both a standard administration and the approved accommodations, the administration would be considered a non-standardized administration and the resulting scores cannot be interpreted with the appropriate interpretive and reporting procedures.

Directions for Paper and Pencil Administration

If it is determined that a student needs to take a paper and pencil version of the FAIR-FS instead of the computer-administered version, the items for paper and pencil administration can be downloaded from the PMRN. The teacher will need to obtain a copy of the student administration materials (e.g., copy of passages, word/letter cards for tasks like Word Reading, and manipulatives for Word Building) and print individual copies of the record sheet for administration. This version of the assessment will provide a subset of grade level items for each task. The scores generated from this assessment are raw scores that are to be used formatively by the student's teacher to inform classroom instructional practices. These raw scores have not been validated for use in determining placement or changes in placement. There is no time limit on the paper and pencil flat version of the assessment or the computer adaptive version of the assessment.

Important Note: The paper and pencil administration of the Screening & Broad Diagnostic tasks is a non-standard administration and the scores produced from the paper and pencil version have greatly

reduced validity and reliability. The computer-adaptive version of the tasks provides students with items that are targeted to individual ability level, depending on the responses to each item. The paper and pencil version presents the items in a fixed order and does not target items to the student's individual ability level. Therefore, scores for students at the higher and lower ends of ability may be particularly inaccurate. The computer-adaptive format of the FAIR-FS increases reliability by tailoring the task to the student's ability level which ensures high reliability ($r = .9$). The score provided on the paper and pencil version is a simple raw score and comparative scores (i.e., ability scores and percentile ranks) cannot be calculated.

Any non-standard administration of the FAIR-FS (i.e., paper and pencil version) should be used for descriptive purposes only. Decisions for students should not be made solely based on the results of a paper and pencil administration of these tasks. Furthermore, the descriptive scores obtained from the paper and pencil administration of the tasks and nonstandard administration of the tasks cannot be aggregated or included in classroom, grade, or school averages.

The FAIR-FS has not been piloted or normed with students identified with a low-incidence disability or students who qualify for alternative assessment. Some teachers may choose to use the FAIR-FS paper and pencil items in order to obtain descriptive information. The table below lists non-standard administration methods for students who are classified with Deafness or Visual Impairment. If needed, Braille files (.brl) and other materials may be requested, free of charge, from the Florida Instructional Materials Center 1-800-282-9193.

FAIR-FS Task	Administration for students with Visual Impairment	Administration for students who are Deaf or Hard-of-Hearing
Phonological Awareness Phonological Blending Phonological Deletion	Standard administration or Paper/pencil version	N/A
Letter Sound Knowledge	Braille letter tiles	N/A
Word Reading Multisyllabic Word Reading	Uncontracted or Contracted Braille	The students may sign their responses.
Following Directions	Use manipulatives; substitute the 6 objects for 6 manipulatives that are well-known to the student	The teacher may sign the instructions.
Vocabulary Pairs	The teacher may administer each item orally.	The teacher may sign the words.
Spelling	Standard administration or Paper/pencil version	The teacher may sign the symbol for the word, but not the spelling.

Reading Comprehension	Braille version available	The students may sign as they read. The teacher may sign the questions.
Listening Comprehension	Standard administration or Paper/pencil version	The teacher may sign the story and questions.
Sentence Comprehension	N/A	The teacher may sign each sentence.
Print Awareness	N/A	The teacher may sign the instructions.
Letter Name Knowledge	Braille letter tiles	The students may sign their responses.
Letter Sound Connection	Braille letter tiles	N/A
Word Building tasks	Braille letter tiles	The teacher may sign the instructions.

N/A = Modifications cannot be made for these tasks and they are not appropriate for use with the specified populations.

Communicating with Parents about FAIR-FS

Educators are encouraged to share individual students' FAIR-FS results with their parents. Computer-generated parent resource letters are available through the reports function of the PMRN. These letters may be used during parent-teacher conferences to help explain strengths and weaknesses, progress over the school year, and which skills should be targeted for instruction.

These letters list activities that can help strengthen reading skills assessed in FAIR-FS and are customizable for teachers.

For More Information

Professional development modules will be available online that provide in-depth information on how to administer the FAIR-FS assessments, as well as how to interpret the results that are provided and the instructional implications.

For additional information regarding FAIR-FS that is not covered in the administration and technical manuals, please use contacts below.

- Curriculum questions: contact your district reading office
- Technical questions: contact the Florida Standards help desk at 855-814-2876
- Content questions: contact Just Read, Florida! at 850-245-0503 or check <http://www.fldoe.org/faq/>

References

- Abbott, R. D., Berninger, V. W., & Fayol, M. (2010). Longitudinal relationships of levels of language in writing and between writing and reading in grades 1 to 7. *Journal of Educational Psychology*, 102(2), 281-298.
- Brown, R. S., & E. Coughlin. (2007). *The predictive validity of selected benchmark assessments used in the Mid-Atlantic Region (Issues & Answers Report, REL 2007–No. 017)*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Mid Atlantic. Retrieved from <http://ies.ed.gov/ncee/edlabs>
- Buros Center for Testing (2010). Evaluating Reading Tests for the State of Florida: Dynamic Indicators of Basic Early Literacy Skills, 6th Edition (DIBELS) and the Florida Assessments for Instruction in Reading (FAIR). Lincoln, NE: Author.
- Douglas, A. R., & Harkness, J. (2011). Using Baltimore City Public Schools (BCPS) benchmark testing program to predict passing HAS for 1st time test takers. Retrieved from <http://www.magonline.org/BCPSHSA2011.pdf>
- Florida Department of Education (2009-2011). Florida Assessments for Instruction in Reading (FAIR). Tallahassee, FL: Author.
- Foorman, B. Arndt, E., & Crawford, E. (2011). Important constructs in literacy learning across disciplines. *Topics in Language Disorder*, 31(1), 73-83.
- Foorman, B. R., & Ciano, D. J. (2005). Screening for secondary intervention: Concept and context. *Journal of Learning Disabilities*, 38(6), 494-499.
- Foorman, B. R., & Connor, C. (2011). Primary reading. In M. Kamil, P. D. Pearson, & E. Moje (Eds.), *Handbook on Reading Research*, Vol. IV (pp. 136-156). NY: Taylor & Francis.
- Foorman, B. R., Fletcher, J. M., & Francis, D. J. (2004). Early reading assessment. In W.M. Evers & H.J. Walberg (Eds.), *Testing student learning, evaluating teaching effectiveness* (pp. 81-125). Stanford, CA: The Hoover Institution.
- Foorman, B. R., Francis, D. J., Fletcher, J. M., Schatschneider, C., & Mehta, P. (1998). The role of instruction in learning to read: Preventing reading failure in at risk children. *Journal of Educational Psychology*, 90, 37-55.
- Foorman, B., Petscher, Y., Schatschneider, C., & Wagner, R.K. (April, 2012). Components of reading comprehension: What dominates at what grade? Presentation at the meeting of the Society for Research on Educational Effectiveness, March 8, 2012, Washington, DC.
- Foorman, B., & Petscher, Y. (2010). Development of spelling and differential relations to text reading in grades 3-12. *Assessment for Effective Instruction*, 36(1), 7-20.
- Foorman, B., Torgesen, J., Crawford, E., & Petscher, Y. (2009). Assessments to guide reading instruction in K-12: Decisions supported by the new Florida system. *Perspectives on Language and Literacy*, 35(5), 13-19.
- Graesser, A. A., McNamara, D. S., & Kulikowich, J. M. (2011). Coh-Metrix: Providing multilevel analyses of text characteristics. *Educational Researcher*, 40(5), 223-234.
- Hanna, P. R., Hanna, J. S., Hodges, R. E., & Rudorf, E. H. Jr. (1966). Phoneme-grapheme correspondences as cues to spelling improvement (USDOE publication No. 32008). Washington, D.C.: U.S. Government Printing Office.

- Institute of Education Sciences, USDOE (\$4,447,990), entitled “Assessing Reading for Understanding: A Theory-Based, Developmental Approach,” subcontract to the Educational Testing Service for five years (R305F100005), 7/1/10-6/30/15 (Foorman, PI on subcontract).
- Institute of Education Sciences, USDOE (R305A100301; \$1,499,741), entitled “Measuring Reading Progress in Struggling Adolescents,” awarded for three years, 3/1/10-2/28/13 (Foorman, PI).
- Kintsch, W., & Rawson, K. A. (2005). Comprehension. In M. J. Snowling & C. Hulme (Eds.), *The science of reading: A handbook* (pp. 209-226). New York: Blackwell.
- Mathes, P. G., Denton, C. A., Fletcher, J. M., Anthony, J. L., Francis, D. J., & Schatschneider, C. (2005). The effects of theoretically different instruction and student characteristics on the skills of struggling readers. *Reading Research Quarterly*, 40(2), 148-182.
- Mehta, P., Foorman, B. R., Branum-Martin, L., & Taylor, W. P. (2005). Literacy as a unidimensional multilevel construct: Validation, sources of influence, and implications in a longitudinal study in grades 1-4. *Scientific Studies of Reading*, 9(2), 85-116.
- National Institute of Child Health and Human Development (2000). National Reading Panel—Teaching children to read: Reports of the subgroups (NIH Pub. No. 00-4754). Washington, D.C.: U.S. Department of Health and Human Services.
- National Research Council (1998). Preventing reading difficulties in young children. Committee on the Prevention of Reading Difficulties in Young Children, Committee on Behavioral and Social Science and Education, C.E. Snow, M.S. Burns, & P. Griffin, eds. Washington, D.C.: National Academy Press.
- National Research Council (2001). Knowing what students know: The science and design of educational assessment. Committee on the Foundations of Assessment. J. Pelligrino, N. Chudowsky, & R. Glaser (Eds.). Board on Testing and Assessment, Center for Education. Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.
- O'Reilly, T., Sabatini, J., Bruce, K., Pillarisetti, S., & McCormick, C. (2012). Middle school reading assessment: Measuring what matters under an RTI framework. *Reading Psychology*, 33(1-2), 162-189.
- Perfetti, C. A., Landi, N., & Oakhill, J. (2005). The acquisition of reading comprehension skill. In M. J. Snowling & C. Hulme (Eds.), *The science of reading: A handbook* (pp. 227-247). New York: Blackwell.
- RAND Reading Study Group (2002). Reading for understanding. Santa Monica, CA: RAND Corporation.
- Perie, M., Marion, S., Gong, B., & Wurtzel, J. (2007). The role of interim assessments in a comprehensive assessment system: A policy brief. Washington, DC: The Aspen Institute.
- Rayner, K., Foorman, B. R., Perfetti, C. A., Pesetsky, D., & Seidenberg, M. S. (2001). How psychological science informs the teaching of reading. *Psychological Science in the Public Interest*, 2(2), 31–74.
- Simmons, D., Coyne, M., Kwok, O., McDonagh, S., Harn, B., & Kame-ennui, E. (2008). Indexing response to intervention: A longitudinal study of reading risk from kindergarten through third grade. *Journal of Learning Disabilities*, 41, 158-173.
- Storch, S.A., & Whitehurst, G.J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology*, 38, 934-947.
- Torgesen, J. K., & Miller, D. H. (2009). Assessments to guide adolescent literacy instruction. Portsmouth, NH: RMC Research Corporation, Center on Instruction.
- Wagner, R. K., Puranik, C. S., Foorman, B. R., Foster, E., Wilson, L. G., Tschinkel, E., Kantor, P. T. (2011). Modeling the development of written language. *Reading and Writing*, 24, 203-220.

Appendix A: Frequently Asked Questions – For Advanced Users

K-2 Administration

Q: Will schools be responsible for printing or will we get a printed book?

A: Districts will have access to the electronic files. The only thing that needs to be printed for administration of the K-2 system is the 26 passages. They can be printed double-sided and laminated for durability.

Charter schools will have the same free access to all of the materials as regular public schools.

Q: What is the average amount of time needed for the K-2 assessment?

A: Students participating in the field test took an average of 30 minutes in Kindergarten, 20-25 minutes in first grade, and 25-30 minutes in second grade.

Q: My district does not use SAT-10.

A: The Probability of Literacy Success is used to predict the probability that students are on the path to developing the component reading skills that will make them successful on an outcome in reading. There are several gold standard reading outcome assessments commercially available (e.g., Stanford 10, Iowa Test of Basic Skills, Gate McGinitie Reading Test, etc.). All of these assessments are strongly correlated with each other. Therefore, the FAIR-FS is still helpful in determining skills to target in instruction regardless of the outcome measure used.

Q: Who was included in the norming study?

A: Students in Escambia County (2012-13), Hillsborough County (2012-13), Orange County (2011-14), and Pinellas County (2013-14) participated in the norming of the tasks. The sampling strategy ensured that the norming sample's demographics match the state achievement distribution (FCAT level 1 through level 5) and demographic distribution (i.e., race/ethnicity, English Language Learner status, and free and reduced-price lunch status) across all grade levels. A more detailed account of the norming study will be found in the Technical Manual.

Q: How are students placed into a Reading Comprehension passage?

A: There are four levels of difficulty for the bank of 26 Reading Comprehension passages. The student's Word Reading ability score determines which of the four difficulty levels a student is given.

The computer then randomly chooses one passage from the passages available at that level. In this way, students will not receive the same passage at multiple assessment periods.

Q: Can a student “move up” a level in Reading Comprehension if they perform well on the first passage that is administered or if the teacher wants to see how the student does on a more difficult passage?

A: The Reading Comprehension section was designed to provide a student with text that they are most likely to be able to decode so that teachers can observe the student’s approach to answering comprehension questions. The 26 Reading Comprehension passages in the K-2 system are not tied to any specific grade level. Students will be assigned a passage based on their ability score from the Word Reading task. The readability of the passages spans a large range with some readability calculations at grade 4. However, the level of difficulty of the passage is not a reliable or valid piece of information and is therefore not provided on the report. If teachers or schools choose to monitor students’ progress in reading fluency, please use the equated passages in the Ongoing Progress Monitoring set available on the PMRN.

Computer Adaptive Testing

Q: What is a simple way to describe how the computer adaptive tasks work?

A: The goal of computer-adaptive functionality is to obtain a precise representation of a student’s ability with the measured skill by individualizing the items administered to each student. After the student responds to the first set of questions, the computer calculates the student’s ability. The calculation is not just based on the number of items the student answered correctly, it also incorporates the difficulty level of the question and the amount of information that particular item provides. The next item that is administered to the student is chosen based on the student’s calculated ability score. In addition to calculating the student’s ability, the computer also calculates the reliability of that ability score. Administration of the task is complete once the computer calculates a highly reliable score (i.e., above 0.9). In this way, a highly reliable score can be obtained for a majority of students while also reducing the amount of assessment time for each student.

Q: The FAIR-FS is administered three times per year. Are students administered the same items each time?

A: The first time a student is administered a task within a school year, the difficulty of the first set of items administered is the average difficulty for the student’s grade level. At the second exposure, the initial set of items administered will be based on the student’s ability score at the previous exposure. Since there is a large bank of items for each task and the relative difficulty of each item to the rest of the item bank has been established, different items will be administered at the second exposure. At the third exposure, students will not receive any of the same items as the second exposure, but may receive items administered at the first exposure.

Scoring and Score Implications

Q: What would be the best score to use for progress monitoring piece for RtI?

A: The ability score on targeted tasks is recommended for use as a reliable and valid score to monitor progress across the school year.

Q: Why is the yellow zone so wide?

A: The color of the PLS range is designed to guide the intensity of instruction/intervention needed, but is NOT designed to guide choice of curriculum or intervention program. When the FAIR-FS is being used within Response to Intervention (RtI) or Multi-Tier System of Supports (MTSS), the individual student's score profile (i.e., graph of percentile rank scores) should be used to determine intervention groupings and to match to targeted curricular materials available at your school.

Q: Were the reference groups assessed at each assessment period so that Percentile scores are related to performance at each corresponding assessment period?

A: The reference group was assessed at mid-year (January through the end of February). Percentile Ranks that are specific to each AP are not available as of this writing (2014).

Q: Has the supplemental skills bank been updated?

A: The supplemental materials from the FAIR 2009 have not been updated, but they continue to be useful and evidence-based tools for instruction.