

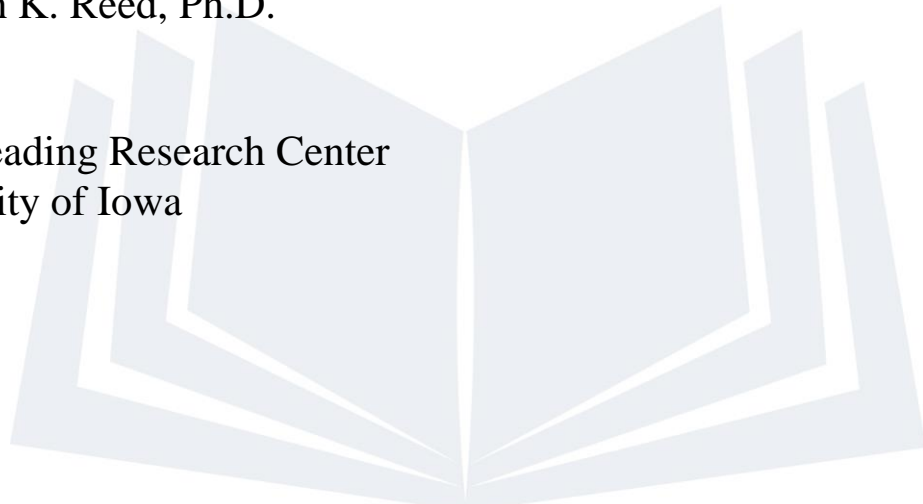


A New Vision for Literacy Research in Iowa

**REPORT OF THE
KINDERGARTEN-SECOND
GRADE PHONICS MATERIALS
REVIEW FOR THE AMES
COMMUNITY SCHOOL DISTRICT**

Jessica Sidler Folsom, Ph.D.
Jennifer A. Knight, Ph.D.
Deborah K. Reed, Ph.D.

Iowa Reading Research Center
University of Iowa



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**Report of the Kindergarten-Second Grade Phonics Materials Review
for the Ames Community School District**

This report describes the findings from the Iowa Reading Research Center's (IRRC) review of the three sets of materials used in the Word Study Team Foundational Skills Materials Pilot study for the Ames Community School District (Ames CSD; see <http://www.ames.k12.ia.us/2016/12/update-pilot-literacy-materials/>). The materials studied were:

- Fountas & Pinnell's *Phonics Lessons* (F&P)
- National Geographic's *Reach into Phonics* (Reach)
- Wilson's *Foundations* (Foundations)

This review was one component of a multifaceted evaluation conducted by the IRRC in support of Ames CSD's foundational skills instruction in kindergarten (K), first (G1), and second grades (G2). Reviewers applied the rubrics available in the *Guide for Reviewing a Reading Program* (Kosanovich et al., 2008) to consider how well each program aligned with research-based content and instructional approaches for phonological awareness and phonics. The appendix contains a description of the procedures followed to arrive at the information contained in this report. Definitions of the criteria categories in the rubric are provided in the *Guide for Reviewing a Reading Program* (Kosanovich et al., 2008)

Findings

The percentages of rubric criteria present in each program by category and grade are presented in the table below.

Table 1

Percentages of Rubric Criteria Present in Each Program by Category and Grade

	F&P	Reach	Fundations
Overall	44%	86%	78%
K Overall	47%	85%	76%
G1 Overall	40%	87%	78%
G2 Overall	47%	85%	81%
Instructional Design (ID)	53%	82%	77%
K ID	53%	80%	77%
G1 ID	53%	83%	77%
G2 ID	53%	83%	77%
Phonological/Phonemic Awareness (PA)	55%	92%	65%
K PA	63%	93%	68%
G1 PA	45%	91%	61%
Phonics	32%	94%	94%
K Phonics	25%	93%	93%
G1 Phonics	28%	95%	95%
G2 Phonics	43%	94%	94%
Motivation & Engagement (ME)	50%	50%	0%
K ME	50%	50%	0%
G1 ME	50%	50%	0%
G2 ME	50%	50%	0%
Assessment	33%	33%	89%
K Assessment	33%	33%	100%
G1 Assessment	33%	33%	100%
G2 Assessment	33%	33%	67%

Overall, Reach met 86% of the criteria, Foundations met 78%, and F&P met 44%. This general pattern of findings was consistent across grades and most categories (i.e., ID, PA, and Phonics). In the Motivation & Engagement (ME) category, both Reach and F&P met 50% of the criteria, but Foundations did not meet any of the criteria. Conversely, Foundations met 89% of the criteria in the Assessment category, while Reach and F&P both met 33% of those criteria. Using the criteria the Ames CSD Word Study Team applied, the results are little changed: Reach = 88%, Foundations = 79%, and F&P = 50%. The explanations of reviewers' ratings are presented in the sections that follow. Because there were not substantial differences in the scores for each grade within a category, the explanations apply across grades K-G2, unless otherwise noted.

F&P

Instructional design (ID). The overall ID rating for F&P was 53%, and this also was the score in each grade. No empirical research on the program was cited, but there was a description of how the developers consulted current research when creating and refining the materials and continuum. There also was a strong rationale for the instructional approach and program strategies.

As reviewed, F&P included 100 minilessons at each grade level, K-G2, that provided a “big picture view of phonics, spelling, and word study” (Fountas & Pinnell, 2017, p. 2). Each minilesson covered the “Nine Areas of Learning”: early literacy concepts, phonological awareness, letter knowledge, letter-sound relationships, spelling patterns, high-frequency words, word meaning/vocabulary, word structure, and word-solving actions. These were defined by the authors as important aspects of a comprehensive phonics program. The minilessons were

designed to take 10-15 minutes of instruction by the teacher followed by 10-20 minutes of students applying and sharing what they learned.

The introductory materials acknowledged that this was not a complete reading program or one intended to progress linearly from lesson 1 through 100.

Rather, the lessons were

The Lesson Selection Map

The Lesson Selection Map catalogs all Grade 2 lessons by Continuum category and suggested time of year (early, middle, or late). In creating this Map we considered how children's experience is likely to build throughout the year as a result not only of the direct teaching of principles related to letters, sounds, and words but also of their daily experiences hearing written language read aloud and participating in shared, independent, and guided reading and interactive, guided, and independent writing.

Again, this Map is not a rigid sequence; it is a continuum of easier to harder principles. It will help you think in broad strokes about the program you are designing for the children in your classroom, which must always be considered in light of your observations and assessments of what your students know and can do at any given point. If children are very knowledgeable and experienced, you may decide that some lessons can be abbreviated or omitted. You will also want to design more lessons on principles children need (see *Teaching Resources*, Lesson Template). If children are very inexperienced in a given area, lessons may need to be repeated using different examples.

A whole year of lessons may seem overwhelming; however, keep in mind that:

- ▶ Any one lesson takes ten to fifteen minutes or less.
- ▶ Some lessons can be skipped or shortened.
- ▶ Some lessons will go very quickly because children have acquired most of the requisite knowledge already through reading and writing in the classroom.

Even if you do not use all the lessons, reflecting on the Map will help you be aware of the entire body of knowledge that is important for second graders to acquire as a foundation for literacy learning.

Figure 1. Lesson section map example.

designed to enhance students' learning and not replace the reading of actual texts. The materials also were designed so that teachers would be able to select appropriate minilessons in any sequence they determined to target the skills that would help students be successful. The order of lessons was fluid, and teachers could have students revisit minilessons often until students mastered a skill. Although there was a grade-by-grade scope and sequence of skills targeted by the program, this did not break down the progression of lessons within the grades. Rather, there was a lesson selection map (Figure 1) that connected lessons within a grade-level book.

A seeming strength of F&P was the flexibility to determine lessons as informed by students' work and performance on daily assessments (both formative and summative).

Nevertheless, despite the assessments and record keeping forms provided, the material offered little direction on how to interpret the data or use them to make instructional decisions. There were multiple lessons that covered many of the phonics skills for students at different levels of ability as well as a monthly guide and continuum for when the different skills should be taught and mastered across grade levels (Figure 2).

PRINCIPLE		EXPLANATION OF PRINCIPLE														
		PRE-K			GRADE K			GRADE 1			GRADE 2			GRADE 3		
		early	mid	late	early	mid	late	early	mid	late	early	mid	late	early	mid	late
Syllables	Hearing and saying syllables	“You can hear and say the syllables in a word [<i>to-ma-to, tomato</i>].” “Some words have one syllable [<i>cat</i>].” “Some words have two syllables [<i>can-dy, candy</i>].” “Some words have three or more syllables [<i>um-brel-la, umbrella</i>].”														
	Blending syllables	“You can blend syllables together [<i>pen-cil, pencil</i>].”														
Onsets and Rimes	Hearing and segmenting onsets and rimes	“You can hear and say the first and last parts of a word [<i>c-ar, car; pl-ay, play</i>].”														
	Blending onsets with rimes	“You can blend word parts together [<i>d-og, dog</i>].”														

Figure 2. Scope and sequence.

However, the materials only offered an early, mid, and late indicator of when the lesson would best fit into the school year—not into the students’ stage of phonics learning. This could be a deficit of the program if a teacher possessed insufficient knowledge of phonics and reading development to plan lessons appropriately. Importantly, there was no scope and sequence connecting the minilessons to specific skills on the learning continuum, which would have provided guidance for determining when to teach what lessons in a fashion that aligned with the developmental acquisition of phonic skills. In addition, there was no index to identify where skills were within the manual. Instead, there were tabs that separated the Nine Areas of Learning (e.g., phonological awareness tab). Hence, it would be difficult for teachers unfamiliar with the materials to navigate them without spending a great deal of time searching.

Minilessons generally were short and concise with clear and logical organization to the order and procedures. There was a clear teacher-led “Teach” section (although without direct teacher modeling), a student-led “Apply” section (although without explicit differentiation), and a “Share” section where students shared their work with the class. The lessons also included ways students could interact with the teacher and other students, connections to other reading components, suggestions for practicing at home, and ways students could demonstrate individual mastery of the skills taught. Nevertheless, there was not a recommendation for how many minilessons should be taught per day or week, and there were no specific scaffolds for students with reading difficulties or enrichment activities for those who were excelling. Included in each lesson was a section with tips and ideas to support English learners (ELs), but there were no clear examples of how to provide specific feedback to students. Suggestions generally were vague (see Figures 3 and 4).

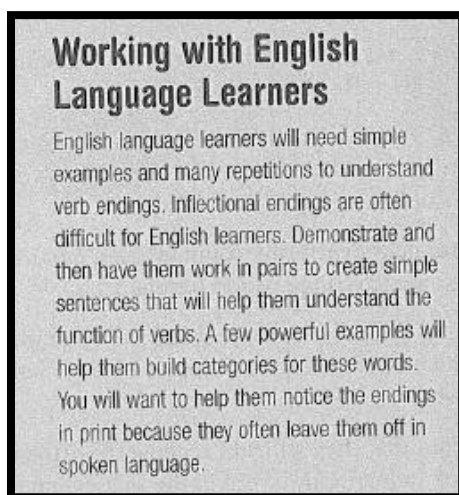


Figure 3. Consider your children.

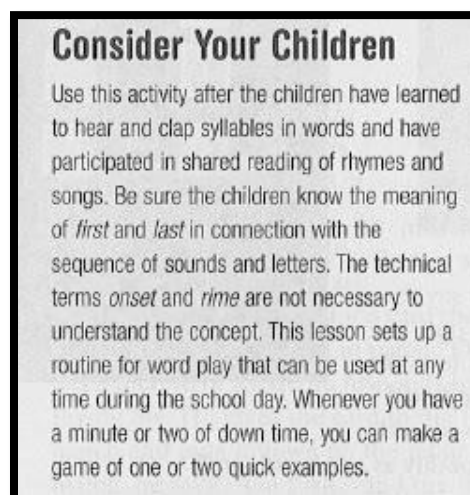


Figure 4. Working with ELs.

The “Consider Your Children” sections appeared at the start of lessons to highlight the skill being taught and suggest how to determine if students were ready for the lesson (e.g., “Use this lesson when the children understand the concept of first and last...”). It was up to the teacher

to refer to the “Teaching Resources” section to locate and administer the assessment for those skills.

The lessons contained few directives to ensure accurate implementation. Each teacher’s manual included explanations and routines to teach to students, but without clear guidance, implementation of the lessons was open to interpretation. Moreover, the introduction indicated the lessons were intended only as a sampling of suggestions to provide “a clear prototype from which you can create your own lessons” (p. 6).

Phonological/phonemic awareness (PA). The overall PA rating for F&P was 55%. (K = 63%; G1 = 45%; G2 = N/A). There were many lessons devoted specifically to developing PA skills (K = 26 lessons; G1 = 11 lessons), and the associated guide provided a comprehensive continuum of skills and components for teachers. It started with the larger units (e.g., words and syllables) or easier skills (e.g., rhyming) and progressed to smaller units (e.g., phonemes) or more complex skills (e.g., segmenting and manipulating phonemes). However, teachers could potentially skip around within the PA lessons and either miss teaching a skill altogether or teach the skills out of their proper developmental sequence.

Hence, instruction was not designed to be systematic because there was no clear order in which specific lessons should be taught, and no clear connection from one lesson to another.

The K lessons provided a phoneme chart to aid in pronunciation of different letters and clusters, but it did not designate the stop or continuous sounds

(Figure 5).

Phoneme Chart			
We examine forty-four phonemes. The actual sounds in the language can vary as dialect, articulation, and other factors in speech vary. The following are common sounds for the letters listed.			
<i>Consonant Sounds</i>			
b /b/ box	n /n/ nest	ch /ch/ chair	
d /d/ dog	p /p/ pail	sh /sh/ ship	
f /f/ fan	r /r/ rose	wh /hw/ what	
g /g/ gate	s /s/ sun	th /th/ think	
h /h/ house	t /t/ top	th /TH/ the	
j /j/ jug	v /v/ vase	ng /ng/ sing	
k /k/ kite	w /w/ was	zh /zh/ measure	
l /l/ leaf	y /y/ yell		
m /m/ mop	z /z/ zoo		
<i>Vowel Sounds</i>			
/ă/ hat	/ā/ gate	/ō/ moon	/ū/ bird
/ē/ bed	/ē/ feet	/ōō/ book	/ə/ about
/ī/ fish	/ī/ bike	/ou/ house	/ă/ car
/ō/ mop	/ō/ boat	/oi/ boy	/ă/ chair
/ū/ nut	/ū/ mule	/ō/ tall	

Figure 5. Phoneme articulation chart.

Throughout much of the PA materials, the focus was on identifying initial, final, and medial sounds. Often, instruction in sounds was paired with letters, primarily through magnetic letters and picture cards. This made the PA instruction difficult to distinguish from phonics instruction. Other PA activities also were heavily text dependent, such as phoneme segmenting and manipulation.

Phonics. The overall phonics rating for F&P was 32% (K = 25%; G1 = 28%; G2 = 43%). There were many lessons devoted specifically to phonics skills throughout the program, and the associated guide provided a comprehensive continuum of skills/instruction for teachers. Instruction progressed from simple to more complex concepts in many of the lessons (e.g., K: -at to -ike; G1: VC to CVCe; G2: CVCC to CVVC). There were some exceptions to these logical progressions such as in G1 where short and long vowels were taught in the same lesson rather than starting with the easier short vowels alone before adding long vowels. And just as the PA section, teachers could potentially skip around within the phonics lessons and either miss teaching a skill altogether or teach the skills out of their proper developmental sequence. Hence, instruction was not designed to be systematic because there was no clear order in which specific lessons should be taught or connection from one lesson to another.

The location of the phonics lessons varied somewhat. Much of the instruction appeared in the “Word Meaning” and “Word Structure” sections, and word families were taught within the spelling patterns. In G1 and G2, consonant clusters (blends and digraphs) were taught as part of the letter-sound relationship lessons. Throughout the materials, letter-sounds were tightly connected to students’ names, so there was little concern for teaching high-utility letters and sounds over low utility ones. Moreover, the lessons were not structured to move students from letter-sound relationships to applying those skills to decode word lists or read decodable texts.

Consistent with the developers' philosophical approach, decodable texts were not included in the materials.

Across the grades, different strategies were taught for decoding (particularly chunking), but there were not clear explanations for how, when, or why students would apply a particular strategy to read unknown words. Notably, the program did not address multisyllabic word analysis and offered very limited morphology instruction. In G2, some lessons included suffixes, but no lessons in any grade taught prefixes. Lessons focused heavily on word analogy (noticing the similarities in spelling and letter patterns among words). Within the materials, there was a specific section devoted to high-frequency word instruction, with the general recommendation that 25 be learned by the end of K and the top 150 high-frequency words learned by the end of G2. However, there was no clarification that some words would be regular and decodable and some would be irregular and not decodable. There was an entire series of minilessons specifically devoted to spelling patterns, and in G2, some lessons addressed words with multiple meanings and advanced phonics. Across all lessons, there was no guidance on which words should be taught in which lessons, nor were there built-in opportunities for cumulative review or practice of previously taught skills within a text.

Motivation and engagement (ME). The overall ME rating for F&P was 50%, and this also was the score in each grade. The program provided opportunities for students to work collaboratively (e.g., reading with a partner, playing literacy-oriented games in pairs or small groups, sharing their learning) and made reading relevant to students' lives (e.g., home connection activities). However, the program did not guide teachers in ways to increase student motivation or offer students opportunities to set goals for their reading, make choices about assignments, or connect skills to texts.

Assessment. The overall Assessment rating for F&P was 33%, and this also was the score in each grade. The “Teaching Resources” sections includes assessments specific to the elements of the lessons as well as progress monitoring information and individual student tracking sheets to guide teachers in lesson planning (Figure 6). However, there was not guidance in how to identify students who were at risk for reading difficulties or interpret the data to make instructional decisions such as determining the next steps for a group or individual student.

How This Assessment Guide Will Help You

Included in *Phonics Lessons: Letters, Words, and How They Work* are two strands of assessment that will enable you to address the six key qualities of effective assessment:

1. Ongoing Observation
An essential part of your teaching role is to observe your children throughout the instructional day and to notice significant behaviors and written products that indicate learning. Sometimes you may want to take observational notes. To guide your observation, each lesson includes a feature entitled *Assess* that outlines what you might observe related to the lesson topic to determine what your students have learned and what instructional steps you might take next. This kind of assessment is an integral part of teaching; it becomes systematic as you work it into your plans and keep ongoing notes and records. It informs teaching on a daily basis.
2. Systematic Assessment Tasks
There is a time to use systematic, planned tasks that are designed to gather information about particular aspects of children's growing word knowledge. Performance-based assessment may involve observation but represents more formal structured experiences in which the tasks are standardized. Standardization of the procedure creates a reliable assessment situation that is more objective than daily ongoing observation. The goal is to get a picture of what the student can do independently. Usually, you do not actively teach during a performance-based assessment but may make teaching points after the neutral observation.

The *Assessment Guide* includes more formal, performance-based Assessment Tasks across the nine Categories of Learning. You can use these tasks in multiple ways: You can use them as diagnostic tools to determine what your students know and need to know; you can use them as monitoring tools to help you keep track of your teaching and your students' learning; and you can also use them as documentation of the teaching and learning you and your students have accomplished. You and your colleagues may even decide to place some of the summary sheets in your children's permanent cumulative folders as a way to create a school-wide record of the phonics and word study program.

Within both formal and informal assessment contexts, we are always asking two questions: 1) What do children know and control relative to letters, sounds, and words? and 2) What do they need to know?

We need an ongoing inventory of the content that children master or have nearly mastered. This information will help us as teachers in the following ways:

- We can relate their knowledge on a continuum of typical progress.
- We can choose specific lessons that will serve the group as a whole or small groups effectively to move them forward in knowledge.
- We can adjust interaction to meet individual needs because we know where children are in their development of phonics and word knowledge.
- We can ascertain when children have acquired knowledge of many examples in any given area (for example, recognizing alphabet letters), and we can plan activities that will solidify knowledge and deepen children's understanding of a basic and useful principle.

Figure 6. Assessment guide for teachers.

Reach

Instructional design (ID). The overall ID rating was 82% (K = 80%; G1 = 83%; G2 = 83%). The teachers' editions listed extensive research supporting each included component of literacy (phonological awareness, phonics, and high-frequency words) and the instructional approach teachers were to follow, but there was no empirical research cited that specifically was conducted on the program itself. The materials also offered a complete scope and sequence with a checklist of items covered in each grade. All sections were easy to navigate, and the index made it easy to identify when and where particular skills were taught.

The units of instruction were organized by weeks and days with planning pages that outlined the content covered each day, time allotted, and procedures to follow. Lessons were designed to be delivered systematically and explicitly (see Figure 7), and the lessons built upon each other. All had clearly identified objectives. In G1 and G2, the teachers' editions suggested language for the teacher to communicate the objective such as, "Tell students they will blend sounds to make a word and then add a sound to make a new word."

The student resources for each lesson were closely aligned with

Develop Phonological Awareness

- 1 **Sing the Song** Review the gestures. Then play "Fun with Snow" and invite children to chime in.
- 2 **Substitute Middle Sounds** Have children use the sound boxes on their **Write-On/Wipe-Off Boards**. Explain that you will say a word slowly and that children will change the middle sound. (See **Phonological Awareness Routine 6**, PD6.)
 - Say: *got*, /g/ /ɔ/ /t/, having children put chips in the sound boxes to show each sound. Then have children identify the middle sound. (/ɔ/) Say: *Now change /ɔ/ to /ō/. What's the new word? (goat)*
 - Have children substitute middle sounds in these words: *taste/toast, cries/crows, cost/coast, bill/bowl, freeze/froze.*
- 3 **Review** Display **Sound/Spelling Card 32**. Ask: *What's the picture? (ocean) What's the sound? (/ō/) What are the spellings? (o, o_e, oa, ow)* Have children say the spellings as they write them with their fingers on their desks.
- 4 **Build, Blend, and Sort Words** Distribute **Practice Master R.19** and **Letter Cards**.
 - Model how to build *boat*. Have partners build and blend the word and then write it in the first column on **Practice Master R.19**.
 - Continue building and sorting with *snow, cold, grow, sold, goat, float, show, and scold*. Have partners take turns reading each group of words. Encourage children to add other words to each column.

Assign **Practice Master 6.2** for more practice.

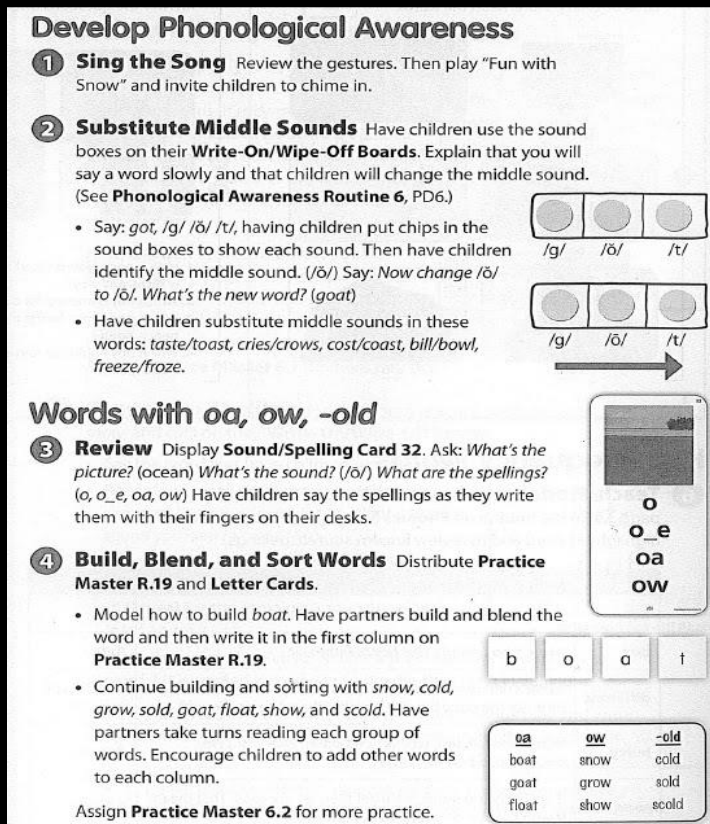


Figure 7. Explicit lesson plan example.

the objectives, readily available to the teacher and students (e.g., blackline masters in resources, student practice books, decodable books), and increasingly complex across grade levels. The necessary resources for a given lesson were listed directly under the objective. One strength of the program was that lessons were connected to decodable texts, including informational passages on science and social studies topics, that students could use to practice applying their developing skills.

Each day built from PA, to phonics, to spelling, to high-frequency words. Within each lesson, there was a clear connection between the letters, sounds, and words used. Lessons followed a teacher model, lead/guide students, and test procedure. That is, the teacher first modeled the skills and behaviors, then lead or guided students through an application activity, and finally checked their understanding. There were multiple opportunities for students to practice by interacting with the teacher and peers, applying skills to reading, and using technology. Each activity had a clear routine to follow as well as explicit directions for the teacher, including suggested language to use. Embedded within the teacher modeling and guided practice sections were examples for how the teacher might provide corrective feedback to students who may be struggling, and suggestions for reteaching when necessary (Figure 8).

5 Connect to Spelling Use **Dictation Routine 1** on PD12 to have children practice spelling *sold*, *bowl*, and *toast*.

- Say the word and have children repeat it.
- Have children say the word slowly, segmenting each individual sound.
- Then have children match each sound in the word to a spelling on a **Sound/Spelling Card**. Ask children to write the correct spelling on their boards.

Then dictate: *I sold toast and a bowl of oats*. Have children write the sentence.

Write-On/Wipe-Off Board

solde
sold

Check Understanding Have children check their spellings and circle any misspelled words as you write the words and the dictation sentence. Erase the words and sentence. Have children spell their circled words again. Rewrite and repeat until children spell the words correctly.

Differentiate

Corrective Feedback
If children misread words with /o/oa, ow, oi/oi/ during blending, use **Corrective Feedback Routine 2** on PD13.

» **Common Errors** If children say both vowel sounds in a vowel pair, use a known word with the long o sound to practice the sound. Write these word pairs: *no/snow*, *no/cold*, *no/road*. Say each word in a pair and have children circle the letter or letters that stand for /o/. Then say each pair and have children repeat. Finally, have children blend the sounds to read the words.

Figure 8. Corrective feedback example for differentiation.

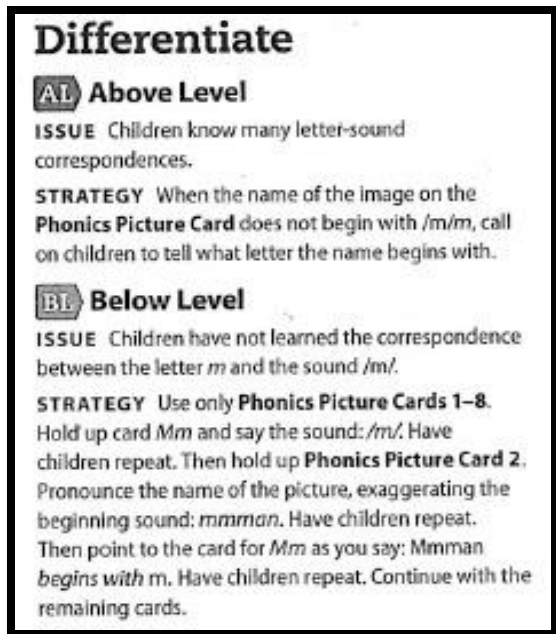


Figure 9. Differentiation for above/below level.

Similarly, the materials consistently offered suggestions for differentiating lessons. This included ways to support students who were performing above grade level (see Figure 9). There also was extensive support for English learners (ELs). For example, there were *language transfer* sections that provided a potential issue EL students might experience and a strategy to address the issue with specific guidelines for

instruction (Figure 10). The one weakness identified was that there were no guidelines for small flexible

grouping in any of the teacher’s manuals.

Phonological/phonemic awareness (PA).

The overall PA rating for Reach was 92% (K = 93%; G1 = 91%; G2 = N/A). PA was an important component of the program, but only a small portion of the overall daily lessons (K = 5 minutes; G1 = 10-15 minutes). The skills progressed from simpler to more complex in the following order: (1) rhyming, words in a sentence; (2) syllables in words; (3) alliteration; (4) syllables into words; (5) onsets and rimes; (6) individual phonemes (initial, final, medial). Similarly, the words used for instruction and practice became increasingly more difficult by including more phonemes and more challenging sounds. Each teacher’s manual

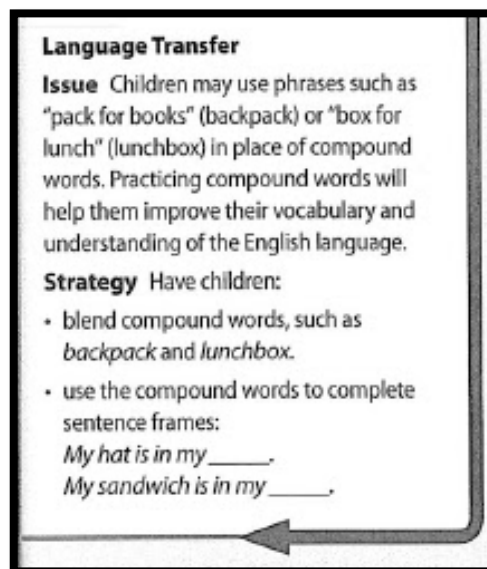


Figure 10. English learner support.

contained information and charts on how to produce sounds and whether they were voiced or unvoiced. Although there were no clear means for teachers to assess student readiness for a new skill, there were embedded reviews and assessments to help determine when a teacher needed to return to a previously taught skill and reteach or review.

One strength of the PA instruction for Reach was the use of physical representations of sounds such as Elkonin boxes, clapping, and counters. The routines demonstrated how to incorporate manipulatives into the lessons. Although the PA lessons were separate from the phonics lessons, the materials made a strong connection between the skills that started early in the K materials. For example, differentiating between words making the /th/ sound could be a PA activity on the same day that words with the printed “th” digraph were taught.

Phonics. The overall phonics rating for Reach was 94% (K = 93%; G1 = 95%; G2 = 94%). There was time dedicated each day to explicit phonics instruction (K = 20-30 minutes; G1 and G2 = 20-35 minutes). Lessons progressed systematically from easier to more difficult phonics skills within and across grades. For example, letter sounds were taught in K and then reviewed in G1 and G2 before digraphs and blends were taught. Similarly, the skills were applied to increasingly more difficult words. Initially, all sounds were practiced with short one-syllable words, but multisyllable words were used in G1 and G2. The explicit instruction in those grades included a variety of strategies for dividing or chunking multisyllable words (e.g., syllables, affixes, known word parts), but the specific names for the syllable types were not taught.

Throughout the lessons, students also were taught to spell the sounds they were learning to read, so there were consistent connections between decoding and encoding. In addition, the lessons included instruction in both regular and irregular high-frequency words. Although

isolated letters or words were used to introduce a new concept, a strength of the Reach materials was the availability of mostly informational decodable texts (with high-interest topics and photos) that

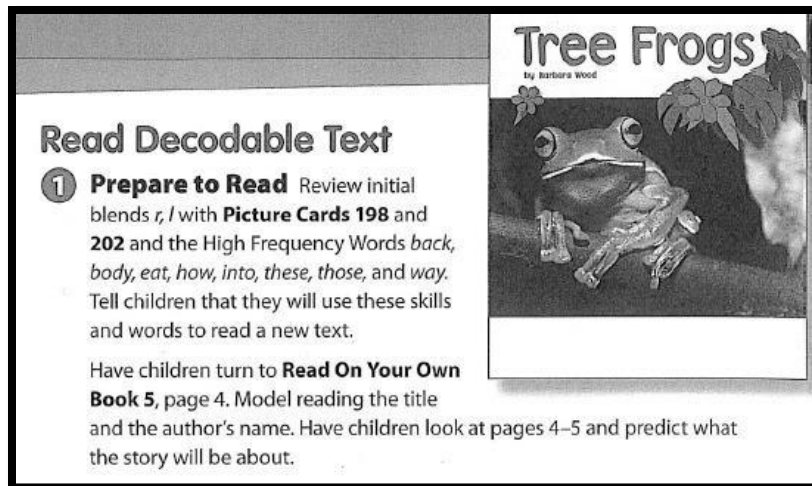


Figure 11. Decodable text example.

offered opportunities for students in all grades to practice applying the skills to reading connected text (Figure 11). The text reading included pre-teaching new high-frequency words, typically one-to-three words per week in K and six words per week in G1 and G2.

There were opportunities for teachers to monitor and reteach skills as necessary. At the end of each week, the materials provided tests for newly learned skills, and tests on skills from previous units and grades were included at the end of each unit. To support EL students, there was a “phonics transfer chart” with information about the articulation of English sounds and the

Phonics Transfer Chart								
ENGLISH			SPANISH		CANTONESE		VIETNAMESE	
Phoneme	Grapheme	Key Word	Sound Transfer?	Sound-Symbol Match?	Sound Transfer?	Sound-Symbol Match?	Sound Transfer?	Sound-Symbol Match?
Consonants								
/b/	b	book	yes	yes	approx.	no	approx.	yes
/k/	c	carrot	yes	yes	yes	no	yes	yes
	ck	check	yes	no	yes	no	yes	no
/d/	d	desk	approx.	yes	approx.	no	approx.	yes
/f/	f	fish	yes	yes	yes	no	yes	no
/g/	g	girl	yes	yes	approx.	no	yes	yes
/h/	h	hand	yes	no	yes	no	yes	yes
/j/	j	jacket	no	no	approx.	no	approx.	no
	g	cage	no	no	approx.	no	approx.	no
	dge	badge	no	no	approx.	no	approx.	no

Figure 12. Excerpt from the Reach phonics transfer chart.

transfer of sounds to several common languages (Figure 12).

Motivation and engagement (ME). The overall ME rating for Reach was 50%, and this also was the score in each grade. A strength of Reach was the inclusion of texts that appeared to be relevant to a young child's interests and daily life. However, there was not a variety of opportunities for students to choose among texts or instructional activities. Each unit was focused on a theme to which the learning goals were connected. There were many activities, but nearly all were teacher directed. Students had some opportunities to be the leader in activities, but they were not encouraged to work collaboratively with peers.

Assessment. The overall Assessment rating for Reach was 33%, and this also was the score in each grade. Day 5 of each weekly plan was designated for checking students' mastery of the newly taught skills as well as those taught in previous weeks, units, and grades. Cumulative tests also were provided at the end of each unit. The teachers' manuals contained all the weekly progress monitoring and unit assessments to determine students' progress in the program. Although there were charts to track the items students answered correctly and tips embedded in the lessons to suggest what to do if students were experiencing difficulty, there was little guidance for interpreting results or making decisions about differentiated instruction for students. In addition, there were no specific criteria for identifying when a student may be at risk for reading difficulty.

Foundations

Instructional design (ID). The overall ID rating was 77%, and this also was the score in each grade. The manuals included extensive research and theoretical support for the instructional approaches and strategies, but there were no studies cited that specifically were conducted on the program as implemented in general education classes. The scope and sequence indicated what skills students should master by the end of each level, and an online resource provided a pacing

guide to support the scope and sequence. Across the grade levels, the activities and content progressively increased in difficulty, building on the skills taught in previous lessons. Units were divided into weeks of instruction, which contained daily phonological awareness and phonics lessons intended to be taught for 30-35 minutes each. The overview pages contained statements resembling goals and objectives for teachers to state when introducing a new concept, but there were not similar statements for review lessons.

One strength of Foundations appeared to be the consistent use of learning activities that aligned to the instructional objectives, followed a predictable sequence, and were introduced with the same teacher language. The repetition likely would help students be able to focus on what they were supposed to be learning, rather than spending time figuring out what was happening. Similarly, all lessons suggested clear and explicit language for teachers to use when delivering instruction. Even where the directions initially appeared vague (e.g., “Practice any new or challenging sounds”), the activity cue cards provided the explicit steps and directions for

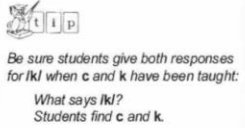
K Echo/Find Letters (Unit 1)		FUNDATIONS® Activity at a Glance
Synopsis	Learning Activity At A Glance	Learning Plan Notes
Students reinforce the skill of matching a letter with a given sound. Helps solidify sound-symbol correspondence, and sets foundation for spelling.	Begin with letters taught so far on the blank side of the Letter Boards. <ul style="list-style-type: none"> • Dictate a sound and hold up Echo: /l/ • <i>Students echo</i> the sound: /l/ • Say: Point to the letter that makes the sound /_ / (/l/). • <i>Students point</i> to the Letter Tile representing the sound. • Ask: What says /_ / (/l/)? • <i>Students name</i> the letter(s) that makes the sound. • Say: "Match it." • <i>Students place</i> tile onto corresponding letter square. • After all sounds are matched, dictate selected sounds and have <i>students repeat</i> the sound, <i>point</i> to the correct letter tile, and <i>name</i> the letter. <p>Alternatives: A student can repeat the sound, name the letter(s), and point to letter(s) at the Standard Card Display. Students can make letter(s) with index fingers on their Letter Board, after pointing to the sound.</p>	Sounds to Dictate:
Teacher Materials		Student at Standard Card Display:
<ul style="list-style-type: none"> ✓ Echo the Owl ✓ Standard Sound Cards ✓ Unit Resources (Echo Sounds) 		
Student Materials		
<ul style="list-style-type: none"> ✓ Foundations® Letter Board & Tiles (only taught sounds) 		
Estimated Time On Activity		
2-3 minutes		
Sequence in Learning Plan		

Figure 13. Sample activity cue card.

teachers to use (Figure 13).

Instruction involved many opportunities for interaction between the teacher and students. Teachers modeled each new

skill or activity when it

was first introduced, but the modeling was faded in successive lessons on the same skill or uses of an activity. Therefore, K included more modeling than G1 and G2, but review was offered throughout. Activities were teacher led but student applied, so there were learning aides provided to support the student practice (e.g., specific auditory and visual cues, posters, and letter-sound cards). In addition, teachers were to give immediate positive feedback or to help students correct their work through guiding questions. Unlike the specific language offered for teachers to use in instruction, the materials did not provide samples of feedback statements.

Fundations considered differentiation one of the “tools of student success,” but the suggestions tended to be general such as, “provide struggling students opportunity for further practice.” The beginning of every unit and the online resource offered basic ideas for helping students who were struggling, but there were no enrichment activities for advanced students or instructional supports for EL students. In addition, the daily plans lacked explicit directions for differentiation and did not include specific times for small-group instruction or flexible grouping. Despite having unit tests and a means to track student progress, there was not a clear guidance in how to interpret the test scores to plan differentiated instruction.

Phonological/phonemic awareness (PA). The overall PA rating for Fundations was 65% (K = 68%, G1 = 61%, G2 = N/A). A weakness of the program was the sequence of PA activities, which started with the most difficult skill: phonemic awareness. Typically, PA instruction begins with easier components (e.g., words and syllables) before moving students to phonemes. However, phoneme isolation (i.e., identifying first sounds) appeared to be the first skill targeted by Fundations, and sounds were introduced to students in the order in which they appeared in a word (i.e., first, medial, last) rather than by order of difficulty (i.e., first, last, medial). Better sequencing was apparent with the targeted words used for lessons, which became

increasingly difficult within and across each instructional unit. PA skills other than phonemic awareness may have been addressed only once, such as rhyming that appeared in one learning activity in K and alliteration that appeared in a picture book used for story time.

To support teachers' delivery of PA instruction, the online resource offered recorded demonstrations of how to pronounce the sounds distinctly, correctly, and without distortion. However, there was not a pronunciation guide that identified features of sound production. "Tapping" and "scooping" strategies were taught in the first unit and used throughout the program as a way for students to physically represent sounds, syllables, or phrases, but these strategies were embedded in instruction on reading printed words.

This immediate pairing with print might have made for a clear connection between sounds and symbols, but it presented a challenge to reviewing the PA instruction in Foundations

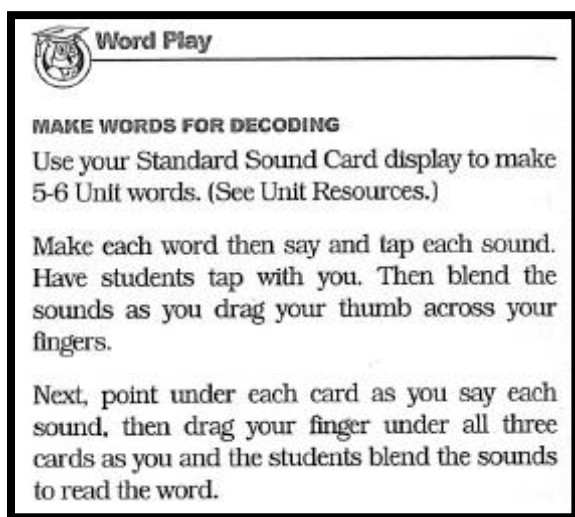


Figure 14. PA embedded in phonics instruction.

because it could not be distinguished from phonics instruction. Word play activities (see Figure 14) often were the only times when PA was addressed apart from text, but these activities did not have specific routines. The merging of PA and phonics meant that the PA component constituted a small portion of daily lessons.

Because all PA instruction was embedded within phonics instruction, the program never specified when oral sound manipulation activities were to be phased out. Teachers might use the unit tests to make this decision because PA skills were only included up to Unit 3 in K and were not included in any tests or grades after that.

However, there was little guidance for interpreting unit test results to determine what interventions should be delivered to a student who was not mastering the skills. The materials only stated, “If a student does not score at least 80% on any given item, this student will need additional assistance with the assessed skill.”

Phonics. The overall phonics rating for Foundations was 94% (K = 93%, G1 = 95%, G2 = 94%). One of Foundations’ greatest strengths was the systematic, explicit phonics instruction that paired decoding with encoding or spelling. There were logical progressions from easier to more difficult skills, such as introducing short vowels before long vowels. Generally, letter sounds that were of high utility were introduced before moving to progressively lower utility or more challenging sounds, but the short /a/ sound (used with high frequency in English) was not introduced until week five of K and after the short /o/ and /u/ sounds (of lower frequency than short /a/). In addition, the materials never specifically addressed continuous versus stop sounds.

Instruction initially utilized decodable words with taught letter-sound correspondences, but the words became progressively more varied and complex. Visually or phonemically confusing words were not taught together, which would have reinforced the target skills. The specific strategy used to teach students to decode words was finger tapping, which involved tapping one finger per sound before swiping across all fingers to blend the sounds and say the word.

High-frequency words, whether decodable or irregular, were taught to students as *trick words* that had to be memorized. The teacher’s edition specified that the words could be regular and irregular, but this was not expressed to students. Typically, 2-3 high-frequency words were taught to students each week, and instruction offered practice and cumulative review. However,

other irregular words were taught during sentence reading; they were not pretaught. Words with multiple meanings were addressed occasionally in “word-of-the-day” activities.

All phonics skills were to be taught for students to achieve mastery, which was defined by students correctly responding to 80% of the items on the cumulative unit tests. As with the PA portion of the program, there was little guidance for planning intervention in phonics skills for students not achieving mastery. The materials only stated that those students needed additional instruction. The lessons included daily reviews of previously taught concepts and words with the goal of achieving fluency in applying all phonics components to read words and sentences. Fluency practice included a scooping procedure to chunk phrases for prosody (Figure 15), so students were not only reading for speed and accuracy.



<p> Trick Word Practice</p> <p>Say each sentence below and have students repeat. Then write the sentence on Sentence Frames, and scoop it into phrases. Read it and have students echo. Say the trick word that is in the sentence and have a student find and circle it. After it is circled, hold up the corresponding Trick Word Flashcard and say the word and have students repeat.</p> <p><i>Sentence Resource</i></p> <p>That boy <u>was</u> here yesterday.</p> <p>We <u>are</u> all done.</p> <p>The kids went <u>to</u> the playground.</p> <p>Lastly present the Trick Word Flashcards, say each and have student repeat.</p>	<p> Storytime</p> <p>Preparation Use the storybook selected in previous week. You will use this book to help develop the students' retelling ability.</p> <p>Instruct Students</p> <p>Last week I read this story to you.</p> <p>Today, I am going to see if you can tell it to me.</p> <p>Let's see if you remember the story.</p> <p>Tell the students the story's title. Next go through the book, page by page and show the students the pictures. Have them tell you what happened on each page. Go through the whole book, without reading.</p> <p>Ask</p> <p>Let's see if you remember it.</p> <p>I'll read it to see if you were right.</p> <p>(Read the story.)</p> <p>Who were the characters?</p> <p>What was the setting for this story?</p> <p>What happened first?</p> <p>Then what happened?</p> <p>What happened next?</p> <p>What happened at the end?</p>
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Figure 15. Scooping for reading prosody.

Although there were not decodable textbooks or trade books used for practice in K, students read connected text in sentence dictation activities. In G1 and G2, a selection of decodable or leveled books was available for practice and story time.

Advanced phonics were explicitly introduced after sufficient practice with individual letter-sounds and orthographic units. Students were taught to use tapping, scooping, and “syllable frames” to break apart multisyllabic words. Generally, word parts were taught in a systematic fashion with the most useful introduced first. For example, syllable types were introduced gradually, and students were to identify all six types by the end of G2. However, instruction addressed suffixes in G1, and prefixes were not introduced until G2. High frequency prefixes typically are considered easier than suffixes that add a syllable (i.e., -ing), in part because students need to learn spelling rules for joining the suffixes but not the prefixes. When learning advanced phonics skills, students practiced with words that also were used in the leveled text.

Motivation and engagement (ME). The ME rating for Foundations was 0%, and this also was the score in each grade. As in all sections of this review, a program’s score is based on how the rubric criteria defined the component which, in the case of ME, emphasized choice and relevancy. The Foundations materials seemed to be engaging, and there were a variety of activities throughout the daily lessons to keep students actively involved. However, the texts were specific to the program (i.e., not trade books), students did not have opportunities to make choices within or among activities, and there were no descriptions of how to make reading relevant to students’ lives. In addition, some activities had student leaders, but there were few opportunities for peer-to-peer interaction.

Assessment. The overall Assessment rating for Foundations was 89% (K = 100%, G1 = 100%, G2 = 67%). The unit tests enabled teachers to monitor students' cumulative development of skills, and the online resources offered a diagnostic for determining where to place a student within the sequence of units. However, the diagnostic was only useful when Foundations was implemented as an intervention or in small group instruction, not for whole class instruction. There were additional assessment resources for K and G1 such as progress monitoring tools and an online tracer to track individual student mastery of skills and whole-class readiness to move to the next unit. These were not available for G2.

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Appendix

Review Procedures

Reviewers and Training

The review team consisted of six reviewers. Four reviewers were consultants hired by the IRRC because of their extensive classroom experience, familiarity with the programs, and participation in coding the pilot teachers' fidelity of implementation. Two of the four consultants reviewed both F&P and Reach. The other two consultants reviewed Foundations. In addition, two IRRC staff members with doctoral degrees in literacy-related fields reviewed all three programs.

Prior to conducting the review, all consultants and internal staff (collectively referred to as reviewers) studied the *Participant's Guide for Reviewing a Reading Program* and accompanying training presentations (Kosanovich et al., 2008). The self-paced training was designed to prepare educators for applying the associated rubric for determining how well a given program was aligned to research. The six reviewers then met to discuss any questions and solidify procedures and definitions for the present review. As this review was specifically for a kindergarten- through second-grade phonics program, only the relevant grade levels and sections of the review protocol were used: Instructional Design (ID), Phonological/Phonemic Awareness (PA), Phonics, Motivation and Engagement (ME), and Assessment. The program was to be implemented during the core literacy block, so the Supplemental Instruction section was not considered. Similarly, the Professional Development section was not considered because the IRRC team was not part of the professional development training provided to the Ames CSD personnel, which was modified for the pilot study.

All reviewers were given approximately one month to complete the reviews of the materials assigned to them. They were instructed not to share notes or collaborate on their

specific scores, but they could ask broad questions about interpreting the criteria. When reviewers were satisfied with their ratings, they entered their scores (yes or no for each item for each relevant grade along with any notes) into an electronic form. Notes were submitted via scans of hard copies or electronic copies of the checklist.

Materials

The materials used for the review were the same edition and copyright year used by the Ames CSD in the pilot and included the following by program type.

- F&P (Fountas & Pinnell, 2003, 2017)
 - The Fountas & Pinnell Literacy Continuum: A Tool for Assessment, Planning, and Teaching
 - The Fountas & Pinnell Comprehensive Phonics, Spelling, and Word Study Guide
 - Phonics Lessons: Letters, Words, and How They Work (teacher's manuals and resource binders)
- Reach (Frey et al., 2013; Kratsky, 2016; National Geographic Society, 2011)
 - Reach for Reading Common Core Program Grade K
 - Teacher's Edition for Units 1-9 Reach into Phonics (includes teacher's editions and practice books for G1 and G2)
- Foundations (Wilson Language Training Corporation, 2012)
 - Foundations Teacher's Second Edition
 - Teacher's Kits for grades K, G1, and G2 (includes teacher's manual and all necessary teacher and student materials)
 - Prevention/Early Intervention Learning Community website

There were electronic or online materials available for each program, but not all could be reviewed. For example, a CD-ROM was reportedly available for F&P but was not part of the materials provided by the Ames CSD. Similarly, there appeared to be substantial online materials available for Reach, but the publishers did not respond to requests for a username. Therefore,

only the print materials were reviewed. The online materials for Foundations were readily available with the access code in the teacher's manual, so they were considered for this review.

Interrater Reliability and Reconciliation

Interrater reliability among the reviewers was calculated in two ways (Hallgren, 2012). First, we calculated the percentage agreement by dividing the number of agreements by the full count of scores on a given program. This was strongest for Reach ($M = 85\%$), followed by Foundations ($M = 77\%$), and F&P ($M = 76\%$). The second approach to determining interrater reliability was through Cohen's Kappa, which adjusts for chance agreement (Cohen, 1960). Results are interpreted as slight (.01 to .20), fair (.21 to .40), moderate (.41 to .60), substantial (.61 to .80), and perfect (.81+). Kappa agreement was highest for Reach ($M = .58$), followed by F&P ($M = .53$), and Foundations ($M = .48$).

Any differences in scores were reconciled by the two IRRC staff members by discussing the interpretation of criteria for each item and referring to specific examples from the materials. The reconciled ratings and all explanatory notes were shared with the external consultants, who concurred with the final decisions. Therefore, these ratings (see below) were used for calculating the percentage of the rubric criteria considered present within and across grades for each category on the rubric (ID, PA, Phonics, ME, and Assessment) and overall.

Table 2

Item-Level Consensus Score Report

	F&P				Reach				Foundations		
	K	1	2		K	1	2		K	1	2
Instructional Design (ID)											
1. Is there empirical research on this program's efficacy?	0	0	0		0	0	0		0	0	0
2. Are resources available to help the teacher understand the rationale for the instructional approach and program strategies (e.g., articles, explanations in the teacher manuals, references, and reliable websites)?	1	1	1		1	1	1		1	1	1
3. Does the comprehensive program address the five components of reading (phonological/phonemic awareness, phonics, fluency, vocabulary and comprehension)?	n/a				n/a				n/a		
4. In addition to the five components of reading, are other dimensions of reading such as spelling, writing, oral language, and listening comprehension addressed?	n/a				n/a				n/a		
5. Does the supplemental/intervention program adequately address the component(s) targeted? (Some programs concentrate on one, two, or a few of the components.)	n/a				n/a				n/a		
6. Is there a scope and sequence ?	1	1	1		1	1	1		1	1	1
7. Are goals and objectives clearly stated?	1	1	1		1	1	1		1	1	1
8. Are student materials aligned with instructional objective of the lesson?	1	1	1		1	1	1		1	1	1
9. Do instructional materials increase in difficulty as students' skills strengthen?	1	1	1		1	1	1		1	1	1
10. Are all lessons and activities (e.g., whole group, small group, and centers) reading-related?	1	1	1		1	1	1		1	1	1

Instructional Design (ID)	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
11. Is there a clear and logical organization to the lessons in:									
The order and procedures of each day's lesson?	1	1	1	1	1	1	1	1	1
The inclusion of all necessary materials?	0	0	0	1	1	1	1	1	1
The consistency of each day's lesson format?	1	1	1	1	1	1	1	1	1
Addressing the components of reading every day?	n/a			n/a			n/a		
12. Is instruction consistently explicit ? Is it concise, specific, and related to the objective?	1	1	1	1	1	1	1	1	1
13. Are teacher directives highly detailed to ensure accurate implementation?	0	0	0	1	1	1	1	1	1
14. Does the lesson format facilitate frequent interactions between teacher and students?	1	1	1	1	1	1	1	1	1
15. Is instruction consistently systematic ? Is there a prescribed order for introducing specific skills within each component of reading?	0	0	0	1	1	1	1	1	1
16. Are there coordinated instructional sequences and instructional routines which include:									
Modeling ?	0	0	0	1	1	1	1	1	1
Guided practice with feedback?	1	1	1	1	1	1	1	1	1
Student practice and application?	1	1	1	1	1	1	1	1	1
Cumulative review ?	0	0	0	1	1	1	1	1	1
17. Are there many guided practice opportunities for explicit teaching and teacher-directed feedback (for typically progressing readers and more for struggling readers)?	0	0	0	1	1	1	1	1	1

Instructional Design (ID)	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
18. Does the program provide clear guidance for the teacher to document student progress and inform instruction?	0	0	0	1	1	1	1	1	1
19. Does instruction make a clear connection among all five components?	n/a			n/a			n/a		
20. Is scaffolding a prominent part of the lessons?	0	0	0	1	1	1	1	1	1
21. Are instructions for scaffolding specific within each lesson?	0	0	0	1	1	1	1	1	1
22. Are teachers encouraged to give immediate, specific feedback (corrective or positive)?	0	0	0	1	1	1	1	1	1
23. Is differentiated instruction prominent?	1	1	1	1	1	1	1	1	1
24. Is instruction differentiated based on assessment?	1	1	1	0	0	0	0	0	0
25. Are directions for differentiating instruction specific?	0	0	0	0	1	1	0	0	0
26. Is small-group instruction (small teacher-pupil ratio) part of daily instruction?	0	0	0	0	0	0	0	0	0
27. Are there guidelines for forming flexible groups based on student progress?	0	0	0	0	0	0	0	0	0
28. Are enrichment activities included for advanced students?	1	1	1	0	0	0	0	0	0
29. Does the program provide instruction for English learners ?	1	1	1	1	1	1	0	0	0
30. Does the program specify for whom it is appropriate (e.g., students on or above grade level, students slightly behind their peers, students more than one grade level behind their peers)?	n/a			n/a			n/a		
31. Does the program specify who should provide instruction for accurate implementation (e.g., special education teacher, general education teacher, paraprofessional, or volunteer)?	n/a			n/a			n/a		

	F&P				Reach				Foundations		
Instructional Design (ID)	K	1	2		K	1	2		K	1	2
32. Does the program specify the instructional setting (e.g., general education classroom, computer lab, or resource room)?	n/a				n/a				n/a		

	F&P				Reach				Foundations		
Phonological/ Phonemic Awareness (PA)	K	1	2		K	1	2		K	1	2
1. Is phonological/phonemic awareness instruction explicit ?	1	1	n/a		1	1	n/a		1	1	n/a
2. Is phonological/phonemic awareness instruction systematic ?	0	0	n/a		1	1	n/a		1	1	n/a
3. Does phonological/phonemic awareness instruction include coordinated instructional sequences and routines ?	0	0	n/a		1	1	n/a		1	1	n/a
4. Is phonological/phonemic awareness instruction scaffolded ?	0	0	n/a		1	1	n/a		1	1	n/a
5. Does phonological/phonemic awareness instruction include cumulative review ?	0	0	n/a		1	1	n/a		1	0	n/a
6. Are assessments included to measure and monitor progress in phonological/phonemic awareness?	1	1	n/a		1	1	n/a		1	0	n/a
7. Is PA only a small portion of the daily lesson?	0	0	n/a		1	1	n/a		1	1	n/a
8. Does each day's lesson focus on only one or two PA skills (as opposed to several)?	1	1	n/a		1	1	n/a		1	1	n/a
9. Are there instructions for PA activities to alert the teacher to student readiness?	1	1	n/a		0	0	n/a		0	0	n/a
10. Does the program contain instructional activities that are designed to stimulate the growth of phonemic awareness?	1	1	n/a		1	1	n/a		1	1	n/a

	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
Phonological/ Phonemic Awareness (PA)									
11. Does PA start with larger units (words and syllables) and progress to smaller units (phonemes)?	1	1	n/a	1	1	n/a	0	0	n/a
12. Does PA start with rhyming and progress to phoneme isolation, blending, segmenting, and phoneme manipulation ?	1	1	n/a	1	1	n/a	0	0	n/a
13. Do students count the number of words in spoken sentences?	1	n/a	n/a	1	n/a	n/a	0	n/a	n/a
14. Are there rhyming activities (recognition and production)?	1	n/a	n/a	1	n/a	n/a	1	n/a	n/a
15. Are there alliteration activities?	1	n/a	n/a	1	n/a	n/a	1	n/a	n/a
16. Are there activities that involve counting the number of syllables in a word?	1	n/a	n/a	1	n/a	n/a	0	n/a	n/a
17. Are there activities that involve blending and segmenting syllables in a word?	1	n/a	n/a	1	n/a	n/a	1	n/a	n/a
18. Are there activities for students to blend onsets and rimes ?	1	n/a	n/a	1	n/a	n/a	0	n/a	n/a
Phonemic Awareness									
19. Do activities follow the continuum of word types (beginning with short words that contain two or three phonemes)?	1	1	n/a	1	1	n/a	1	1	n/a
20. Does instruction include physical representations (e.g., clapping, Elkonin boxes with markers, counters, tiles, fingers, and auditory cues) to help students make the connection between sounds and print (the alphabetic principle)?	0	0	n/a	1	1	n/a	1	1	n/a
21. When PA activities are at the phoneme level, do students' activities target the first sound in words and then move to the last sound in words and finally focus on the middle sound in words?	1	0	n/a	1	1	n/a	0	0	n/a

	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
Phonological/ Phonemic Awareness (PA)									
22. Are there blending activities at the phoneme level?	1	0	n/a	1	1	n/a	1	1	n/a
23. Are there segmenting activities at the phoneme level?	0	0	n/a	1	1	n/a	1	1	n/a
24. Does instruction include phoneme manipulation in words (i.e., deletion, addition, and substitution)?	n/a	1	n/a	n/a	1	n/a	n/a	0	n/a
25. Once students demonstrate early phonemic awareness , is PA instruction linked to phonics instruction?	1	1	n/a	1	1	n/a	1	1	n/a
26. Does the program specify when oral language PA activities should be phased out?	0	0	n/a	0	0	n/a	0	0	n/a
27. Are the words used in PA activities found in subsequent word lists and text readings?	0	0	n/a	1	1	n/a	1	1	n/a
28. Does the program include a pronunciation guide for the various features of sound production (e.g., stop sounds and continuous sounds)?	0	0	n/a	1	1	n/a	0	0	n/a
29. Do computer-based programs pronounce sounds distinctly, correctly, and without distortion?	n/a (no access)			n/a (no access)			1	1	n/a

	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
Phonics (P)									
1. Is phonics instruction explicit ?	1	1	1	1	1	1	1	1	1
2. Is phonics instruction systematic ?	0	0	0	1	1	1	1	1	1

Phonics (P)	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
3. Does phonics instruction include coordinated instructional sequences and routines ?	0	0	0	1	1	1	1	1	1
4. Is phonics instruction scaffolded ?	0	0	0	1	1	1	1	1	1
5. Does phonics instruction include cumulative review ?	0	0	0	1	1	1	1	1	1
6. Are assessments included to measure and monitor progress in phonics?	1	1	1	1	1	1	1	1	1
7. Does the program teach both consonants and vowels?	1	1	n/a	1	1	n/a	1	1	n/a
8. Are short vowels taught before long vowels?	0	0	n/a	1	1	n/a	1	1	n/a
9. Are individual letter-sounds taught first, followed by digraphs, blends, and word families ?	0	0	0	0	1	1	1	1	1
10. Are high utility letter-sounds (e.g., /a/, /m/, /s/, /t/, /r/ found in short, one syllable CVC or CCVC words) introduced before low utility letter-sounds (e.g., /x/, /y/, /z/)?	0	0	n/a	1	1	n/a	1	1	n/a
11. Are digraphs taught as single sounds (e.g., /sh/, /ch/, /th/, /ai/, /ea/)?	n/a	1	1	n/a	1	1	n/a	1	1
12. Are individual sounds in a blend taught?	n/a	1	1	n/a	1	1	n/a	1	1
13. Are letter-sound correspondences taught to mastery and reviewed cumulatively?	0	0	n/a	1	1	n/a	1	1	n/a
14. Are students taught an explicit strategy to decode words by their individual sounds?	1	1	1	1	1	1	1	1	1
15. Do students practice decoding words that contain only those letter-sounds that have been previously taught?	0	0	0	1	1	1	1	1	1
16. Once students have mastered a few letter-sounds, do they immediately apply them to reading word lists and short decodable texts ?	0	0	n/a	1	1	n/a	1	1	n/a

Phonics (P)	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
17. Are symbol to sound (decoding) and sound to symbol (spelling) taught explicitly?	0	0	0	1	1	1	1	1	1
18. Is spelling taught during word learning so students can understand how sounds map onto print?	1	1	1	1	1	1	1	1	1
19. Does instruction progress from simple to more complex concepts (e.g., CVC words before CCCVCC words and single syllable words before multisyllabic words)?	1	1	1	1	1	1	1	1	1
20. Does instruction follow the continuum of word types (beginning with CV and CVC words), incorporating continuous and stop sounds and blends in an appropriate sequence?	0	0	n/a	1	1	n/a	1	1	n/a
21. Are reviews of previously taught concepts and words frequent and cumulative?	0	0	0	1	1	1	1	1	1
22. Is emphasis placed on fluency practice for each phonics component (e.g., sound identification, CVC blending, word recognition, multisyllabic words , and text reading)?	0	0	0	0	0	0	1	1	1
23. Are there ample decodable texts (familiar and unfamiliar) for students to practice applying their skills with phonic elements?	0	0	0	1	1	1	1	1	1
24. Are decodable texts read before trade books (for students to master new skills)?	0	0	0	1	1	1	1	1	1
25. Does the program clarify that high frequency words can be both regular and irregular ?	0	0	0	1	1	1	1	1	1
26. Are irregular words that are visually or phonemically confusing (e.g., saw/was, where/were, of/off) separated?	0	0	n/a	1	1	n/a	1	1	n/a

	F&P			Reach			Foundations		
	K	1	2	K	1	2	K	1	2
Phonics (P)									
27. Does the program include explicit instruction in irregular words and decoding strategies for the decodable parts of words (clarifying that the letters represent their most common sounds as well as the irregularities of certain letters)?	0	0	0	1	1	1	0	0	0
28. Are the numbers of high frequency, irregular words introduced in one lesson kept to a minimum?	1	1	1	1	1	1	1	1	1
29. Are irregular words pre-taught before students read connected texts?	0	0	0	1	1	1	0	0	0
30. Are difficult, high frequency words reviewed often and cumulatively?	0	0	0	1	1	1	1	1	1
31. Is there sufficient practice with individual letter-sounds before larger orthographic units are taught?	n/a	0	0	n/a	1	1	n/a	1	1
32. Are students taught the strategy of chunking when trying to decode multisyllabic words?	n/a	1	1	n/a	1	1	n/a	1	1
33. Does the program provide teacher modeling of a think-aloud strategy to aid in multisyllabic word analysis?	n/a	0	0	n/a	1	1	n/a	1	1
34. Are students taught strategies to read multisyllabic words by using prefixes, suffixes , and known word parts?	n/a	0	0	n/a	1	1	n/a	1	1
35. Is instruction explicit in the use of syllable types (e.g., open, closed, vowel-consonant-e, vowel combinations, r-controlled, and consonant-le)?	n/a	0	1	n/a	1	1	n/a	1	1
36. Is a section of the program devoted to advanced phonics (structural analysis) skills?	n/a	n/a	1	n/a	n/a	1	n/a	n/a	1
37. Are advanced phonics skills taught explicitly, first in isolation and then in words and connected texts?	n/a	n/a	1	n/a	n/a	1	n/a	n/a	1
38. Does the program include spelling strategies (e.g., word sorts, categorization activities, word-building activities, and word analogies)?	n/a	1	1	n/a	1	1	n/a	1	1

	F&P				Reach				Foundations		
Motivation and Engagement (M&E)	K	1	2		K	1	2		K	1	2
Providing opportunities for students to work collaboratively?	1	1	1		0	0	0		0	0	0

	F&P				Reach				Foundations		
Assessment (A)	K	1	2		K	1	2		K	1	2
1. Are assessments included that teachers can use to guide student movement through the program (e.g., screening, progress monitoring, diagnostic, and outcome measures)?	1	1	1		1	1	1		1	1	1
2. Does the program provide teacher guidance in using assessment results to differentiate instruction?	0	0	0		0	0	0		1	1	0
3. Do the assessments identify students who are at risk or already experiencing difficulty learning to read?	0	0	0		0	0	0		1	1	1

Note. 0 = no, the criterion was not present in the materials; 1 = yes, the criterion was present in the materials; n/a = the criterion was not applicable to this review.