

Validation of the Monitoring Academic Progress: Reading (MAP: R):
Development and Investigation of a Group-Administered Comprehension-Based
Tool for RTI

A dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Angela Hilton-Prillhart

August, 2011

Copyright 2011© by Angela Hilton-Prillhart
All rights reserved.

Dedication

To my husband, Chris, for your unconditional love and support. My sons, Evan, Riley, and Joseph for your patience with this project and the amount of time devoted to its completion. To my father, Grady Hilton, for your positive example, love, and sacrifice. In memory of my mother, Emma Hilton, daughter, Jessica Mounger, sister, Tonya Edmonson, and grandparents, Ralph and Margaret Tyree, and Irene Hilton...you are always with me.

“Be present in all things and thankful for all things.”
~Maya Angelou

Acknowledgements

This project would not have been possible without the guidance and direction of Dr. Sherry Bell and Dr. Steve McCallum. I thank them for the opportunity to work on this project and for their direction during conception, development and implementation of MAP: R. I also appreciate the technical and edit suggestions offered during the writing of this dissertation. Their expertise with testing and psychometrics has been invaluable.

I also wish to thank the members of Dr. McCallum's research group that participated in this project. Michael Hopkins' contributions were essential to the completion of this project. Without his time and data management expertise, this project could not have been completed. I also wish to thank Kelli Miller, Ashlee Cornett, Kristen Maurer, and Amelia Davis for their feedback and work on editing the probes. Additionally, I appreciate the willingness of Dr. Christopher Skinner and Dr. Amy Broemmel to serve on my dissertation committee and the feedback and suggestions they provided.

Steve Dunkin and Robyn O'Dell were instrumental in the implementation of the MAP: R probes as part of the Response to Intervention program in their school district. I appreciate their patience and willingness to advocate for this project. Their hard work will hopefully translate into more students receiving evidence-based intervention in their system.

Finally, I thank my family for providing encouragement and support throughout this project. Their generosity and understanding of the time commitment required to complete this project made its completion possible.

Abstract

Monitoring Academic Progress: Reading (MAP: R), a silent, group-administered screener was piloted as part of a comprehensive Response to Intervention program. MAP: R along with AIMSweb© Maze and STAR reading were administered to 1,688 students in Grades 1-3. Overall alternate-form reliabilities for MAP: R resulted in moderately high stability (Grade 1 = .79, Grade 2 = .78, and Grade 3 = .75). Test-retest reliability was .90 for Grade 1, .84 for Grade 2, and .89 for Grade 3. Concurrent validity, correlations for MAP: R and AIMSweb© Maze ranged from .43 to .69, with correlations for MAP: R and STAR ranging from .48 to .67. Predictive validity was assessed using end-of-the-year STAR reading scores as the criterion for MAP: R and AIMSweb© Maze. Results of a stepwise regression indicated that MAP: R scores predicted 37% of the variance in STAR scores and AIMSweb© Maze failed to add additional predictive variance. Data support the utility of MAP: R as a reading screener for progress monitoring within a Response to Intervention framework, though additional data are needed.

Table of Contents

DEDICATION	III
LIST OF TABLES	VIII
CHAPTER 1	1
LITERATURE REVIEW	1
Response to Intervention.....	2
Measuring Fluency and Comprehension with Norm-Referenced Tests	4
Standardized Measures of Reading Fluency	9
Curriculum-Based Measures of Reading Fluency	12
Integrating Standardized and Curriculum-Based Measurement with RTI	14
MAP: R Reading Assessment.....	19
Statement of the Problem.....	20
CHAPTER II.....	21
METHOD	21
Participants.....	21
Instrument Development.....	21
CHAPTER III	38
RESULTS	38
Reliability of the MAP: R.....	38
Validity of the MAP: R.....	40
CHAPTER IV	43
DISCUSSION	43

Reliability.....	45
Validity	47
Limitations and Future Research	49
LIST OF REFERENCES	52
APPENDICES	76
Appendix A.....	77
Appendix B	97
Appendix C	107
Appendix D.....	133
Appendix E	155
Appendix F.....	170
VITA.....	177

List of Tables

Table 1 MAP: R Pilot and Phase 1: Means, Standard Deviations, and Standard Error of Measure	65
Table 2 MAP: R Pilot Phase 2: Means, Standard Deviations, and Standard Error of Measure ...	66
Table 3 MAP: R Pilot Phase 3: Means, Standard Deviations, and Standard Error of Measure ...	67
Table 4 Current Study Demographic Information	68
Table 5 Descriptive Statistics: MAP: R	69
Table 6 Alternate-Form Reliability: MAP: R	70
Table 7 Alternate-Form Reliability: AIMSweb© Maze	71
Table 8 MAP-R Test-Retest Reliability	72
Table 9 Concurrent Validity: MAP: R and AIMSweb© Maze	73
Table 10 Correlation Matrix for End-of-the-Year STAR Scores with AIMSweb© Maze and MAP:R	74
Table 11 Stepwise Multiple Regression Analysis Predicting STAR with MAP: R and AIMSweb© Maze Across Grades 2 and 3	76

CHAPTER 1

Many current instruments used to monitor reading progress in school-aged children focus primarily on oral reading fluency to determine whether or not a student needs specialized reading instruction within a Response to Intervention (RTI) model. These measures rely almost exclusively on individually administered oral reading fluency tasks to predict reading comprehension as well. Because assessment of reading fluency takes less time than many available comprehension measures it is more efficient; and it is a good predictor of reading comprehension. Nonetheless, some experts recommend use of ecologically valid measures of reading that offer information regarding fluency *and* comprehension (Fuchs, 2004), given that comprehension is the ultimate goal of reading. However, current screening measures of comprehension are limited in that they typically rely on time-intensive, narrow evaluation, e.g., they do not also assess multiple elements of the reading process. Consequently, the Monitoring Academic Progress: Reading (MAP: R) was developed to assess both comprehension and fluency in a time efficient group-administered format. However, there is little reliability and validity information available to support its use. This study was designed to determine the extent to which MAP: R exhibits alternate form reliability, test-retest reliability, concurrent validity (when compared to other measures such as the AIMSweb© Maze task and STAR test), and its predictive power, as compared to the AIMSweb© Maze (when the criterion is STAR reading scores).

LITERATURE REVIEW

Passage of educational legislation such as the Individuals with Disabilities Education Improvement Act (IDEA, Congress, 2004) and No Child Left Behind (NCLB, Congress, 2001)

has placed an emphasis on improving the academic achievement of at-risk students. NCLB stressed that all children, despite various societal factors, should make adequate yearly progress. The Reading First Initiative, a federally funded grant program designed to help states meet the academic standards of NCLB, took this recommendation a step further, suggesting regular monitoring of student progress in the area of reading. The passage of IDEA (2004), with its emphasis on determining student response to scientifically based instruction using Response to Intervention (RTI), resulted in an increase in progress monitoring for students at-risk for academic failure. In the wake of this legislation, monitoring academic progress through evaluation became an integral feature of the educational environment. Even though some assessment techniques designed to monitor student progress have been around for years (e.g., Curriculum-Based Measurement, CBM; Deno & Mirkin, 1977), the reauthorization of IDEA with its provision allowing states to use a RTI model for identifying those with reading problems, resulted in an impetus to develop more sophisticated and informative progress monitoring measurements.

Response to Intervention

Because IDEA (2004) encourages RTI to supplement or substitute for the IQ-achievement discrepancy model for the identification of learning disabilities, motivation for use of progress monitoring assessment has greatly increased. The intent is to identify and remedy learning difficulties early, instead of waiting for students to qualify under the discrepancy model before receiving specialized instruction. Fuchs and Fuchs (2006) pointed out that intervention within an RTI model may be used as a process to help struggling students catch up with their same-aged peers and that RTI-based assessment can aid identification for learning disabilities.

RTI models require assessment of all students and target a specified number of students for extra assistance in reading or math. For instance, a district may choose to target for intervention students who perform in the lower 10% on an RTI assessment instrument.

After assessment occurs in the RTI process and students are identified for remediation, progression through a tiered process of additional instruction begins. Districts may use between two to four tiers which increase in the intensity and length of instruction provided (Hollenbeck, 2007). If at the end of the tier process, students have not made adequate gains, they may then be identified for special education services, which may require standardized assessment. Though IDEA still requires a comprehensive evaluation for identification of learning disabilities, there is no consensus about which elements should comprise the evaluation; so, the debate over which tests adequately assess for learning disabilities continues, a debate that has raged for years, well before the latest IDEA directives (Bradley, Danielson, & Hallahan, 2002; Fuchs, Fuchs, & Speece, 2002; Scruggs & Mastropieri, 2002; Siegel, 1999).

One challenge associated with the implementation of the RTI process is determining the most effective, efficient, and psychometrically robust techniques for assessing/monitoring the performance of students. In the discrepancy model for identifying learning disabilities the focus has been on using standardized tests to determine the extent to which a severe discrepancy exists between ability, typically determined by an IQ score, and academic performance, typically operationalized by a test of academic achievement. In this model, curriculum-based measurement data, if used at all, was provided by the teacher before a referral was initiated to assess eligibility for special education. Even though these data have often been advocated as the best method to frequently monitor student performance, they were not typically a salient element

of the special education identification process (Shapiro, 2004). As a result of the move toward using the RTI model to address student progress, emphasis on developing curriculum-based and related strategies have led to the creation of new instruments such as Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002a) and AIMSweb© (Shinn & Shinn, 2002). These measures are in many ways a hybrid of traditional standardized tests and curriculum-based measures in that they are presumed to accurately reflect the academic curriculum, *and* they can yield norm-referenced comparisons (Bell & McCallum, 2008b). The following sections provide a brief history of the use of standardized and curriculum-based measurement to help identify reading-related deficits.

Measuring Fluency and Comprehension with Norm-Referenced Tests

The need to assess student performance in order to make informed educational decisions has long been recognized and both norm-referenced and criterion-referenced tests have been used for this purpose. Norm-referenced tests are used primarily for comparison purposes (Shapiro, 2004); an examinee's performance is defined within the context of his or her peers, (e.g., how well his/her responses to test questions match those of the norm group). Norm-referenced tests are useful when making special education eligibility decisions because these decisions have traditionally been based on how discrepant an individual's performance is from the norm group (Shapiro, 2004). Even though norm-referenced tests can provide this information, they have several limitations, including a lack of match to the curriculum. This makes it difficult for teachers to use norm-referenced information to inform them about what students are learning in the classroom and how much progress they are making within the

curriculum. Additionally, norm-referenced tests produce a global snapshot of skills and may not be sensitive enough to measure small gains in student performance (Shapiro, 2004).

Many standardized measures of reading currently exist, and measures of reading fluency are most common. Reading fluency rates not only inform teachers about word recognition, but fluency rate is a powerful predictor of reading comprehension, and overall reading success (Deno, Mirkin, & Chiang, 1982; Edwards, Lutz, & Keller, 2004; Hamilton & Shinn, 2003; Hintze, Callahan, Matthews, & Shapiro, 2002; Williams & Tobin, 2002). This robust finding was reinforced by recommendations made by the National Reading Panel in 2000; the Panel members noted:

“Because the ability to obtain meaning from print depends so strongly on the development of word recognition accuracy and reading fluency, both of the latter should be regularly assessed in the classroom, permitting timely and effective instructional response when difficulty or delay is apparent”(p.7).

Measures that assess fluency are useful for helping teachers design appropriate reading instruction and interventions for students. However, one of the difficulties inherent in developing assessments that assess fluency is the lack of agreement on what reading behaviors constitute reading fluency. Is reading fluency freedom from word identification problems that interfere with reading comprehension, as suggested by Harris and Hodges (1995)? Is reading fluency the fast, effortless, autonomous, and unconscious recognition of words described by Logan (1997)? Or is reading fluency simply oral reading operationalized by rate and accuracy?

Reading fluency is related to automaticity. Laberge and Samuels (1974) define automaticity as the ability to perform tasks free of significant demands on attention. Within the

context of reading, automaticity characterizes the ability to decode or identify words with little conscious cognitive effort. Individuals who decode automatically have more cognitive capacity to devote to reading comprehension. If an individual lacks automaticity fluency will be hindered. Clearly, word recognition automaticity helps students read faster (Samuels & Flor, 1997). Prosody is also a component in some definitions of reading fluency. Prosody consists of rhythm, intonation, and phrasing when reading and, according to Hook and Jones (2002), is needed in order to read fluently.

Rasinski (1994) proposes that readers who are fluent group words into meaningful units or phrases. Similarly, according to Newell and Rosenbloom (1981) fluent readers chunk information into components with complex information integrated into single units of information. By chunking information, readers concentrate less on making meaning of each word and more on making sense of meaningful phrases. As a result, reading becomes less labored and segmented. According to Rasinski and Newell and Rosenbloom, then, fluent readers are adept at *parsing*.

Parsing is the ability to integrate the meanings of individual words while reading into larger units of meaning (Gagne & Yekovich, 1993). This ability to use the syntactic and linguistic rules of language to form meaningful ideas is essential for literal comprehension, one of the component processes of reading. Parsing is a good indicator of comprehension because it requires a reader to establish relationships between and among words to make meaning. Readers who effectively chunk text into meaningful units in this manner are also more likely to divide text into appropriate phrases, which underlies the prosody associated with identifying which phrases fit together syntactically (Gerrell & Mason, 1983; Rasinski, 1994). According to Kuhn

and Stahl (2003), this ability to identify text phrasing (parsing) is itself an indicator of whether or not the student has comprehended the text. Therefore, by using measures that incorporate parsing or text phrasing, the examiner is able to get information about how quickly the student reads *and* how well that student chunks words into meaningful units.

Comprehension is identified as a target area by the National Reading Panel (2000). Comprehension is a complex process that involves many different elements (Duke & Pearson, 2002). Reading comprehension also involves constant and ongoing adaptation of many cognitive processes (Williams, 2002). Parsing or text phrasing is one component of the overall process of reading comprehension.

Although oral reading fluency is a predictor of reading comprehension for most students, oral reading measures that focus solely on rate and accuracy do not give educators instructional information regarding the construction of meaning from text. Complicating this issue, in part, is the controversy that exists regarding “word-callers”. Stanovich (1986) describes word-callers as students who possess adequate decoding skills, but do not comprehend the meaning of the decoded text. Controversy exists in the research literature regarding the prevalence of word-callers (Hamilton & Shinn, 2003; Meisinger, Bradley, Schwanenflugel, Kuhn, & Morris, 2009; Nathan & Stanovich, 1991). Hamilton and Shinn found that teacher identification of word-callers was unreliable. Meisinger et al. examined the relationship between teacher nominations and the prevalence of word-callers in elementary school children. In this study, word-callers were operationally defined as students with psychometrically normal fluency score (e.g. a minimum standard score of 95 on the Gray Oral Reading Test – 4 [GORT-4] Fluency scale) but who possessed below average comprehension skills as determined by a standard score of 85 or

below on the Wechsler Individual Achievement Test-Reading Comprehension (WIAT-RC; Wechsler, 1992). According to the Meisinger et al. study the incidence of word-callers is relatively rare in the early grades but is more prevalent in late elementary grades. This phenomenon likely relates to the “fourth grade slump” noted by Jean Chall (1986). As students progress through elementary grades, reading demands change from simple decoding and surface level comprehension to deep understanding of vocabulary and language.

Oral reading measures for fluency may not take into account diverse groups of students who exhibit the characteristics of word-callers. Hyperlexia, the ability to decode fluently but comprehend poorly, often co-exists with Asperger’s Syndrome and may resemble word-calling (Grigorenko et al., 2002). Additionally, some English Language Learners and others with limited exposure to the mainstream culture may decode more fluently than they comprehend due to limited exposure to English language (Carlo et al., 2004; Marzano, 2004; Nakamoto, Lindsey, & Manis, 2007; Proctor, Carlo, August, & Snow, 2005). Therefore, even if the prevalence of word-callers is relatively rare in the early elementary grades, these students who struggle with comprehension but decode well likely would be missed by oral reading assessments. Conversely, students who struggle with automaticity but comprehend a high percentage (of words read) might be targeted to receive reading remediation that is not needed. If reading comprehension is the ultimate goal of reading, then fluency measures that contain components related to comprehension in addition to speed are likely the most beneficial in predicting comprehension. However, one of the biggest challenges to implementing this type of top-down reading assessment is that assessing both comprehension and fluency is time-consuming.

Nonetheless, given the importance of assessing comprehension, more attention should be paid to developing such measures.

Many of the studies recommending fluency be used as a predictor of comprehension are based on correlational data. Ultimately, relying on fluency measures to predict comprehension will fail to identify some children who need remediation. Consequently, Shapiro (2004) recommended that any CBM for reading include some type of comprehension screen.

Standardized Measures of Reading Fluency

Several assessments currently exist that measure aspects of reading fluency. However, as revealed in a study of 496 elementary teachers conducted by Paris, Paris, and Carpenter (2001), teachers consider lack of training and time constraints as obstacles in incorporating standardized assessments in the classroom. Even so, several exist and are widely used. Standardized instruments provide both individualized and group formats and may require silent or oral responding. Among the most commonly used tests of standardized reading assessments are: The Woodcock-Johnson – III Tests of Achievement (WJ-III; Woodcock, McGrew, & Mather, 2001), the Kaufman Test of Educational Achievement (K-TEA; Kaufman & Kaufman, 2004), the Test of Word Reading Efficiency (TOWRE; Torgensen, Wagner, & Rashotte, 1999), the Nelson Denny Reading Test (Brown, Vick, Fishco, & Hanna, 1993), the Gray Oral Reading Tests-Diagnostic (GORT-D; Wiederbolt & Bryant, 2001), the Test of Silent Word Reading Fluency (TOSWRF; Mather, Hamill, Allen, & Roberts, 2004), the Test of Silent Contextual Reading Fluency (TOSCRF; Hammill, Wiederholt, & Allen, 2006), and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002b). With the exception of the TOSWRF and TOSCRF these measures involve time consuming individual administration which is not

practical for routine classroom use. Additionally, only the Nelson Denny, TOSWRF, and TOSCRF provide an option for silent, group administration, with the other assessments requiring students to read the test content aloud and/or be individually administered.

Because educators are typically motivated to use the most efficient assessment strategies they are increasingly interested in evaluating, and adopting, group-based and/or silent instruments. One of the most promising instruments is the TOSWRF, considered a beneficial instrument for teachers because it allows a silent reading option *and* may be group-administered. With an administration time of 3 minutes, the test is also efficient for use within the classroom setting. The TOSWRF relies on a word chaining technique and is designed for students aged 6-6 years to 17-11 years. Word chaining uses a graded word list utilizing both sight and vocabulary knowledge by presenting words that become less familiar as the items increase in difficulty (Bell et al., 2006). The words are presented to the examinee with no spaces between them. The examinee is then asked to separate the words by drawing lines between them in order to identify as many different words as possible during the time limit provided (Mather et al., 2004). The TOSWRF essentially relies on unconnected text to assess the automaticity of word recognition and decoding.

Although the TOSWRF provides useful information it is limited; it allows the examinee to recognize words as wholes and it assesses automaticity, but it does not require the examinee to make meaningful connections between sentences as recommended by Fuchs (2004). The TOSWRF requires chunking of words but not the chunking of information into meaningful units, a skill required for quickly processing new information (Rupley, Wilson, & Nichols, 1998). Further, as the TOSWRF has only two alternate forms and yields standard scores; it is suitable

for screening (e.g. three times per year) but not for progress monitoring. Additionally, the TOSWRF is limited because it does not address prosody or anticipation related to fluency, both of which are needed for readers to fluently read materials (Hook et al., 2002). This skill is recognized by the National Reading Panel (NRP) as a component of fluency (National Institute of Child Health and Human Development, 2000).

The TOCSRF is also a potentially useful assessment in assisting classroom teachers with designing appropriate reading instruction. The TOCSRF is practical for use within classroom settings because it can be administered silently to groups and is given within a relatively short time frame (2 minutes for practice exercises with students advancing to a 3 minute test if they perform well). Like the TOSWRF, the TOSCRF requires examinees to mark between words. However, the TOSCRF differs from the TOSWRF in that it uses connected text with graded passages of increasing difficulty. With the TOSCRF the embedded words are combined in chunks or passages with meaning (Bell, McCallum, Kirk, Fuller, & McCane-Bowling, 2007). The TOSCRF has four alternate forms; however like the TOSWRF, it provides standard scores and it not suitable for frequent progress monitoring. Passages range from pre-primer with simple grammar to adult level with complex grammar. Each passage contains letters in all uppercase print and no punctuation. Examinees are instructed to draw a line between each word in the text. Although the TOSCRF format incorporates chunking of meaningful units into the assessment of reading fluency as recommended by Rupley et al. (1998), it does not necessarily require the examinee to process meaningful connections between sentences or complete ideas, which is intertwined with reading fluency and comprehension (Fuchs, 2004). In some instances, passages contain some words that have other small words inside them; therefore students have to actually

comprehend what they read in context instead of simply identifying words (Hammill et al., 2006).

Curriculum-Based Measures of Reading Fluency

Because traditional standardized tests are not time efficient nor tied to the curriculum, they are only of limited help to classroom teachers. Criterion-referenced tests may be more useful. Such tests differ from most norm-referenced tests in that they specifically measure acquisition of specific skills (Shapiro, 2004). Since these tests measure individual performance on a set of academic skills and are not typically used for ranking, they do not require a norm group. Their results are more often considered important because they are anchored within a mastery-based orientation. That is, the results reveal content mastery, or not, of specific academic skills, which may be compared to superordinate academic goals. Often, criterion-referenced tests set predetermined criteria for mastery of a set of skills. Like standardized tests, these criterion-referenced tests also have limitations. For example, they are often characterized by little methodological sophistication, and little evidence to support the presumed relationship between specific skills assessed and the less sophisticated building blocks (of these skills). According to Shapiro (2004), because criterion-referenced tests measure only specific (and perhaps semi-independent) subsets of skills within a domain, they may not be sensitive to small amounts of growth in student performance. As a result, even though criterion-referenced tests make useful screeners for academic problems, they lack the sensitivity for progress monitoring over time.

The idea of monitoring instructional content to make informed and specific educational decisions is not a new concept. As early as 1977 Deno and Mirkin described a Data-Based

Program Modification (DBPM) model that stressed the importance of progress monitoring in order to make educational decisions for students receiving special education services. Within this model teachers used data generated from curriculum-based measurement (CBM) to make judgments about how to adjust instructional design for individual students with learning difficulties. CBM measures are typically developed after consideration of the following: a) What (goals) to measure; b) How to measure; and c) How to use the data (Fuchs, Fuchs, & Maxwell, 1988; Shinn 1989; Shinn, 1998). A particularly prized strength of CBM is its capability to measure the specific performance of individual students over time (Deno, 1985). CBM measurement can be evaluated because it often provides alternate forms that are amenable to the calculation of test-retest and alternate-forms reliability.

By implementing CBM procedures in schools, educators are able to measure student progress on a variety of constructs. Although CBM initially began as a way to monitor progress in reading, math, and written expression directly linked to the curriculum, in recent years it has been expanded to encompass specific academic content, but the content is not directly linked to a particular curriculum being used by a school (Fuchs & Deno, 1994). This allows for the standardization of CBM measures that may be used across schools and curriculums. Fuchs and Deno referred to this type of CBM as General Outcome Measurement (GOM). GOM lends itself to progress monitoring for RTI programs in schools. Currently, GOM measures are used extensively to assess reading progress within RTI models across the country, especially in relation to progress made at the end of the year.

Curriculum Based Assessment (CBA), a related descriptor, is also often referred to in the literature. CBA involves assessing student performance in the areas of reading, spelling, writing,

and math. CBA, like CBM, is designed to provide information about a student's progress in order to determine if intervention is needed (Gickling & Havertape, 1981; Shapiro & Lentz, 1986). Gickling's model of CBA relies on the premise that students' lack of achievement is based on environmental variables with the classroom (e.g. nature of instruction) rather than intrinsic student factors, and the teacher uses the data obtained from the assessments to alter instructional strategies or techniques, rather than specific progress monitoring (Gickling, 1985). Within CBA the assessments are often teacher-made or commercial tests that relate directly to the curriculum. Beginning with Fuchs and Fuchs (1986) and the description of standardization procedures and psychometric properties of CBM, the differences between CBA and CBM became more pronounced since CBA measures focus more directly on curricular content.

Integrating Standardized and Curriculum-Based Measurement with RTI

Both CBM and CBA can be used within the classroom to inform the RTI process. Although the National Reading Panel (NRP) identified five pillars critical to reading (phonological awareness, phonics, fluency, vocabulary, and comprehension; National Institute of Child Health and Human Development, 2000), assessment of phonics and fluency have most often been the focus of attention as experts have developed screening instruments within RTI models. Traditional reading assessments typically assess reading skills in a bottom-up manner beginning with letter-sound identification, phonics knowledge, and then fluency. Individual weaknesses in these areas are then identified and targeted for skill remediation. One of the most commonly used commercial assessments, the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), uses this procedure. Because DIBELS is a commonly used instrument within the RTI model in the United States, and because its development and use illustrates both

standardized and curriculum-based measurement elements, it is the focus of the following discussion.

The DIBELS assessment was widely used in schools across the United States as part of the Reading First initiative (Riedel, 2007). Unlike the TOSWRF and the TOCSRF, DIBELS administration is individualized and time-consuming. The oral reading fluency (ORF) subtest assesses reading fluency by measuring how fast a student reads a passage of connected text. Since the administration of this subtest requires oral reading, the examinee is not asked to make marks to delineate between connected text. With the ORF only the rate at which the student reads is measured with no emphasis on prosody. Pressley, Hilden, and Shankland (2005) asserted that DIBELS essentially only measures the speed at which the words are read with little attention given to whether or not the material is comprehended. In addition to the ORF subtest, DIBELS also contains subtests for phoneme segmentation fluency (PSF), nonsense word fluency (NWF), and retell fluency (RF). According to a study conducted by Riedel (2007), the ORF ($r=.67$) subtest was the most accurate predictor of reading comprehension as measured by the Terra Nova Reading normal curve equivalent scores at the end of first- and second-grades. DIBELS RF, which was created in part to be an indicator of comprehension, is a weaker predictor of comprehension than ORF alone, which may due to scoring subjectivity (Riedel, 2007; Samuels, 2007).

DIBELS ORF essentially measures only the student's reading rate (Pressley et al., 2005). If students exhibit weaknesses in fluency, further testing may be used to determine the effects of the deficits on comprehension, but the follow-up assessment is rare. Interventions are often simply targeted on increasing fluency with the assumption that if this area improves

comprehension will improve as well. Vocabulary and comprehension are inadequately assessed (Scanlon, 2011; Spear-Swerling, 2011). As part of school-wide response to intervention guidelines, students who may have no weaknesses in comprehension or any of the other areas essential for reading are routinely tested with screeners involving skills they have already mastered. Conversely, students who have difficulty with comprehension or vocabulary but who have little difficulty with phonics or fluency may be completely missed by fluency-only assessments. Despite these criticisms, research indicates that oral reading fluency is the best overall predictor of reading performance for the vast majority of students (Andren, 2011; Good et al., 2001; Hintze & Silbergitt, 2005; McGlinchey & Hixson, 2004; Stage & Jacobsen, 2001; Wiley & Deno, 2005).

Ignoring comprehension as part of a screening model for identifying reading difficulties creates a challenge for educators. Although the NRP recognizes that fluency is a powerful predictor of comprehension, the Panel also recognizes that comprehension is the ultimate goal of reading (National Institute of Child and Human Development, 2000). By using narrow screening measures that address only specific skill acquisition, educators run the risk of identifying students for remediation who do not really need it or miss others who do. Given the large amount of time and resources needed to administer the DIBELS and similar assessments, Allington (2009) questioned if this is this really the most effective use of time and money if the measure does not adequately assess comprehension.

Another assessment package that focuses on oral reading fluency and is widely used in RTI is AIMSweb©. AIMSweb© provides a maze measure for comprehension. The oral reading fluency task is similar to DIBELS in that it uses a one-min oral reading administration to

determine rate and accuracy. The maze task is administered separately from the oral reading fluency measure. With the maze task every seventh word in a graded narrative reading passage is omitted and replaced with three word choices. The reader must then identify the correct choice to complete the idea. Examinees are given three minutes to complete the maze task. Research indicates that the AIMSweb© Maze task has adequate predictive validity (Jenkins & Jewell, 1993; Shinn, Deno, & Espin, 2000). However, the AIMSweb© Maze procedure must be administered with the AIMSweb© ORF measure to give a complete picture of fluency and comprehension. The AIMSweb© ORF is individually administered and takes 1 min to give to a student. The AIMSweb© Maze task may be group-administered and takes 3 min to administer. Therefore, the total administration time is 4 min which does not include the time lost in having students leave class, sit down with an examiner, and then return to class. Additionally, neither test requires examinees to make meaningful connections between sentences and ideas as recommended by Fuchs (2004).

Christo, Davis, and Brock (2009) recommended a top-down method of reading assessment that begins with assessing comprehension first and then moving on to the other NRP areas. For instance, if comprehension (or vocabulary) was assessed and comprehension was found to be below expectations, fluency in text would then be assessed. If fluency was found to be age-appropriate the targeted intervention for improving comprehension would include a focus on comprehension strategies and vocabulary. However, if fluency was found to be below expectations, word reading skills would be assessed as well. Christo et al. proposed that word reading skill be measured in timed and untimed conditions. If age appropriate word reading skills exist, intervention would focus on text reading fluency. If word reading was found to

below expectations in untimed conditions, direct instruction in sound-symbol and word learning would be provided. Alternately, if word reading skills were found to be below expectations in timed conditions, intervention would focus primarily on practice and fluency.

With the assessment process outlined by Christo, et al. (2009), some of the problems presented by the bottom-up style of assessment are eliminated. Proficiency with bottom-up skills such as decoding and fluency will not automatically yield gains in reading comprehension, perhaps, in part, because other skills essential for reading comprehension such as reasoning and vocabulary have not improved (Cutting & Scarborough, 2006). For instance, by assessing comprehension and vocabulary skills as the first part of the process, students who are experiencing difficulty with reading comprehension due to language difficulties are identified. As a result, these students receive a more appropriate form of intervention that will later aid them with comprehension; on the other hand, if the intervention had only focused on fluency the true difficulties may have been misidentified and an inappropriate strategy applied. Secondly, this model recognizes that if students comprehend what they read, a straight comprehension intervention is probably not in their best interest. Finally, the model provides recommendations for interventions that address comprehension strategies and vocabulary.

Effective implementation of this and similar models requires effective and efficient reading measures for monitoring progress. It is important to note that CBM-type data and information from more traditional standardized academic and cognitive measures will likely be used within the RTI model at the end of the monitoring process for students who fail to respond to empirically-based intervention, and when eligibility for special education is under consideration. Currently available strategies are limited. That is, most rely on an individually

administered oral format and/or fail to provide a psychometrically sound operationalization of fluency and comprehension.

MAP: R Reading Assessment

Currently, there are few techniques that assess the extent to which students can make meaningful connections between sentences or complete ideas in a group format within the classroom. A newly developed instrument, the Monitoring Academic Progress: Reading (MAP: R; Bell, Hilton-Prillhart, McCallum, & Hopkins, 2009) addresses this need by assessing the ability to read connected text, and can also be administered silently, within a group setting. First-grade MAP: R probes provide students with strings of words with connected text. These probes were written at the end-of-grade difficulty level, and require students to mark between each word. MAP: R probes for students at the second-and-third grade levels provide students with short reading passages, with text in lower case font and without ending punctuation. Each passage is comprised of sentences arranged to create a coherent, meaningful paragraph, each containing 10 ideas. The examinee is asked to mark between complete ideas with a pencil. The difficulty level of the passages is targeted for end of grade performance, with a consistent level of difficulty maintained from passage to passage. The test is timed with the examinee given 3 min to read and mark as many passages as possible. Because the MAP: R is timed, it also provides a measure of fluency mediated by comprehension.

MAP: R addresses the gap in current reading fluency measurement. It is designed to assess comprehension and fluency in an efficient, group-administered format. The MAP: R provides an assessment of students' ability to make meaningful connections between sentences and ideas as recommended by Fuchs (2004). Since the MAP:R examines connections between

complete ideas it may provide a more powerful predictor of reading comprehension than most assessment measures currently being used in schools. Unless reading fluency measures assess reading comprehension instructional time may be lost in working on skills that have little relation to improving comprehension (Riedel, 2007). MAP: R follows the definition of reading fluency in the National Reading Panel report (National Institute of Child Health and Human Development, 2000) and assesses fluent word recognition and comprehension, which optimally occurs simultaneously.

Statement of the Problem

Currently there are few ecologically valid measures of reading that provide information regarding fluency *and* comprehension using a group-administered silent reading format. If comprehension is the ultimate goal of reading, the assessment of comprehension must be a cornerstone of any reading assessment program. The MAP: R is designed to efficiently assess fluency and comprehension. In order to use such a test, it is necessary to establish reliability and the validity. The purpose of this study is to establish the reliability and validity of the MAP: R. Specific research questions follow.

- 1) To what extent does the MAP: R assessment instrument exhibit alternate form reliability?
- 2) To what extent does the MAP: R assessment instrument exhibit test-retest reliability?
- 3) What is the concurrent validity of the MAP: R when compared to other measures such as the AIMSweb© Maze task and the STAR Reading Assessment?
- 4) What is the relative predictive power of the MAP: R and AIMSweb© Maze when the criterion is STAR Reading scores?

CHAPTER II

METHOD

Participants

Participants for this study included over 1,600 public school children within the eastern Tennessee area. The study was completed in a number of developmental phases, as described below, and the number of participants varied depending on the phase.

Instrument Development

Initial probe development. Prior to beginning the study, this author worked within a research group consisting of two university professors, with expertise in reading and test development, and two doctoral level School Psychology students, to produce MAP: R probes. This effort was informed by a team of specialists from the school district consisting of literacy leaders, special education personnel, curriculum specialists, and school psychologists. Meetings occurred to discuss assessment needs within the district and how to best design probes that would provide beneficial information as part of the RTI process. Feedback from these meetings informed probe development.

The initial probe design was based on an experimental version of an unpublished test, the Fluency and Comprehension Test: Silent (FACT: S; Bell and McCallum, 2008a). This 3-min subtest requires participants to read passages with connected text and mark between complete thoughts. This subtest was initially designed for use with older students but modified for early elementary students. Probes were developed to be consistent with end-of-year reading levels. For instance passages at the second grade level were written at the 2.9 grade level. The decision to target the end of grade reading level is based on the recommendation by the National Reading

Panel to assess information amenable to targeting for instruction skills, habits, and learning strategies required for successful progress to the next grade. By targeting end of grade performance, test data will inform development of student progress throughout the year (Fuchs et al., 1988; Shinn, 1989; Shinn 1998). In order to ensure content validity for each grade level words were taken from the corresponding Dolch Word Lists, curriculum lists provided for each grade level by the district, Qualitative Reading Inventory-IV word lists (QRI-IV; Leslie and Caldwell, 2006), and state approved curriculum texts. A combination of narrative and informational passages were used. Information for much of the informational text was based on the Tennessee Learning Standards for science and social studies for the second-and third-grades. Basing the informational text, in part, on the state science and social studies learning standards ensures that the students had approximately the same background context. The basic development of the probes is consistent with a CBM model, can be scored objectively, and is amenable to creation of system-wide and school-wide norming.

Text readability. This type of measure typically requires that text be controlled and reflective of the child's grade placement for comparison purposes. Consistent with the recommendation that text readability should address the frequency of words that are highly decodable as well as those that are not easily decoded, the Spache readability formula was selected to reflect text difficulty (Heibert, 2000). The decision to use Spache was also based on a technical analysis conducted by Good et al. (2001) who characterized it as a reliable formula for children's text written at the second-grade level. The Spache formula is a vocabulary-based measure, and along with the Dale-Chall and Fry formulas is the most widely used in constructing CBA readability estimates (Shapiro, 2004). Since vocabulary strongly impacts the readability of

text (Klare, 1984) and lack of vocabulary can lead to school failure for disadvantaged students (Becker, 1977), emphasizing vocabulary when determining readability for CBA is crucial. The Spache formula is appropriate for text that is written below the fourth grade level and is based on average sentence length and the percentage of unknown words. Unknown words are basically those that are not high frequency sight words for Grade 3 and below and also those words that cannot be easily decoded such as “pierce” or “mountain.” Easily decodable words such as consonant-vowel-consonant combinations are included on the list of known words. This readability format aligns with the recommendation made by (Hiebert, 2000) that highly decodable words should be treated differently from more difficult words when determining text readability (Hiebert, 2002).

The Spache readability score is calculated using the following formula: Spache Index/Grade Level = $(0.141 \times \text{Average Sentence Length}) + (0.086 \times \text{Percent of Difficult Words}) + 0.839$. Average Sentence Length (ASL) is determined by counting the total number of words in the passage and dividing by the number of sentences. Passage length of 100 – 150 words is recommended for the best results. Percent of Difficult Words is calculated by counting the number of words in the passage that are not found on the Spache Revised Word List (see Appendix A) of known words, dividing the number of difficult or unknown words by the total number of words in the passage, and then multiplying by 100 (Spache, 1981). When constructing passages, difficulty was adjusted by adding words not listed on the Spache word list, one at a time, to increase the difficulty level of the passage. When a passage was too difficult the sentence length was shortened and words not on the Spache Revised word list were removed. This is similar to the procedure used by Good et al. (2002b) to create readability for

the DIBELS Oral Reading Fluency Passages. Additionally, the decision was made to use both narrative and informational text similar to the format students encounter in the classroom setting. In order to control for lack of background knowledge, the informational passages were constructed using science and social studies vocabulary words from the second- and third-grade curriculums. The decision to use both narrative and informational texts differs from other tests currently in use such as AIMSweb© Maze.

Since the Spache readability formula is not recommended for texts approximating the 4.0 grade level, the Dale-Chall method (Chall & Dale, 1995) was used in conjunction with Spache to check readability for the third grade passages which were written at the 3.9 readability level. Developed by Edgar Dale and Jean Chall, the Dale-Chall readability formula is calculated in a manner that closely resembles Spache. The Dale-Chall formula compares a list of 3,000 Familiar Words against average sentence length (Dreyer, 1984) and is also a vocabulary-based readability measure. The Dale-Chall formula is calculated by using the following formula: Dale-Chall readability = $(0.1579 \times \text{Percentage of Difficult Words}) + 0.0496 \times \text{Average Sentence Length}$ + 3.635. As with the Spache readability formula, passage length of 100 – 150 words is recommended for the best results. Percent of Difficult Words is calculated by counting the number of words in the passage that are not found on the Spache Revised Word List of known words, dividing the number of difficult or unknown words by the total number of words in the passage and then multiplying by 100. Average sentence length is calculated by dividing the number of words by the number of sentences.

When constructing passages, difficulty was adjusted by adding words that were not listed on the Dale-Chall Familiar Word List (see Appendix B), one at a time, to increase the level of

difficulty of the passage. When a passage was too difficult the sentence length was shortened and words not on the Dale-Chall Familiar Word List were removed. This procedure is similar to the one used by Good et al. (2002b).

Pre-pilot tryout phase. MAP: R was initially administered to a small sample of students, including six female and three male students. Four of the participants were first-grade students, two were second-grade students, and three were third-grade students. The probes were adjusted for kindergarten and first-grade levels. A rebus format was used for the kindergarten and beginning first-grade probes requiring students to match a picture in a passage with one of two word choices. Choices were mixed in order to provide feedback regarding whether students were having difficulty with beginning, middle, or ending phoneme identification. At the mid-first grade level passages with connected text were developed using the rebus format. Connected text using short passages without rebus were written at the 1.9 grade level for the end of first grade, at the 2.9 level for second-grade, and the 3.9 level for third-grade.

The results of the tryout indicated that this procedure provided an appropriate format for the second- and third-grade probes. At this level students seemed to have little difficulty understanding the concept of complete ideas. However, some problems were noted. Although most second-graders appeared to understand the concept of marking between words, error analysis revealed that they struggled with compound sentences. This is understandable since many second-graders are often taught to recognize compound sentences as two ideas linked together, and do not yet have the reading sophistication to link separate but related ideas together as a single idea. As a result the decision was made to restrict compound sentences as well as prepositional phrases in the second-grade and third-grade probes.

Pilot phase 1. After revision based on pre-pilot tryout results, Pilot Phase 1 Probes were given to 181 students in grades 1-3 attending two different elementary schools in the same school system. The schools selected for participation were representative of the student demographics for the system according to school personnel. Participating students included 37 first-grade students, 59 second-grade students, and 55 third-grade students.

The probe administration was conducted by one of the research team members and was observed by a literacy leader (e.g. person primarily responsible for literacy-related activities within the school) and the classroom teacher for each class. Prior to the probe administration students were given directions on how to mark the probes (see Appendix F). At this time opportunities were given for questions, as well as for guided and independent practice. This practice was conducted in order to ensure that students understood task demands prior to taking the actual probe. All directions were scripted (see Appendix F). The administration was untimed in an attempt to determine the length of time students needed to complete the activity.

The first grade probe set (see Appendix C) consisted of 15 items using a rebus format with connected text, with a font size of 14, using Times New Roman script. Boxes were placed around each passage to assist students with differentiating between individual passages. A word count number was enclosed at the end of each passage to assist teachers with calculating the number of words read. Students were instructed to mark between each individual idea in the passage. Preliminary feedback indicated that students completed the probes during a range of time from 4 to 8 min.

The second- and third-grade probes (see Appendix C) consisted of six reading passages each. The passages contained no punctuation and once again students were instructed to mark in

between each individual idea in the passage. The font size used was 14-point and the script was Times New Roman.

According to teacher report after administration, the first-grade probes relying on the rebus format and directions to mark between ideas was much too difficult for first-grade students. This report was supported by data analysis, which yielded a mean of 49.54 out of a possible score of 159, a standard deviation of 33.43, and a standard error of the mean (SEM) of 5.50 (see Table 1), indicating recognition of 31% of the words. The high variability of scores was due perhaps to the wide range of student reading skills within the sample. Pinnell et al. (1995) found that comprehension is directly linked to speed of word recognition. Because first-grade instruction is designed to help students master high-frequency sight-words and learning decoding skills, many students cannot read and simultaneously identify ideas in context. Based on teacher feedback and a review of other reading assessments for young children the decision was made to change this format to marking between words in connected text. This format exposes students to connected text but only requires them to recognize basic words in the connected text.

Data analysis for second grade resulted in a mean of 105.46 out of a possible 403 points, standard deviation of 63.39, and a standard error of the mean of 8.25, indicating recognition of 26% of the words. Data analysis for third-grade revealed a mean score of 118.42 out of a possible 443 points, standard deviation of 71.90, and a standard error of the mean of 9.69, indicating recognition of 27% of the words. Analysis of these results (see Table 1) indicated that using compound sentences for second-and-third graders made identification of individual ideas too difficult. The variability in scores was probably due to the wide range in skill level.

Participants were in the beginning part of their second-and-third grade years, but assessments targeted end-of-the-year reading levels. Teachers reported that the format used for second-and third-grade students was appropriate other than the use of compound sentences and prepositional phrases (at the beginning and end of ideas) for both grade levels for the next administration.

Pilot phase 2. Following revision, Pilot Phase 2 Probes were given to 153 students in grades 1-3 attending two different elementary schools in the same system (see Table 2). The schools that were selected for participation were the same schools that were used for the Pilot Phase 1 Study.

The probe administration was conducted by one of the research team members and was observed by a literacy leader and the classroom teacher for each class. Prior to the probe administration students were given scripted directions (see Appendix D). At this time opportunities were given for questions, as well as for guided and independent practice. This practice was conducted in order to ensure that students understood task demands prior to taking the actual probe. Participants were allowed three minutes to complete the practice exercise and three minutes to complete the actual probes.

Probes were administered to both grade-level participants and students one grade level higher in order to compare performance and to ensure appropriate difficulty level. This was the first administration of the modified first grade probes. The first grade probes consisted of strings of connected text with equal 5 point spacing between all letters. A group of first grade students were administered probes originally designed for kindergarten, a second group of first graders were administered probes designed for beginning first grade (1.4 grade level), a group of second grade students were administered first grade passages at the 1.9 grade level; another class of

second grade students were given second grade probes, a group of third grade students were given third grade probes, and a group of fourth grade students were given third grade probes. Students in the first grade group given the 1.4 grade level passages were instructed to mark between words, which was a dramatic departure from the rebus format used in the Pilot Phase 1 study. Teacher feedback suggested that they were pleased with this change and had more confidence in the results. The revised first-grade probes used 14 point font and Times-New Roman font, with serifs in the print. Serif font makes differentiating between letters and numbers easier (e.g. I and 1). The first grade probe contained 11 individual passages with 107 words total for all passages combined.

First-graders taking the kindergarten probes produced a mean of 13.45 out of a total of 30 for words read, and a standard deviation of 1.21 indicating that the first-grade group recognized out about 45% of the words designed for kindergartners. Beginning first-graders (the 1.4 grade level) produced a mean of 25.80 out of a possible score of 183, and a standard deviation of 22.62, indicating recognition of about 14% of the words. Second-graders taking the 1.9 grade level probe yielded a mean of 52.24 out of a possible score of 183 and a standard deviation of 21.73, indicating recognition of approximately 29% of the words. Second-grade students taking the second-grade probes at the 2.9 grade level yielded a mean of 138.88 out of a possible 247, with a standard deviation of 61.55, indicating recognition of about 56% of the words and a more appropriate format for second-grade. The third-grade probes administered to the third-graders resulted in a mean of 185.29 out of a possible score of 312, with a standard deviation of 12.79, indicating recognition of about 59% of the words and suggesting an appropriate level of difficulty. The third-grade probes administered to fourth-grade students yielded a mean of

218.16 out of a possible score of 312, with a standard deviation of 9.24, indicating recognition of 70% of the words. Because the 1.9 grade level probes yielded weak results at the second grade level, efforts were made to ensure sure complex sentence structure was eliminated. No changes were made to the third-grade probes, although the editing process attempted to eliminate compound sentences and prepositional phrases as much as possible. Both the second-and-third grade probes used a 14 point Times New Roman font. Both the second-and-third grade probes contained four individual passages (see Appendix D).

Pilot phase 3. Pilot 3 was administered to 114 first-grade students, 99 second-grade students, and 122 third-grade students enrolled at all eight elementary schools in the district (see Table 3).

Classroom teachers using scripted directions conducted the administration. They received training from literacy leaders who had been trained by the researchers. An administration checklist was also provided for teachers to ensure fidelity. Literacy leaders conducted fidelity checks using the checklists to ensure teachers understood proper administration procedures. Prior to the probe administration students were given directions on how to mark the probes (see Appendix D). At this time opportunities were provided for questions, as well as for guided and independent practice. This practice was conducted in order to ensure that students understood task demands prior to taking the actual probe. All scripted directions were read to students prior to the probe administration (see Appendix D). Students were allowed three minutes to complete the practice exercise and three minutes to complete the actual probes.

Data analyses indicated that the mean for the first grade probe was 41.38 out of a possible score of 107 with a standard deviation of 27.31, indicating recognition of 39% of the words. The standard error of the mean for this probe set was .88. This was an improvement over the results for the first grade probes in Pilot Phase 1, and resulted in less variability. The second-grade probes yielded a mean of 176.22 out of a possible score of 247, a standard deviation of 69.48, and a standard error of the mean of 2.24, indicating recognition of 71% of the words. The third-grade probes yielded a mean of 226.99 out of a possible score of 312 with a standard deviation of 83.34, indicating recognition of 73% of the words. The standard error of the mean was 2.84.

The information gained from Pilot Phase 3 helped determine the length for each grade level probe. In addition, appropriate probe length was informed by data from the Harris-Sipay model (1990) which takes both oral and silent reading fluency into consideration when determining average reading fluency rates for students at various grade levels. According to Harris-Sipay data average students at the end of Grade 1 read between 60-90 words per minute, average students at the end of second grade read between 85-125 words per minute, and average students at the end of third grade read between 115-140 words per minute. Therefore, word limits for each grade level passage were based on the higher end of these ranges and multiplied by three to ensure that students would not finish before the end of the three-minute time limit.

Final development phase. The participating school district is located in a rural area of northeastern Tennessee. The school district contains eight elementary schools who participated in the study. A total of 1688 examinees in grades 1-3 took 11 probe administrations of the MAP: R. 538 first-grade students, 567 second-grade students, and 583 third-grade students participated. The examinees included 895 (54%) males and 749 (46%) females. There were 1546 (94%)

White, 69 (4%) African-American, 6 (<1%) Asian Pacific Islander, 18 (1%) Hispanic, and 2 (<1%) Native American/Alaskan participants (see Table 4). 56.4% of the students in the district qualify for free or reduced lunch. Prior to beginning the study, permission was obtained from the school district superintendent and the University of Tennessee Institutional Review Board.

Training. Literacy leaders were provided additional training on test administration and scoring. Literacy leaders were then responsible for training teachers in grades 1 through 3 how to administer and score the probes. The literacy leaders and teachers were provided with step-by-step, scripted administration directions along with sequential, detailed scoring instructions. An administration checklist was also provided for teachers to ensure fidelity. Literacy leaders were encouraged to conduct fidelity checks using the checklists to ensure teachers understood proper administration procedures. Prior to the probe administration students were given directions on how to mark the probes (see Appendix F). Opportunities were provided for questions, as well as for guided and independent practice. This practice was conducted in order to ensure that students understood task demands prior to taking the actual probe. All directions were scripted and read to students prior to the probe administration (see Appendix F). Students were allowed 3 min to complete the practice exercise and 3 min to complete the actual probes.

Materials. All probe materials were made available to the literacy leaders who were responsible for conveying materials to teachers. The decision was made to administer probes every other Wednesday; probe directions, probes, and scoring templates for each grade level were loaded onto a website (www.monitoringacademicprogress.com), designed for this project, on the preceding Friday. All literacy leaders had access to this website. Once probes were administered and scored, the scores were then entered into a centralized database developed by

the participating school district. Probe administration occurred bi-weekly from the first universal screening in November until the end of the school year in May. We developed 10 different probe sets for each grade level.

Administration. MAP: R probes were administered to students in grades one through three in a group format within their regular classrooms. The classroom teacher was responsible for the probe administration. For the three administrations the teacher provided opportunities for practice by reading the scripted practice exercises in order to familiarize students with the testing format. During this time teachers were instructed to provide further explanation or assistance for students who asked.

After completing the practice exercise, practice sheets were collected and the MAP: R probes were distributed to students. Upon receiving the probe students were instructed to write their first name, last name, and the date in the spaces provided on the first page of the probe. Next teachers read the scripted directions. Although teachers were instructed to provide additional explanation and to identify students who appeared to experience confusion with following directions, they were informed that no assistance could be given during the actual probe administration. At the end of three minutes, teachers instructed students to stop working and collected the MAP: R probes. This procedure was followed for easy and consistent probe administration throughout the year.

Scoring. Because the format of MAP: R for first-grade is different from the format for second- and third-grades, different scoring systems were created. For first-grade, the number of words read minus the number of omissions (missing slashes) and commissions (slashes in the wrong place) resulted in the total score (see Appendix F for detailed scoring directions for each

grade). Initially, the same format was used for second-and third-grades . However, older students frequently marked at the end of the passage, indicating that they had read the entire passage even though they had not. This resulted in high scores based on the number of words read even if very little was comprehended. For this reason, a different scoring system was devised which used the percentage of correct ideas times the number of words read, as indicated by the last slash used to define an “idea.” Switching to this format eliminated falsely inflated scores by weighting comprehension more heavily. As a result, a student could make slashes indicating that he/she had read a high number of words; however, if he/she did not comprehend anything that was read, the student’s score would be zero. This scoring scheme takes both comprehension and rate into consideration.

AIMSweb© Maze administration and descriptors. The AIMSweb© Maze passages are standardized and may be individually or group-administered in three minutes. The maze passages are designed for use with students in grade 1 through grade 8. The maze procedure requires that every seventh word be replaced and the student selects the correct word from a group of three word choices. The AIMSweb© Maze assessment is often used to monitor reading comprehension. Shinn et al. (2000) researchers found that AIMSweb© Maze is sufficiently valid, reliable, and sensitive for monitoring student growth. According to the AIMSweb© manual, alternate forms reliability for the AIMSweb© Maze measure is strong at .80 (Shinn et. al, 2000). Criterion-validity with the AIMSweb© Oral Reading Fluency (ORF) measure ranges from .77 to .86 (Espin, Deno, Maruyama, & Cohen, 1989). The same passages that are used for AIMSweb© ORF are also used for AIMSweb© Maze. According to the National Center for Student Progress Monitoring, criterion validity was also established for AIMSweb© Maze using

the Comprehensive Reading Assessment Battery and the Stanford Achievement Test: Comprehension. Correlations between AIMSweb© Maze and the Comprehensive Reading Assessment Battery: Words Read Correctly was .83, correlations with AIMSweb© Maze and the Comprehensive Reading Assessment Battery: Correct Questions was .76, and the correlations between AIMSweb© Maze and the Stanford Achievement Test: Comprehension was .79 (National Center for Student Progress Monitoring, 2011).

The AIMSweb© Maze measure was administered to obtain concurrent validity data with MAP: R. The AIMSweb© Maze measure was administered three times in a counterbalanced format with the MAP: R. One class per grade per school from each of the eight elementary schools was selected as a representative sample. Literacy leaders were provided with scripted administration directions and students were given three minutes to complete the task. Scores were prorated, consistent with publisher guidelines, for students who finished before three minutes elapsed.

A school employee assigned to maintaining data entry in the database created for this project was responsible for scoring the AIMSweb© Maze measure. She was given step-by-step scoring directions published as part of the AIMSweb© package.

STAR administration and descriptors. The STAR Reading Assessment (Renaissance Learning Systems, 1997) is a standardized, norm-referenced, computerized reading test that is designed for use with students in first-grade and above. The test is only taken on a computer and may be individually or group-administered during 10 minutes. The test yields scores based on answers to items by the computer. The examinee is presented with a brief passage and asked to identify a missing word from four choices. Each passage has only one missing word which

distinguishes it from traditional maze procedures. Additionally, the examinee is expected to answer questions about an authentic reading passage for the last five items for grades 3 and above. The test manual reports that STAR measures reading comprehension and overall reading ability. The computerized program automatically adjusts to the student's estimated performance level based on the student's answers to previous responses. Percentile ranks, normal curve equivalents (NCE), and grade equivalents are generated to measure general reading. According to studies reported in the STAR reading manual, overall test-retest reliability for STAR Reading is .94 with reliabilities ranging by grade from .85 to .95. Test-retest reliability was established following an interval of seven days. Split-half reliability ranges from .89 to .93. The STAR Reading manual also reports a strong correlation of .74 with the Iowa Test of Basic Skills and a strong correlation of .69 with the Stanford Achievement Test, Ninth Edition (Topping, Samuels, & Paul, 2007). Students in second-and third-grades took the STAR test at the beginning and end of the school year.

Data analysis. Using the information gained from the various pilot studies, probe sets were created for progress monitoring; selected probe sets were used for various data analyses. Initially, descriptive data were calculated (e.g., means, standard deviations, SEMs). Pearson Product Moment Correlations were calculated to determine alternate-form reliability for US1-P10 and test-retest reliability for MAP: R and AIMSweb© Maze. Pearson Product Moment Correlation coefficients were also used to determine concurrent validity using MAP: R and AIMSweb© Maze and using MAP: R and STAR. Finally, predictive validity was examined using a step-wise multiple regression to determine the relative predictive power of MAP: R and

AIMSweb© Maze with STAR scores as the criterion. Each research question is addressed and the relevant data are presented.

CHAPTER III

RESULTS

In order to examine the reliability and validity of the Monitoring Academic Performance-Reading (MAP:R; Bell et al., 2010), data were analyzed for a universal screener and 10 probes given to both general and special education students in grades 1-3. Multiple administrations yielded reliability data; two additional measures, the AIMSweb© Maze task and the STAR reading test also were administered to determine concurrent and predictive validity. Descriptive statistics for the universal screener and probes 1-10 are displayed in Table 5.

Reliability of the MAP: R

In order to assess the alternate-form reliabilities of the MAP: R, Pearson product-moment correlation coefficients were calculated for US1-P10 probes for grades one through three. According to Garson (2005) reliability indices should be .70 and above; others experts characterize the strength of correlations coefficients be more molecularly described. For example, Sattler (2008) recommends that the strength of correlations be described in the following manner: .20 to .29 = low; .30 to .49 = moderately low; .50 to .69 = moderate; .70 to .79 = moderately high; .80 to .99 = high. Correlation coefficients for the first-grade MAP: R probes yielded an overall average alternate-form reliability of .79, indicating moderately high stability between probes. Alternate-form correlations for US1-P10 probes for first-grade ranged from .66 to .88. Second-grade overall average MAP: R alternate-form reliability was .78, which is comparable to first-grade and also suggests moderately high stability. Correlation coefficients for US1-P10 probes for second-grade ranged from .63 to .85. Similarly, correlation coefficients between third-grade probes resulted in an overall alternate-form reliability of .75 indicating a

moderately high degree of stability. Correlations coefficients for third-grade ranged from .66 to .83.

When correlations between adjacent probes for MAP: R were calculated, correlations were found to be higher. First-grade average reliability between adjacent probes was .82, second-grade average reliability between adjacent probes was .82, and third-grade reliability between adjacent probes was .78.

Overall alternate-form reliability from first-grade AIMSweb© Maze probes was .74 (see Table 6). Correlation coefficients for first-grade AIMSweb© probes across three administrations ranged from .66 to .80. Second-grade alternate-form reliability for AIMSweb© Maze yielded results similar to first-grade, with an overall correlation coefficient of .73. Correlation coefficients for second-grade AIMSweb© Maze across all forms ranged from .70 to .78. Third-grade overall alternate-form reliability for AIMSweb© Maze was also comparable to first-and second-grades with an alternate-form reliability of .71. Correlation coefficients for AIMSweb Maze third-grade probes ranged from .67 to .76 across the three administrations.

Overall alternate-form reliabilities for MAP: R grades 1-3 indicate moderately high stability. Alternate-form reliabilities for AIMSweb© Maze were also moderately high for grades 1-3, ranging from .66 to .80. Overall alternate-form reliabilities for AIMSweb© Maze for each grade were slightly lower than the obtained alternate-form reliabilities for MAP: R (first-grade: MAP: R = .79, AIMSweb© Maze = .74; second-grade: MAP: R = .78; AIMSweb© Maze = .73; third grade: MAP: R = .75, AIMSweb© Maze = .71).

Pearson product moment correlations were calculated to determine the test-retest reliability of MAP: R. P10 was administered twice within a 24 hour period to 75 first-grade

students, 65 second-grade students, and 91 third-grade students at a single elementary school. Test-retest coefficients are provided in Table 7, by grade. Test-retest reliability was .90 at the first-grade level, .84 at the second-grade level, and .89 at the third-grade level, indicating a high degree of stability between correlation coefficients. These values indicate strong stability of MAP: R.

Validity of the MAP: R

Correlation coefficients for MAP: R and AIMSweb© Maze probes given on the same day, to the same students, in a counterbalanced format, were used to obtain concurrent validity results. Results for concurrent validity for MAP: R and AIMSweb© Maze range from .43 to .69 (see Table 8). Concurrent administrations of MAP: R Probe 6 and AIMSweb© Maze Administration 1 for first-grade ($n=111$) yielded a moderate correlation coefficient of .69, for second-grade ($n=124$) a moderate correlation coefficient of .54, and for third-grade ($n=132$) a moderate correlation coefficient of .55. Concurrent administrations of MAP: R Probe 8 and AIMSweb© Maze Administration 2 yielded a moderate correlation coefficient of .63 for first-grade ($n= 117$), a moderate correlation coefficient of .61 for second-grade ($n=124$), and a moderate correlation coefficient of .55 for third-grade ($n= 138$). Finally, concurrent administrations of MAP: R Probe 10 and AIMSweb© Maze Administration 3 resulted in a moderate correlation coefficient of .52 for first-grade ($n= 96$), a moderate correlation coefficient for second-grade of .62 ($n=112$), and a moderately low correlation coefficient of .43 for third-grade ($n= 115$).

The amount of shared variance between two variables can be reflected via calculation of coefficients of determination (r^2). The r^2 s were calculated between concurrent administrations of

the MAP: R and AIMSweb© Maze probes. This value is often used to further define the strength of the relationship between two variables (Huck & Cormier, 1996). For first grade, the amount of variance shared between MAP: R and AIMSweb© Maze ranged from .29 to .48. Shared variance between the MAP: R and AIMSweb© Maze for second-grade ranged from .30 to .40. Finally, shared variance between MAP: R and AIMSweb© Maze for third-grade ranged from .18 to .38.

Concurrent validity was also examined for MAP: R and STAR. MAP: R Probe 9 and the STAR test were administered within a two-week period of time. Counterbalanced administrations of MAP: R Probe 9 and STAR for first grade ($n=91$) yielded a correlation coefficient of .48 indicating moderately low relationships using Sattler's descriptors (Sattler, 2008). Concurrent administration of MAP: R Probe 9 and STAR for second grade ($n= 77$) yielded a correlation coefficient of .58 indicating a moderate relationship. Finally, concurrent administration of MAP: R Probe 9 and STAR for third grade ($n=125$) resulted in a correlation coefficient of .67, indicating a moderate relationship. .

In order to determine how well MAP: R agrees with other reading measures currently used in instructional environment, MAP: R results and AIMSweb© Maze results were compared to determine which measure best predicted end-of-the-year STAR scores. Equations used to determine predictive validity using a step-wise regression requiring certain assumptions be met (e.g. normality, multi-collinearity) were used to compare MAP: R Probe 6 and AIMSweb© Maze Administration 1 to end of the year STAR scores.

Results of the stepwise regression analyses show that the MAP: R scores predicted 37% ($R^2= .37$) of the variance in end-of-year STAR scores and the AIMSweb© Maze measures failed

to add additional predictive variance. AIMSweb© Maze Administration 1 scores were removed from the equation because they did not contribute significantly to the prediction of end-of-the-year STAR scores (beyond the predictive capability of the MAP: R Probe 6).

CHAPTER IV

DISCUSSION

In 2000 the National Reading Panel emphasized the importance of reading fluency in determining meaning from print. Oral reading fluency is a strong overall predictor of comprehension reading success for most students (Deno et al., 1982; Hamilton et al., 2003; Hintze, et al., 2002; Shapiro et al., 2004). Consequently, many current screening measures in the RTI process rely on reading fluency measures as predictors of comprehension. However difficulties with comprehension in some groups of students, such as those who are English Language Learners and those with strong word calling skills but weak language/vocabulary skills (e.g., students who have Asperger's syndrome) may be missed using oral reading only as a predictor of overall reading ability (Carlo et al., 2004; Grigorenko, et al., 2002; Nakamoto et al., 2007; Proctor et al., 2005). Consequently, some experts (e.g. Fuchs, 2004) recommend measuring the ability of students to make meaningful connections between ideas when reading. This definition of fluency also embeds a comprehension element. Its utility is supported by Rasinski (1994) who defined fluent readers as those who are able to break strings of text into meaningful units or phrases. In part, because of the potential value of this operationalization of reading MAP: R was developed. In addition, MAP: R was developed to address other limitations of currently available measures. For example, unlike other techniques which require fluency and comprehension to be assessed separately, such as AIMSweb© Maze and DIBELS, MAP: R allows a single, brief, silent, group administration format. Consequently, MAP: R should be a more efficient screener. The purpose of this study is to examine the reliability and utility of this novel measure.

As recommended by the National Reading Panel (2000), data are needed to support the use of any novel, experimental instrument that might be used as part of a comprehensive RTI assessment model. Results from the current study show relatively strong promise for the MAP: R as a reading screener for children in grades 1-3. Because MAP:R provides information on fluency as well as information on how well a student comprehends text, it has potential to identify at risk readers who struggle along the continuum of reading skills. More specifically, it may help identify groups of students, such as English Language Learners, students with weak language/vocabulary (due to a myriad of reasons including limited background experiences and language-related disabilities) who may be missed with traditional oral language-based assessment. Since MAP: R incorporates science and social studies vocabulary from the curriculum, it should address the needs of student who respond well to basic reading instruction but struggle with comprehension due to limited vocabulary/background knowledge (Chall, 1986).

Another possible benefit of MAP: R is its sensitivity to both rate and comprehension. The MAP: R takes both rate and comprehension into consideration by examining omissions and commissions in relation to words read at the first-grade level, and by considering the percentage of ideas correct times word read for second- and third-grades. Therefore, the MAP: R provides a rough measure of fluency moderated by comprehension (Bell et al., 2011). As previously mentioned this type of format has the potential to more fully assess diverse groups of students such as ELL and hyperlexic readers, but may also be of benefit in a top-down model of reading assessment. By examining comprehension, MAP: R could fit into the model described by Christo et al. (2009) which recommends beginning assessment with comprehension, then

fluency, then working down toward identification of deficits with basic reading skills. Thus, students who comprehend, which is the ultimate goal of reading, are not mistakenly identified for remediation in fluency or basic reading skills. Additionally, the group-administered, silent format provides this information in an ecologically friendly manner for teachers. Even though initial reliability and validity data are promising, as indicated below, some limitations exist, and additional research on the reliability and validity of this instrument are needed.

Reliability

Alternate-form reliabilities were calculated for grades 1-3 for all probes (US1-P10). Alternate-form reliabilities for grades 1-3 were greater than .70 indicating moderately high stability, and are consistent with the recommended minimum by Garson (2005). However, the alternate-form reliabilities fall short of the .80 recommended by other experts (e.g., Sattler, 2008). Interestingly, alternate-form reliabilities improved from probes 5-10. This may be attributed to decreased scoring error over time. The scoring instructions and procedures were reviewed and clarified mid-year; further, school personnel likely became more proficient with scoring over time. Additionally, the MAP: R was administered throughout the school year resulting in a long span of time for data collection which could also contribute to the difference in correlations between probes administered at the beginning of the year and those administered later in the year. In fact, when the average coefficients were calculated for adjacent probes, the magnitude increased (first-grade average $r = .82$, second-grade average $r = .82$, and third-grade average $r = .78$). This may be due, in part, to less error associated with assessment based on longer times between probe administrations, as well the possibility that more intervention occurred between earlier and later and probe administrations, with differential intervention

effects. Of note, these reliabilities are comparable to other measures employing a similar administration format or to assessment strategies that aim to provide similar information. The format of the first grade probes is similar to the format of the Test of Silent Contextual Reading Fluency (TOSCRF). Average alternate-form reliability for children age 7 (the average age of a child in first-grade) on the TOSCRF was .82. Similarly, the average alternate-form reliability of CBM maze tasks was .81 when given to second-grade students over a one- to three- month interval (Shinn et al., 2000). Thus MAP: R appears to have comparable average alternate-reliability to both the TOSCRF and CBM maze tasks.

Test-retest reliability for MAP: R indicated a high degree of stability for grades 1-3 (first-grade=.90, second-grade=.84, third-grade=.89). Correlations for grades 1-3 met or exceeded the .80 standard established by some experts for psychometric testing (Sattler, 2008). Test-retest for grades 1-3 was conducted within a 24 to 48 hour time period. Since test-retest numbers tend to be higher for shorter time intervals, future studies may focus on slightly longer periods of time between administrations to determine how robust this finding is for more extended test intervals. Again, these findings are similar to those from other similar instruments. For example, test-retest reliability for elementary children taking the TOSCRF was .87 using a two week test-retest interval, as reported in the manual. Test-retest reliability for CBM maze task was .81 (range=.69 to .91) for second-grade students taking the measure over a one- to three-month period (Shinn et al., 2000). Overall alternate-form reliabilities for the maze task were .83 with a 1-month interval between testing, .80 with a 2-month interval, and .80 with a 3-month interval. Overall, the test-retest reliability of MAP: R is similar to alternate-form reliabilities for the TOSCRF and CBM maze task, which are commonly used by for screening purposes.

Overall, these reliability results for the MAP: R are promising; moderately high alternate-form reliabilities and high test-retest reliabilities were obtained. Additionally, the alternate-form and test-retest reliabilities are similar to other measures such as the TOSCRF and CBM Maze task. These data support use of the MAP: R for screening and, in the main, are consistent with best practice recommendations.

Validity

When a new test is developed it is tradition to compare it to other, more established measures. Consequently, concurrent validity indices for MAP: R and AIMSweb© Maze were obtained. These data show moderate relationships ranging from .43 to .69. Overall correlations for MAP: R and AIMSweb © Maze were .61 for first-grade, .59 for second-grade, and .51 for third-grade. Since both MAP: R and AIMSweb © Maze measure comprehension, albeit in different formats, a moderate relationship between these measures supports construct validity for MAP: R. Similarly, concurrent validity for MAP: R and STAR indicated a moderate relationship for grades 2-3. These values are surprising, given that the formats are different. Method variance has been shown to inflate relationships between and among operationalizations of constructs (Coward & McCallum, 1988). Of note, the indices from the first grade administration yielded a slightly lower relationship between MAP: R and STAR ($r = .48$). This may be in part due to the different format *and* content for first-grade students, relative to the format/content assessed from second-and third-grade students. That is, first-grade students are required to mark between words in context, not ideas, and performance may be less impacted by comprehension for these students. So, they do not share method or trait, at least to the same degree as the older students. Consequently, a better test of the validity of these first-grade probes may require that

they be compared to the TOSWRF or TOSCRF; both of these instruments use formats similar to the first-grade MAP: R probes.

Predictive validity was determined for grades 2-3 by using end-of-the-year STAR scores as a criterion and MAP: R and AIMSweb© Maze as predictors in the context of a stepwise regression analysis. Of the two, MAP: R was the strongest predictor, and the AIMSweb© Maze Administration 1 scores did not add any additional predictive capability for end-of-the-year STAR scores. MAP: R scores predicted 37% of the variance in the STAR scores. This result was interesting given that AIMSweb© Maze and STAR are more similar in format. However, these results may not be anomalous; other studies also point to limitations of the predictive validity of maze. Andren (2010) found that AIMSweb © Maze alone was a weaker predictor of end-of-year standardized assessments than AIMSweb© Oral Reading Fluency or AIMSweb Oral Reading Fluency and AIMSweb© Maze combined. This study used the Measures of Academic Progress (MAP) and New England Common Assessment Program (NECAP) as the criterion and AIMSweb© Oral Reading Fluency and AIMSweb© Maze as independent variables. For context, the MAP measures word recognition and decoding, literal comprehension, interpretive comprehension, and evaluative comprehension (Northwest Evaluation Association, 2009), and the NECAP assesses overall reading achievement (New England Common Assessment Program, 2010). Similarly, Merino and Beckman (2010) found that AIMSweb© Maze was not a significant predictor of end-of-the-year MAP scores. Finally, Wiley and Deno (2005) found that maze was not a significant predictor for the performance of English Language Learners on a state standardized assessment. In each of these studies, oral reading fluency was found to be a better predictor. To further determine the predictive value of MAP: R, future researchers may

compare measures of oral reading fluency and MAP: R to end-of-the-year STAR scores or state standardized assessments.

Overall, these data provide evidence of moderately strong concurrent and predictive validity for MAP: R. Concurrent validity for MAP: R and AIMSweb© Maze was moderately strong. Concurrent validity was also moderately strong for concurrent administrations of MAP: R and STAR for grades 2-3. A moderately low relationship was found for first-grade students when the MAP: R and STAR instruments were administered in counterbalanced order. The different format used for MAP: R (from STAR) for first-grade students may have contributed to the lower relationship, relative to the indices for older students. Finally, MAP: R was found to be a stronger predictor of end-of-the-year STAR scores than AIMSweb© Maze.

Limitations and Future Research

Several limitations exist within the current study. One possible limitation includes administration fidelity and probe scoring. Although training, scripted directions, and fidelity checklists were provided to school personnel responsible for probe administrations, researchers were unable to directly observe probe administration. Additionally, researchers did not observe scoring fidelity. However, detailed scoring directions were made available to school personnel and researchers made themselves available to assist with scoring troubleshooting. Future researchers may be interested in gathering information on inter-rater reliability for scoring.

Another possible limitation relates to probe construction, especially readability. The Spache and Dale-Chall reading formulas were used to create text at the end-of-grade readability. However, text readability is often difficult to determine, and other readability formulas exist that provide different criteria for determining readability (Hiebert, 2002). Future researchers may

decide to examine the correlation between current MAP: R readability levels using Spache and Dale-Chall as well as other readability formulas.

Because the data from this study are limited, practitioners will want to know the extent to which MAP: R identifies diverse groups of learners (e.g. English Language Learners, students who have a learning disability in reading, or students who are “word-callers” or hyperlexic) relative to other measures. In particular, educators would be interested in determining how well MAP: R can identify then predict students’ success within these groups as they respond to interventions as part of a comprehensive RTI program. Future researchers may also consider extending this assessment approach to kindergarten students, older primary grades (since the focus of reading shifts more to comprehension in the upper grades), and to students in other locales. Additionally, researchers may be interested in gathering data regarding the extent to which teachers value and agree with the information provided by MAP: R.

Other questions remain as well and can be addressed using different methodology. For example, some experts may be interested in using Generalizability Theory to determine the number of probes required to meet or exceed the .80 reliability criterion. This information would be useful to practitioners, as would determination of the relative slopes of MAP: R vs.

AIMSweb© Maze within an RTI context. Finally, social validity and practical utility of the MAP: R should be examined. Also, research indicates that ORF measures are currently the best predictors of future reading performance on standardized assessments (Andren, 2011; Good et al., 2001 Hintze & Silberglitt, 2005; McGlinchey & Hixson, 2004; Stage & Jacobsen, 2001; Wiley & Deno, 2005), although they might not be better predictors than MAP: R. Therefore, in the future researchers may compare the predictive validity of MAP: R and ORF measures with

standardized assessments as the criterion. Additionally, though designed as efficient (e.g., group administered, three minute screeners), scoring for the MAP: R is time consuming, at least initially. Research on educators' perceptions of the MAP: R's utility, validity and practicality is needed.

In conclusion, MAP: R shows promise as a reading screener for students in grades 1-3. MAP: R is unique in that it is sensitive to both fluency and comprehension, as recommended by the National Reading Panel (2000), is brief and efficient, and could be used as part of a comprehensive RTI process to identify at-risk students. Additional data from future research will help determine acceptability of MAP: R for widespread use.

LIST OF REFERENCES

- Advantage Learning Systems. (1997). *STAR Reading*. Wisconsin Rapids, WI: ALS, Advantage Learning Systems.
- Allington, R. L. (2009). *What Really Matters in Fluency: Research-Based Practices across the Curriculum*. Boston: Pearson Education, Inc.
- Bell, S.M., Hilton-Prillhart, A. McCallum, R.S., & Hopkins, M.B. (2009). *Monitoring Academic Progress: Reading (MAP: R)*. Unpublished test. University of Tennessee.
- Bell, S.M., & McCallum, R.S. (2008a). *Fluency and Comprehension Test: Silent (FACT: S)*. Unpublished test. University of Tennessee.
- Bell, S.M., & McCallum, R.S. (2008b). *Handbook of reading assessment*. Boston: Allyn and Bacon.
- Bell, S.M., McCallum, R.S., Burton, B, Gray, R., Windingtad, S., & Moore, J. (2006). Concurrent validity of the Test of Silent Word Reading Fluency. *Assessment for Effective Intervention*, 31(3), 1-9.
- Bell, S.M., McCallum, R.S., & Cox, E.A. (2003). Toward a research-based assessment of Dyslexia: Using cognitive measures to identify reading disabilities. *Journal of Learning Disabilities*, 36, 505-516.
- Bell, S.M., McCallum, R.S., Kirk, E.R., Fuller, E.J., & McCane-Bowling, S. (2007). Investigation of the Psychometric attributes of the Test of Silent Contextual Reading Fluency. *Assessment for Effective Intervention*, 33(1), 39-46.
- Becker, W.C. (1977). Teaching reading and language to the disadvantaged-
What we have learned from the field research. *Harvard Educational Review*, 47, 518-543.

- Bracken, B. (1987). Limitations of preschool instruments and standards for minimal levels of technical adequacy. *Journal of Psychoeducational Assessment*, 5, 313-326.
- Bradley, R., Danielson, L.C., and Hallahan, D.P. (2002). *Identification of learning disabilities: Research to practice*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Brown, J.A., Fishco, V.V., & Hanna, G. (1993). *Nelson-Denney Reading Test: Manual for Scoring and Interpretation*, Forms G and H. Itasca, IL: Riverside.
- Carlo, M.S., August, D., McLaughlin, B., Snow, C.E., Dressler, C., Lippman, D.N., & White, C.E. (2004). Closing the gap: Addressing the vocabulary needs of English-language learners in bilingual and mainstream classrooms. *Reading Research Quarterly*, 39, 188-215.
- Chall, J.S. (1986). Literacy: Trends and explanations. *Educational Researcher*, 12, 3-8.
- Chall, J., & Dale, E. (1995). *Readability revisited: The new Dale- Chall readability formula*. Cambridge, MA: Brookline.
- Christo, C., Davis, J., & Brock, S.E. (2009) *Identifying, assessing, and treating dyslexia at school*. New York: Springer.
- Cowart, C.A., & McCallum, R.S. (1988). Multi-trait-multi-method investigation of the simultaneous successive-planning model. *Journal of Psychoeducational Assessment*, 6(1), 55-66.
- Cronbach, L.J., & Meehl, P.E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52(4), 281-302.
- Cutting, L. E., & Scarborough, H. S. (2006). Prediction of reading comprehension: Relative contributions of word recognition, language proficiency, and other

- cognitive skills can depend on how comprehension is measured. *Scientific Studies of Reading*, 10, 277-299.
- Deno, S.L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children*, 52, 219-232.
- Deno, S. L. & Mirkin, P. K. (1977) *Data-based Program Modification: A Manual*. Reston VA: Council for Exceptional Children.
- Deno, S.L., Mirkin, P.K., & Chiang, B. (1982). Identifying valid measures of reading. *Exceptional Children*, 49, 36-47.
- Dreyer, L.G. (1984). Readability and responsibility. *Journal of Reading*, 27(4), 334-338.
- Duke, N.K., & Pearson, P.D. (2002). Effective practices for developing reading comprehension. In Farstrup and Samuels (Eds.), *What research has to say about reading instruction*. (pp.337-369). Newark, DE: International Reading Association.
- Espin, C.A., Deno, S.L., Maruyama, G., & Cohen, C. (1989, April). The Basic Academic Skills Samples: An instrument for screening and identifying children at for failure in the regular education classroom. *Paper presented at the American Educational Research Association Meeting, San Francisco, CA*.
- Field, A. (2008). Multiple regression using SPSS and PAW. Retrieved March 26, 2010. <http://www.statisticshell.com/multireg.pdf>
- Fuchs, L.S. (2004). The past, present, and future of curriculum-based measurement research. *School Psychology Review*, 33, 188-192.
- Fuchs, L. S. & Deno, S. L., (1994) Must instructionally useful performance assessment be based in the curriculum? *Exceptional Children*, 61(1), 15-24.

- Fuchs, D., & Fuchs, L. S. (2006). Introduction to Response to Intervention: What, why, and how valid is it? *Reading Research Quarterly*, 41, 93-99.
- Fuchs, L.S., Fuchs, D. , & Speece, D. (2002). Treatment validity as a unifying construct for identifying learning disabilities. *Learning Disabilities Quarterly*, 25, 33-45.
- Fuchs, L., & Fuchs, D. (1986). Effects of systematic formative evaluation: A meta-analysis. *Exceptional Children*, 53, 199-208.
- Fuchs, L. S., Fuchs, D., & Maxwell, L. (1988). The validity of informal reading comprehension measures. *Remedial and Special Education*, 9, 20-28.
- Gagne, E. D., Yekovich, C. W., & Yekovich, F. R. (1993). *The cognitive psychology of school learning*. (2nd ed.). Harper Collins College Publishers: New York.
- Garson, G. D. (2008). *Scales and Standard Measures* from Statnotes: Topics in Multivariate Analysis. Retrieved December 28, 2010 from <http://faculty.chass.ncsu.edu/garson/pa765/statnote.htm>.
- Gerrell, H. R., & Mason, G. (1983). Computer-chunked and traditional text. *Reading World*, 23, 241-246.
- Gickling, E. T. (1985). A personal view of curriculum-based assessment. *Exceptional Children*, 52, 205-218.
- Gickling, E., & Havertape, J. (1981). *Curriculum-based assessment*. Minneapolis, MN: National School Psychology In-service Training Network.
- Good, R.H., & Kaminski, R.A. (2001). Technical adequacy of second grade DIBELS oral reading fluency passages. *World Health Organization Technical Report Series*, 8.

- Good, R.H., & Kaminski, R.A. (Eds.) (2002a). *Dynamic Indicators of Basic Early Literacy Skills* (6th ed.). Eugene, OR: Institute for the Development of Educational Achievement.
- Good, R. H. & Kaminski, R. A. (2002b). DIBELS Oral Reading Fluency Passages for First through Third Grades (Technical Report No. 10). Eugene, OR: University of Oregon.
- Good, R.H., Simmons, D.C., & Kameenui, E.J. (2001). The importance and decision-making utility of a continuum of fluency-based indicators of foundational reading skills for third-grade high-stakes outcomes. *Scientific Studies of Reading*, 5, 257-288.
- Grigorenko, E.L., Klin, A., Pauls, D.L., Senft, R., Hooper, C., & Volkmar, F. (2002). A descriptive study of hyperlexia in a clinically referred sample of children with developmental delays. *Journal of Autism and Developmental Disorders*, 32, 3-12.
- Hamilton, C., & Shinn, M.R. (2003). Characteristics of word-callers: An investigation of the accuracy of teachers' judgments of reading comprehension and oral reading skills. *School Psychology Review*, 32, 228-240.
- Hammill, D.D., Widerholt, J.L., & Allen, E.A. (2006). *Test of Silent Contextual Reading Fluency*. Austin, TX: Pro-Ed.
- Harris, A.J., & Sipay, E. (1990). *How to increase reading ability* (10th ed.). White Plains, NY: Longman
- Harris, T.L., & Hodges, R.E. (1995). *The literacy dictionary: The vocabulary of reading and writing*. Newark, DE: International Reading Association.
- . Hiebert, E.H. (2000). *What is third-grade reading?* Paper presented at the meeting of the Southeast Literacy Consortium, Athens, Ga.

- Hiebert, E.H. (2002). Standards, assessments, and text readability. In Farstrup and Samuels (Eds.), *What research has to say about reading instruction*. (pp.337-369). Newark, DE: International Reading Association.
- Hintze, J.M., Callahan, J.E., III, Matthews, W.J., Williams, S.A., & Tobin, K.G. (2002). Oral reading fluency and prediction of reading comprehension in African-American and Caucasian elementary schoolchildren. *School Psychology Review*, 31, 540-553.
- Hintze, J.M., & Silberglitt, B. (2005). A longitudinal evaluation of the diagnostic accuracy and predictive validity of the R-CBM and high-stakes testing. *School Psychology Review*, 34(3), 372-386.
- Hollenbeck, A. F. (2007). From IDEA to implementation: A discussion of foundational and future Responsiveness-to-Intervention research. *Learning Disabilities Research & Practice*, 22, 137-146.
- Hook, P.E., & Jones, S.D. (2002). The importance of automaticity and fluency for efficient reading comprehension. *Perspectives*, 28(1), 9-14. Individuals with Disabilities Education Improvement Act, U.S.C, 2004.
- Huck, S.W., & Cormier, W.H. (1996). *Reading statistics and research* (2nd ed.). New York: Harper Collins College Publishers.
- Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. § 1400 et seq. Stat. (2004).
- Jenkins, J.R., & Jewell, M. (1993). Examining the validity of two measures for formative teaching: Reading aloud and Maze. *Exceptional Children*, 59, 421-432.

- Kaufman, A., & Kaufman, N.L. (2004). *Kaufman Test of Educational Achievement*, Form A (KTEA-II Form A). Circle Pines, MN: AGS Publishing.
- Klare, G.R. (1984). Readability. In P.D. Pearson, R. Barr, M.I. Kamil, & P. Mosenthal (Eds.), *Handbook of reading research* (pp. 681-794). New York: Longman.
- Kuhn, M. R., & Stahl, S. A. (2003). Fluency: A review of developmental and remedial practices. *Journal of Educational Psychology*, 95, 3-21.
- Laberge, D., & Samuels, S.J. (1974). Towards a theory of automatic information processing in reading. *Cognitive Psychology*, 6, 293-323.
- Leslie, L., & Caldwell, J.S. (2006). *Qualitative Reading Inventory-IV*. Needham Heights, MA: Allyn and Bacon.
- Logan, G.D. (1997). Automaticity and reading: Perspectives from the instance theory of automatization. *Reading and Writing Quarterly*, 13, 123-146.
- Marzano, R.J. (2004). Building background knowledge for academic achievement: Research on what works. Alexandria, VA: Association for Supervision and Curriculum Development.
- Mather, N., Hammill, D.D., Allen, E.A., & Roberts, R. (2004). *Test of Silent Word Reading Fluency*. Austin, TX: Pro-Ed.
- Meisinger, E.B., Bradley, B.A., Schwanenflugel, P.J., Kuhn, M.R., and Morris, R.D. (2009). Myth and reality of the word caller: The relation between teacher nominations and prevalence among elementary school children. *School Psychology Quarterly*, 24(3), 147-159.
- McGlinchey, M.T., & Hixson, M.D. (2004). Using curriculum-based measurement to predict performance on state assessments in reading. *School Psychology Review*, 33, 193-203.

- Nakamoto, J., Lindsey, K.A., & Manis, F.R. (2007). A longitudinal analysis of English language learners' word decoding and reading comprehension. *Reading and Writing, 20*, 691-719.
- Nathan, R.G., & Stanovich, K.E. (1991). The causes and consequences of differences in reading fluency. *Theory into Practice, 30*, 176-184.
- National Center for Student Progress Monitoring. (2011). [Progress monitoring general outcome measures tools chart February 25, 2011]. *Progress Monitoring Tools*. Retrieved from http://www.rti4success.org/tools_charts/progress.php
- National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel: Teaching Children to Read* (NIH Publication No. 00-4769). Washington, D.C.: Government Printing Office.
- New England Common Assessment Program. (2010). *2009-2010 NECAP Technical Report*. Dover, N.H.: Measured Progress.
- Newell, A., & Rosenbloom, P. S. (1981). Cognitive skills and their acquisitions. In J. R. Anderson (Ed.), *Mechanisms of skill acquisitions and the law of practice* (pp. 1-55). NJ: Lawrence Erlbaum Associates.
- No Child Left Behind Act, 20 U.S. C., 2001.
- Northwest Evaluation Association. (2009). *Technical Manual for Measures of Academic Progress and Measures of Academic Progress for Primary Grades*. Lake Oswego, OR: Northwest Evaluation Association.
- Paris, S.G., Paris, A.H., & Carpenter, R.D. (2001). Effective practices for assessing young Readers. *CIERA Report* (CIERA-3-013). University of Michigan, Center for the Improvements of Early Reading Achievement.

- Pinnell, G.S., Pikulski, J.J., Wixson, K.K., Campbell, J.R., Gough, P.B., & Beatty, A.S. (1995). *Listening to children read aloud: Data from NAEP's integrated reading performance record (IRPR) at grade 4*. Washington, D.C.: Office of Educational Research and Improvement, U.S. Department of Education; Princeton, N.J.: Educational Testing Service.
- Pressley, M., Hilden, K., & Shankland, R. (2005). An evaluation of end-grade-3 Dynamic Indicators of Basic Early Literacy Skills (DIBELS): Speed reading without comprehension, predicting little (Tech.Rep.). East Lansing, MI: Michigan State University, Literacy Achievement Research Center.
- Proctor, C.P., Carlo, M., August, D., & Snow, C. (2005). Native Spanish-speaking children reading in English: Toward a model of comprehension. *Journal of Educational Psychology*, 97, 246-256.
- Rasinski, T. V. (1994). Developing syntactic sensitivity in reading through phrase cued texts. *Intervention in School & Clinic*, 29, 165-168.
- Riedel, B.W. (2007). The relation between DIBELS, reading comprehension, and vocabulary in urban first-grade students. *Reading Research Quarterly*, 42(4), 546-567.
- Rupley, W.H., Wilson, V.L., & Nichols, W.D. (1998). Exploration of the developmental components contributing to elementary school children's reading comprehension. *Scientific Studies of Reading*, 2, 143-158.
- Samuels, S. J. (2007). The DIBELS tests: Is speed of barking at print what we mean by reading fluency? *Reading Research Quarterly*, 42, 563-566.

- Samuels, S.J., & Flor, R.F. (1997). The importance of automaticity for developing expertise in reading. *Reading and Writing Quarterly*, 13, 107-121.
- Sattler, J. (2008). *Assessment of children: Cognitive Foundations*. San Diego: J.M. Sattler.
- Scanlon, D.M. (2011). Response to intervention as an assessment approach. In R.L. Allington and A. McGill-Franzen (Eds.), *Handbook of Reading Disability Research* (pp. 139-148). New York: Taylor and Francis.
- Scruggs, T.E., & Mastropieri, M.A. (2002). On babies and bathwater: Addressing the problems of the identification of learning disabilities. *Learning Disability Quarterly*, 25, 155-168.
- Shapiro, E.S. (2004). *Academic skills problems: Direct assessment and intervention*. The Guildford Press: New York.
- Shapiro, E.S., Edwards, L., Lutz, J.G., & Keller, M. (2004, March). *Relationships of general outcomes measurement normative data and standardized tests in Pennsylvania*. Paper presented at the National Association of School Psychologists, Dallas, TX.
- Shapiro, E.S., & Lentz, F.E. (1986). Behavioral assessment of academic behavior. In T.R. Kratchowill (Ed.), *Advances in school psychology*. Hillsdale, NJ: Erlbaum.
- Shinn, J., Deno, S.L., & Espin, C. (2000). Technical adequacy of the Maze task for curriculum-based measurement and growth. *Journal of Special Education*, 34, 164-173.
- Shinn, M.R., Good, R.H., Knutson, N., Tilly, W.D., & Collins, V.L. (1992). Curriculum-based measurement reading fluency: A confirmatory analysis of its relation to reading. *School Psychology Review*, 21, 459-479.

- Shinn, M.R. (1989). Identifying and defining academic problems: CBM screening and eligibility. In. M.R. Shinn (Ed.), *Curriculum-based measurement: Assessing special children* (pp. 90-129). New York: Guilford Press.
- Shinn, M.M., & Shinn, M.R. (2002). *AIMSweb*. Eden Prairie, MN: Edformation, Inc.
- Shinn, M. R. Ed. (1998), *Advanced applications of curriculum-based measurement* (pp. 61-88). New York: Guilford.
- Shinn, M., & Marston, D. (1985). Differentiating mildly handicapped, low-achieving, and regular education students: A curriculum-based approach. *RASE: Remedial & Special Education*, 6(2), 31-38.
- Siegel, L.S. (1999). Issues in the diagnosis of learning disabilities: A perspective on Guckenberger v. Boston University. *Journal of Learning Disabilities*, 32(4), 304-319.
- Snow, C., Burns, M.S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, D.C.: National Academy Press.
- Spache, G.D. (1981). *Diagnosing and correcting reading disabilities*. Boston: Allyn & Bacon.
- Spear-Swerling, L. (2011). Patterns of reading disabilities across development. In. R.L. Allington and A. McGill-Franzen (Eds.), *Handbook of Reading Disability Research* (pp. 149-161). New York: Taylor and Francis.
- Stage, S.A., & Jacobsen, M.D. (2001). Predicting student success on a state-mandated performance-based assessment using oral reading fluency. *School Psychology Review*, 30, 407-419.
- Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360-406.

- Topping, K.J., Samuels, J., & Paul, T. (2007). Does practice make perfect? Independent reading quantity, quality, and student achievement. *Learning and Instruction*, 17, 253-264.
- Torgensen, J.K., Wagner, R.K., & Rashotte, C.A. (1999). *TOWRE: Test of Word Reading Efficiency: Examiner's Manual*. Austin, TX: Pro-Ed, Inc.
- Wechsler, D. (2002). *Wechsler Individual Achievement Test – Third Edition*. San Antonio, TX: Pearson.
- Wiederbolt, J.L., & Bryant, B.R. (2001). *Gray Oral Reading Tests – Diagnostic*. Los Angeles, CA: Western Psychological Services.
- Wiley, H.I., & Deno, S. (2005). Oral reading and maze measures as predictors of success for English Language Learners on a state standards assessment. *Remedial and Special Education*, 26(4), 207-214.
- Williams, J.P. (2002). Reading comprehension strategies and teacher preparation. In Farstrup and Samuels (Eds.), *What research has to say about reading instruction*. (pp.337-369). Newark, DE: International Reading Association.
- Woodcock, R.W., McGrew, K.S., & Mather, N. (2001). *Woodcock-Johnson III Tests of Achievement-Revised*. Itasca, IL: Riverside.

Table 1

MAP: R Pilot Phase 1: Means, Standard Deviations, and Standard Error of Measure

	n	M	SD	SEM
Grade 1	37	49.54	33.43	5.50
Grade 2	59	105.46	63.34	8.25
Grade 3	55	118.42	71.90	9.70

Table 2

MAP: R Pilot Phase 2: Means, Standard Deviations, and Standard Error of Measure

	n	M	SD
Grade 1			
K Probe	15	13.45	1.21
Beginning First Grade Probe	15	25.8	22.63
Grade 2			
Ending First Grade Probe	12	52.24	21.73
Second Grade Probe	11	138.88	61.55
Grade 3			
Third Grade Probe	17	185.29	12.79
Grade 4			
Third Grade Probe	19	218.16	9.24

Table 3

MAP: R Pilot Phase 3: Mean, Standard Deviations, and Standard Error of Measure

	n	M	SD	SEM
Grade 1	114	41.38	27.313	.88
Grade 2	99	176.22	69.48	2.24
Grade 3	122	226.99	83.34	2.84

Table 4

Current Study Demographic Information

	N	Sex		Ethnicity				
		Male	Female	W	B	A	H	P
Grade 1	538	291(54%)	234(44%)	485(90%)	29(5%)	3(1%)	7(1%)	(<1%)
Grade 2	567	298(53%)	257(45%)	521(92%)	26(5%)	1(<1%)	4(1%)	1(<1%)
Grade 3	583	307(53%)	258(44%)	540(93%)	14(2%)	2(<1%)	7(1%)	1(<1%)
Total	1688	895(54%)	749(46%)	1546(94%)	69(4%)	6(<1%)	18(1%)	2(<1%)

Table 5

Descriptive Statistics for MAP: R

First Grade			
	n	M	SD
Universal Screener	495	45.37	27.64
Probe 1	491	35.72	26.22
Probe 2	486	34.39	24.94
Probe 3	499	46.52	32.10
Probe 4	485	37.29	29.13
Probe 5	491	51.74	34.98
Probe 6	491	57.09	33.63
Probe 7	450	59.48	37.50
Probe 8	486	64.82	33.59
Probe 9	482	62.74	38.51
Probe 10	425	68.22	38.65
Second Grade			
Universal Screener	439	26.07	21.17
Probe 1	448	25.91	21.19
Probe 2	525	23.95	18.00
Probe 3	489	29.52	22.59
Probe 4	518	32.78	25.43
Probe 5	528	28.87	22.56
Probe 6	517	30.59	24.13
Probe 7	485	36.53	27.04
Probe 8	521	41.06	29.45
Probe 9	510	41.45	29.48
Probe 10	460	33.23	23.43
Third Grade			
Universal Screener	452	28.73	23.02
Probe 1	453	34.80	28.44
Probe 2	525	28.72	24.76
Probe 3	475	28.34	24.86
Probe 4	512	38.88	27.57
Probe 5	508	36.79	27.18
Probe 6	535	40.70	28.99
Probe 7	516	40.77	26.52
Probe 8	527	40.76	29.82
Probe 9	539	42.66	29.65
Probe 10	453	49.07	29.16

Table 6

Alternate Form Reliability – MAP: R

	1	2	3	4	5	6	7	8	9	10
Grade 1										
US1	.79	.79	.79	.77	.79	.78	.80	.77	.75	.75
Probe 1		.76	.80	.79	.79	.75	.78	.72	.73	.69
Probe 2			.76	.77	.80	.77	.77	.75	.75	.66
Probe 3				.86	.84	.82	.82	.76	.75	.75
Probe 4					.83	.80	.80	.73	.75	.72
Probe 5						.85	.88	.82	.81	.78
Probe 6							.85	.81	.81	.83
Probe 7								.84	.86	.81
Probe 8									.84	.80
Probe 9										.82
Grade 2										
US1	.81	.76	.75	.75	.74	.73	.72	.76	.73	.74
Probe 1		.78	.82	.81	.80	.76	.80	.80	.76	.71
Probe 2			.81	.79	.78	.76	.78	.79	.74	.63
Probe 3				.83	.82	.78	.77	.77	.76	.78
Probe 4					.81	.77	.80	.77	.75	.74
Probe 5						.82	.83	.81	.77	.80
Probe 6							.83	.81	.79	.79
Probe 7								.85	.80	.80
Probe 8									.85	.82
Probe 9										.76
Grade 3										
US1	.75	.67	.67	.73	.71	.73	.68	.69	.67	.67
Probe 1		.73	.75	.78	.75	.76	.73	.77	.72	.67
Probe 2			.70	.71	.69	.71	.70	.69	.68	.70
Probe 3				.78	.77	.76	.75	.74	.72	.76
Probe 4					.80	.77	.78	.77	.75	.82
Probe 5						.81	.78	.80	.79	.74
Probe 6							.81	.79	.79	.72
Probe 7								.83	.82	.66
Probe 8									.83	.77
Probe 9										.79

Table 7

Alternate Form Reliability: AIMSweb© Maze

	Probe 2	Probe 3
Grade 1		
Probe 1	.80	.66
Probe 2		.75
Grade 2		
Probe 1	.70	.70
Probe 2		.78
Grade 3		
Probe 1	.70	.67
Probe 2		.76

Table 8

MAP: R Test-Retest Reliability

	n	r	p
Grade 1	75	.90	<.01
Grade 2	65	.84	<.01
Grade 3	91	.89	<.01

Table 9

Concurrent Validity: MAP: R and AIMSweb© Maze

	MAP: R Probe		
	6	8	10
AIMSweb Maze© - Grade 1			
Probe 1	.69		
Probe 2		.63	
Probe 3			.52
AIMSweb Maze © - Grade 2			
Probe 1	.53		
Probe 2		.61	
Probe 3			.62
AIMSweb Maze © - Grade 3			
Probe 1	.55		
Probe 2		.55	
Probe 3			.43

Table 10

Correlation Matrix for End-of-the-Year STAR scores with AIMSweb© Maze and MAP: R

		STAR	AIMSweb© Admin. 1	MAP: R P6
Pearson Correlation	STAR		.39	.61
	AIMSweb© Admin.1	.39		.46
	MAP: R P6	.61	.46	
Sig. (1-tailed)	STAR		.02	.000
	AIMSweb© Admin.1	.02		.01
	MAP: R P6	.000	.01	
N	STAR	29	29	29
	AIMSweb© Admin.1	29	29	29
	MAP: R P6	29	29	29

Table 11

Stepwise Multiple Regression Analysis Predicting STAR with MAP: R and AIMSweb© Maze Across Grades 2 and 3

Predictor	n	R ²	SEb	β	F	p
MAP: R P6	29	.37	.09	.61	16.16	.01
Excluded	29			.14		.43
AIMSweb© Maze						

APPENDICES

Appendix A

Spache Revised Word List (Spache, 1974)

A

able about above across act add afraid after afternoon again against
ago air airplane alarm all almost alone along already also always am
among an and angry animal another answer any anyone appear
apple are arm around arrow as ask asleep at ate attention aunt awake
away

B

baby back bad bag ball balloon bang bank bark barn basket be bean
bear beat beautiful became because become bed bee been before
began begin behind believe bell belong bend bent beside best better
between big bird birthday bit bite black blanket blew block blow
blue board boat book boot born borrow both bother bottle bottom
bought bow box boy branch brave bread break breakfast breath
brick bridge bright bring broke broken brother brought brown brush
build bump burn bus busy but butter button buy by

C

cabin cage cake call came camp can candle candy can't cap captain
car card care careful carrot carry case castle cat catch cattle caught
cause cent certain chair chance change chase chicken chief child
children church circle circus city clap clean clever cliff climb clock
close cloth clothes clown coat cold color come comfortable
company contest continue cook cool corner could count country
course cover cow crawl cream cry cup curtain cut

D

Dad dance danger dangerous dark dash daughter day dear decide
deep desk did didn't die different dig dinner direction disappear
disappoint discover distance do doctor does dog dollar done don't
door down dragon dream dress drink drive drop drove dry duck
during dust

E

each eager ear early earn earth easy eat edge egg eight eighteen
either elephant else empty end enemy enough enter even ever every
everything exact except excite exclaim explain eye

F

face fact fair fall family far farm farmer farther fast fat father feather
feed feel feet fell fellow felt fence few field fierce fight figure fill
final find fine finger finish fire first fish five flag flash flat flew
floor flower fly follow food for forest forget forth found four fourth
fox fresh friend frighten frog from front fruit full fun funny fur

G

game garden gasp gate gave get giant gift girl give glad glass go
goat gone good got grandfather grandmother grass gray great green
grew grin ground group grow growl guess gun

H

had hair half hall hand handle hang happen happiness happy hard
harm has hat hate have he head hear heard heavy held hello help hen
her here herself he's hid hide high hill him himself his hit hold hole
holiday home honey hop horn horse hot hour house how howl hum

hundred hung hungry hunt hurry hurt husband

I

i I ice idea if I'll I'm imagine important in inch indeed inside instead
into invite is it it's its

J

jacket jar jet job join joke joy jump just

K

keep kept key kick kill kind king kitchen kitten knee knew knock
know

L

ladder lady laid lake land large last late laugh lay lazy lead leap
learn least leave left leg less let let's letter lick lift light like line lion
list listen little live load long look lost lot loud love low luck lump
lunch

M

machine made magic mail make man many march mark market
master matter may maybe me mean meant meat meet melt men
merry met middle might mile milk milkman mind mine minute miss
mistake moment money monkey month more morning most mother

mountain mouse mouth move much mud music must my

N

name near neck need needle neighbor neighborhood nest never new
next nibble nice night nine no nod noise none north nose not note
nothing notice now number

O

ocean of off offer often oh old on once one only open or
orange order other our out outside over owl own

P

pack paid pail paint pair palace pan paper parade parent park part
party pass past pasture path paw pay peanut peek pen penny people
perfect perhaps person pet pick picnic picture pie piece pig pile pin
place plan plant play pleasant please plenty plow picket point poke
pole policeman pond poor pop postman pot potato pound pour
practice prepare present pretend pretty princess prize probably
problem promise protect proud puff pull puppy push put

Q

queen, queer, quick, quiet, quite

R

rabbit, raccoon, race, radio, rag, rain, raise, ran, ranch, rang, reach,
read, ready, real, red, refuse, remember, reply, rest, return, reward,

rich, ride, right, ring, river, road, roar, rock, rode, roll, roof, room,
rope, round, row, rub, rule, run, rush

S

sad, safe, said, sail, sale, salt, same, sand, sang, sat, save, saw, say,
scare, school, scold, scratch, scream, sea, seat, second, secret, see,
seed, seen, sell, send, sent, seven, several, sew, shadow, shake,
shall, shape, she, sheep, she'll, shine, ship, shoe, shone, shook.
shoot, shop, shore, short, shot, should, show, sick, side, sight, sign,
signal, silent, silly, silver, since, sing, sister, sit, six, size, skip, sky,
sled, sleep, slid, slide, slow, small, smart, smell, smile, smoke,
snap, sniff, snow, so, soft, sold, some, something, sometimes, son,
song, soon, sorry, sound, speak, special, spend, spill, splash, spoke,
spot, spread, spring, squirrel, stand, star, start, station, stay, step,
stick, still, stone, stood, stop, store, story, straight, strange, street,
stretch, strike, strong, such, sudden, sugar, suit, summer, sun,
supper, suppose, sure, surprise, swallow, sweet, swim, swing

T

table, tail, take, talk, tall, tap, taste, teach, teacher, team, tear, teeth,
telephone, tell, ten, tent, than, thank, that, that's, the, their, them,
then, there, these, they, thick, thin, thing, think, third, this, those,
though, thought, three, threw, through, throw, tie, tiger, tight, time,
tiny, tip, tire, to, today, toe, together, told, tomorrow, too, took,
tooth, top, touch, toward, tower, town, toy, track, traffic, train, trap,
tree, trick, trip, trot, truck, true, trunk, try, turkey, turn, turtle,
twelve, twin, two

U

ugly, uncle, under, unhappy, until, up, upon, upstairs, us, use, usual

V

valley, vegetable, very, village, visit, voice

W

wag, wagon, wait, wake, walk, want, war, warm, was, wash, waste,
watch, water, wave, way, we, wear, weather, week, well, went,

were, wet, what, wheel, when, where, which, while, whisper,
whistle, white, who, whole, whose, why, wide, wife, will, win,
wind, window, wing, wink, winter, wire, wise, wish, with, without,
woke, wolf, woman, women, wonder, won't, wood, word, wore,
work, world, worm, worry, worth, would, wrong

X

Y

yard, year, yell, yellow, yes, yet, you, young, your

Z

zoo

Spache., G. (1974) *Good reading for poor readers*. Champaign, IL:
Garrard.

The Dale-Chall Word List

A

a	afraid	alarm	angel	apron	asleep
able	after	alike	anger	are	at
aboard	afternoon	alive	angry	aren't	ate
about	afterward	all	animal	arise	attack
above	afterwards	alley	another	arithmetic	attend
absent	again	alligator	answer	arm	attention
accept	against	allow	ant	armful	August
accident	age	almost	any	army	aunt
account	aged	alone	anybody	arose	author
ache	ago	along	anyhow	around	auto
aching	agree	aloud	anyone	arrange	automobile
acorn	ah	already	anything	arrive	autumn
acre	ahead	also	anyway	arrived	avenue
across	aid	always	anywhere	arrow	awake
act	aim	am	apart	art	awaken
acts	air	America	apartment	artist	away
add	airfield	American	ape	as	awful
address	airplane	among	apiece	ash	awfully
admire	airport	amount	appear	ashes	awhile
adventure	airship	an	apple	aside	ax
afar	airy	and	April	ask	axe

B

baa	battle	believe	blast	bought	bud
babe	battleship	bell	blaze	bounce	buffalo
babies	bay	belong	bleed	bow	bug
back	be	below	bless	bowl	buggy
background	beach	belt	blessing	bow-wow	build
backward	bead	bench	blew	box	building
backwards	beam	bend	blind	boxcar	built
bacon	bean	beneath	blindfold	boxer	bulb
bad	bear	bent	blinds	boxes	bull
badge	beard	berries	block	boy	bullet
badly	beast	berry	blood	boyhood	bum
bag	beat	beside	bloom	bracelet	bumblebee

bake	beating	besides	blossom	brain	bump
baker	beautiful	best	blot	brake	bun
bakery	beautify	bet	blow	bran	bunch
baking	beauty	better	blue	branch	bundle
ball	became	between	blueberry	brass	bunny
balloon	because	bib	bluebird	brave	burn
banana	become	bible	blush	bread	burst
band	becoming	bicycle	board	break	bury
bandage	bed	bid	boast	breakfast	bus
bang	bedbug	big	boat	breast	bush
banjo	bedroom	bigger	bob	breath	bushel
bank	bedspread	bill	bobwhite	breathe	business
banker	bedtime	billboard	bodies	breeze	busy
bar	bee	bin	body	brick	but
barber	beech	bind	boil	bride	butcher
bare	beef	bird	boiler	bridge	butt
barefoot	beefsteak	birth	bold	bright	butter
barely	beehive	birthday	bone	brightness	buttercup
bark	been	biscuit	bonnet	bring	butterfly
barn	beer	bit	boo	broad	buttermilk
barrel	beet	bite	book	broadcast	butterscotch
base	before	biting	bookcase	broke	button
baseball	beg	bitter	bookkeeper	broken	buttonhole
basement	began	black	boom	brook	buy
basket	beggar	blackberry	boot	broom	buzz
bat	begged	blackbird	born	brother	by
batch	begin	blackboard	borrow	brought	bye
bath	beginning	blackness	boss	brown	
bathe	begun	blacksmith	both	brush	
bathing	behave	blame	bother	bubble	
bathroom	behind	blank	bottle	bucket	
bathtub	being	blanket	bottom	buckle	

C

cab	carve	chick	clock	cooked	cream
cabbage	case	chicken	close	cooking	creamy
cabin	cash	chief	closet	cookie	creek
cabinet	cashier	child	cloth	cookies	creep
cackle	castle	childhood	clothes	cool	crept

cage	cat	children	clothing	cooler	cried
cake	catbird	chill	cloud	coop	croak
calendar	catch	chilly	cloudy	copper	crook
calf	catcher	chimney	clover	copy	crooked
call	caterpillar	chin	clown	cord	crop
caller	catfish	china	club	cork	cross
calling	catsup	chip	cluck	corn	crossing
came	cattle	chipmunk	clump	corner	cross-eyed
camel	caught	chocolate	coach	correct	crow
camp	cause	choice	coal	cost	crowd
campfire	cave	choose	coast	cot	crowded
can	ceiling	chop	coat	cottage	crown
canal	cell	chorus	cob	cotton	cruel
canary	cellar	chose	cobbler	couch	crumb
candle	cent	chosen	cocoa	cough	crumble
candlestick	center	christen	coconut	could	crush
candy	cereal	Christmas	cocoon	couldn't	crust
cane	certain	church	cod	count	cry
cannon	certainly	churn	codfish	counter	cries
cannot	chain	cigarette	coffee	country	cub
canoe	chair	circle	coffeepot	county	cuff
can't	chalk	circus	coin	course	cup
canyon	champion	citizen	cold	court	cuff
cap	chance	city	collar	cousin	cup
cape	change	clang	college	cover	cupboard
capital	chap	clap	color	cow	cupful
captain	charge	class	colored	coward	cure
car	charm	classmate	colt	cowardly	curl
card	chart	classroom	column	cowboy	curly
cardboard	chase	claw	comb	cozy	curtain
care	chatter	clay	come	crab	curve
careful	cheap	clean	comfort	crack	cushion
careless	cheat	cleaner	comic	cracker	custard
carelessness	check	clear	coming	cradle	customer
carload	checkers	clerk	company	cramps	cut
carpenter	cheek	clever	compare	cranberry	cute
carpet	cheer	click	conductor	crank	cutting
carriage	cheese	cliff	cone	cranky	
carrot	cherry	climb	connect	crash	

carry	chest	clip	coo	crawl
cart	chew	cloak	cook	crazy

D

dab	dawn	deserve	discover	dot	drive
dad	day	desire	dish	double	driven
daddy	daybreak	desk	dislike	dough	driver
daily	daytime	destroy	dismiss	dove	drop
dairy	dead	devil	ditch	down	drove
daisy	deaf	dew	dive	downstairs	drown
dam	deal	diamond	diver	downtown	drowsy
damage	dear	did	divide	dozen	drub
dame	death	didn't	do	drag	drum
damp	December	die	dock	drain	drunk
dance	decide	died	doctor	drank	dry
dancer	deck	dies	does	draw	duck
dancing	deed	difference	doesn't	drawer	due
dandy	deep	different	dog	draw	dug
danger	deer	dig	doll	drawing	dull
dangerous	defeat	dim	dollar	dream	dumb
dare	defend	dime	dolly	dress	dump
dark	defense	dine	done	dresser	during
darkness	delight	ding-dong	donkey	dressmaker	dust
darling	den	dinner	don't	drew	dusty
darn	dentist	dip	door	dried	duty
dart	depend	direct	doorbell	drift	dwarf
dash	deposit	direction	doorknob	drill	dwell
date	describe	dirt	doorstep	drink	dwelt
daughter	desert	dirty	dope	drip	dying

E

each	edge	electricity	engineer	even	exchange
eager	egg	elephant	English	evening	excited
eagle	eh	eleven	enjoy	ever	exciting
ear	eight	elf	enough	every	excuse
early	eighteen	elm	enter	everybody	exit
earn	eighth	else	envelope	everyday	expect
earth	eighty	elsewhere	equal	everyone	explain
east	either	empty	erase	everything	extra

eastern	elbow	end	eraser	everywhere	eye
easy	elder	ending	errand	evil	eyebrow
eat	eldest	enemy	escape	exact	
eaten	electric	engine	eve	except	

F

fable	fault	film	flew	footprint	fret
face	favor	finally	flies	for	Friday
facing	favorite	find	flight	forehead	fried
fact	fear	fine	flip	forest	friend
factory	feast	finger	flip-flop	forget	friendly
fail	feather	finish	float	forgive	friendship
faint	February	fire	flock	forgot	frighten
fair	fed	firearm	flood	forgotten	frog
fairy	feed	firecracker	floor	fork	from
faith	feel	fireplace	flop	form	front
fake	feet	fireworks	flour	fort	frost
fall	fell	firing	flow	forth	frown
false	fellow	first	flower	fortune	froze
family	felt	fish	flowery	forty	fruit
fan	fence	fisherman	flutter	forward	fry
fancy	fever	fist	fly	fought	fudge
far	few	fit	foam	found	fuel
faraway	fib	fits	fog	fountain	full
fare	fiddle	five	foggy	four	fully
farmer	field	fix	fold	fourteen	fun
farm	fife	flag	folks	fourth	funny
farming	fifteen	flake	follow	fox	fur
far-off	fifth	flame	following	frame	furniture
farther	fifty	flap	fond	free	further
fashion	fig	flash	food	freedom	fuzzy
fast	fight	flashlight	fool	freeze	
fasten	figure	flat	foolish	freight	
fat	file	flea	foot	French	
father	fill	flesh	football	fresh	

G

gain	geography	glue	good-bye	grandmother	grew
gallon	get	go	good-looking	grandpa	grind

gallop	getting	going	goodness	grandson	groan
game	giant	goes	goody	grandstand	grocery
gang	gift	goal	goose	grape	ground
garage	gingerbread	goat	gooseberry	grapes	group
garbage	girl	gobble	got	grapefruit	grove
garden	give	God	govern	grass	grow
gas	given	god	government	grasshopper	guard
gasoline	giving	godmother	gown	grateful	guess
gate	glad	gold	grab	grave	guest
gather	gladly	golden	gracious	gravel	guide
gave	glance	goldfish	grade	graveyard	gulf
gay	glass	golf	grain	gravy	gum
gear	glasses	gone	grand	gray	gun
geese	gleam	good	grandchild	graze	gunpowder
general	glide	goods	grandchildren	grease	guy
gentle	glory	goodbye	granddaughter	great	
gentleman	glove	good-by	grandfather	green	
gentlemen	glow	goodbye	grandma	greet	

H

ha	harm	heard	hid	home	housewife
habit	harness	heart	hidden	homely	housework
had	harp	heat	hide	homesick	how
hadn't	harvest	heater	high	honest	however
hail	has	heaven	highway	honey	howl
hair	hasn't	heavy	hill	honeybee	hug
haircut	haste	he'd	hillside	honeymoon	huge
hairpin	hasten	heel	hilltop	honk	hum
half	hasty	height	hilly	honor	humble
hall	hat	held	him	hood	hump
halt	hatch	hell	himself	hoof	hundred
ham	hatchet	he'll	hind	hook	hung
hammer	hate	hello	hint	hoop	hunger
hand	haul	helmet	hip	hop	hungry
handful	have	help	hire	hope	hunk
handkerchief	haven't	helper	his	hopeful	hunt
handle	having	helpful	hiss	hopeless	hunter
handwriting	hawk	hem	history	horn	hurrah
hang	hay	hen	hit	horse	hurried

happen	hayfield	henhouse	hitch	horseback	hurry
happily	haystack	her	hive	horseshoe	hurt
happiness	he	hers	ho	hose	husband
happy	head	herd	hoe	hospital	hush
harbor	headache	here	hog	host	hut
hard	heal	here's	hold	hot	hymn
hardly	health	hero	holder	hotel	
hardship	healthy	herself	hole	hound	
hardware	heap	he's	holiday	hour	
hare	hear	hey	hollow	house	
hark	hearing	hickory	holy	housetop	

I

I	I'll	income	instant	iron	I've
ice	I'm	indeed	instead	is	ivory
icy	important	Indian	insult	island	ivy
I'd	impossible	indoors	intend	isn't	
idea	improve	ink	interested	it	
ideal	in	inn	interesting	its	
if	inch	insect	into	it's	
ill	inches	inside	invite	itself	

J

jacket	jaw	job	journey	juice	junk
jacks	jay	jockey	joy	juicy	just
jail	jelly	join	joyful	July	
jam	jellyfish	joke	joyous	jump	
January	jerk	joking	judge	June	
jar	jig	jolly	jug	junior	

K

keen	kick	kindly	kitchen	kneel	knob
keep	kid	kindness	kite	knew	knock
kept	kill	king	kitten	knife	knot
kettle	killed	kingdom	kitty	knit	know
key	kind	kiss	knee	knives	known

L

lace	late	led	lie	little	loop
------	------	-----	-----	--------	------

lad	laugh	left	life	live	loose
ladder	laundry	leg	lift	lives	lord
ladies	law	lemon	light	lively	lose
lady	lawn	lemonade	lightness	liver	loser
laid	lawyer	lend	lightning	living	loss
lake	lay	length	like	lizard	lost
lamb	lazy	less	likely	load	lot
lame	lead	lesson	liking	loaf	loud
lamp	leader	let	lily	loan	love
land	leaf	let's	limb	loaves	lovely
lane	leak	letter	lime	lock	lover
language	lean	letting	limp	locomotive	low
lantern	leap	lettuce	line	log	luck
lap	learn	level	linen	lone	lucky
lard	learned	liberty	lion	lonely	lumber
large	least	library	lip	lonesome	lump
lash	leather	lice	list	long	lunch
lass	leave	lick	listen	look	lying
last	leaving	lid	lit	lookout	

M

ma	maple	meadow	midnight	mix	move
machine	marble	meal	might	moment	movie
machinery	march	mean	mighty	Monday	movies
mad	March	means	mile	money	moving
made	mare	meant	milk	monkey	mow
magazine	mark	measure	milkman	month	Mr.
magic	market	meat	mill	moo	Mrs.
maid	marriage	medicine	miler	moon	much
mail	married	meet	million	moonlight	mud
mailbox	marry	meeting	mind	moose	muddy
mailman	mask	melt	mine	mop	mug
major	mast	member	miner	more	mule
make	master	men	mint	morning	multiply
making	mat	mend	minute	morrow	murder
male	match	meow	mirror	moss	music
mama	matter	merry	mischief	most	must
mamma	mattress	mess	miss	mostly	my
man	may	message	Miss	mother	myself

manager	May	met	misspell	motor
mane	maybe	metal	mistake	mount
manger	mayor	mew	misty	mountain
many	maypole	mice	mitt	mouse
map	me	middle	mitten	mouth

N

nail	nearly	neither	nibble	nod	note
name	neat	nerve	nice	noise	nothing
nap	neck	nest	nickel	noisy	notice
napkin	necktie	net	night	none	November
narrow	need	never	nightgown	noon	now
nasty	needle	nevermore	nine	nor	nowhere
naughty	needn't	new	nineteen	north	number
navy	Negro	news	ninety	northern	nurse
near	neighbor	newspaper	no	nose	nut
nearby	neighborhood	next	nobody	not	

O

oak	offer	onion	otherwise	outside	owe
oar	office	only	ouch	outward	owing
oatmeal	officer	onward	ought	oven	owl
oats	often	open	our	over	own
obey	oh	or	ours	overalls	owner
ocean	oil	orange	ourselves	overcoat	ox
o'clock	old	orchard	out	overeat	
October	old-fashioned	order	outdoors	overhead	
odd	on	ore	outfit	overhear	
of	once	organ	outlaw	overnight	
off	one	other	outline	overturn	

P

pa	pass	people	place	pond	print
pace	passenger	pepper	plain	ponies	prison
pack	past	peppermint	plan	pony	prize
package	paste	perfume	plane	pool	promise
pad	pasture	perhaps	plant	poor	proper
page	pat	person	plate	pop	protect
paid	patch	pet	platform	popcorn	proud

pail	path	phone	platter	popped	prove
pain	patter	piano	play	porch	prune
painful	pave	pick	player	pork	public
paint	pavement	pickle	playground	possible	puddle
painter	paw	picnic	playhouse	post	puff
painting	pay	picture	playmate	postage	pull
pair	payment	pie	plaything	postman	pump
pal	pea	piece	pleasant	pot	pumpkin
palace	peas	pig	please	potato	punch
pale	peace	pigeon	pleasure	potatoes	punish
pan	peaceful	piggy	plenty	pound	pup
pancake	peach	pile	plow	pour	pupil
pane	peaches	pill	plug	powder	puppy
pansy	peak	pillow	plum	power	pure
pants	peanut	pin	pocket	powerful	purple
papa	pear	pine	pocketbook	praise	purse
paper	pearl	pineapple	poem	pray	push
parade	peck	pink	point	prayer	puss
pardon	peek	pint	poison	prepare	pussy
parent	peel	pipe	poke	present	pussycat
park	peep	pistol	pole	pretty	put
part	peg	pit	police	price	putting
partly	pen	pitch	policeman	prick	puzzle
partner	pencil	pitcher	polish	prince	
party	penny	pity	polite	princess	

Q

quack	quarter	queer	quick	quiet	quit
quart	queen	question	quickly	quilt	quite

R

rabbit	rat	redbird	rich	robin	royal
race	rate	redbreast	rid	rock	rub
rack	rather	refuse	riddle	rocky	rubbed
radio	rattle	reindeer	ride	rocket	rubber
radish	raw	rejoice	rider	rode	rubbish
rag	ray	remain	riding	roll	rug
rail	reach	remember	right	roller	rule
railroad	read	remind	rim	roof	ruler

railway	reader	remove	ring	room	rumble
rain	reading	rent	rip	rooster	run
rainy	ready	repair	ripe	root	rung
rainbow	real	repay	rise	rope	runner
raise	really	repeat	rising	rose	running
raisin	reap	report	river	rosebud	rush
rake	rear	rest	road	rot	rust
ram	reason	return	roadside	rotten	rusty
ran	rebuild	review	roar	rough	rye
ranch	receive	reward	roast	round	
rang	recess	rib	rob	route	
rap	record	ribbon	robber	row	
rapidly	red	rice	robe	rowboat	

S

sack	sell	shut	smile	splash	strange
sad	send	shy	smoke	spoil	stranger
saddle	sense	sick	smooth	spoke	strap
sadness	sent	sickness	snail	spook	straw
safe	sentence	side	snake	spoon	strawberry
safety	separate	sidewalk	snap	sport	stream
said	September	sideways	snapping	spot	street
sail	servant	sigh	sneeze	spread	stretch
sailboat	serve	sight	snow	spring	string
sailor	service	sign	snowy	springtime	strip
saint	set	silence	snowball	sprinkle	stripes
salad	setting	silent	snowflake	square	strong
sale	settle	silk	snuff	squash	stuck
salt	settlement	sill	snug	squeak	study
same	seven	silly	so	squeeze	stuff
sand	seventeen	silver	soak	squirrel	stump
sandy	seventh	simple	soap	stable	stung
sandwich	seventy	sin	sob	stack	subject
sang	several	since	socks	stage	such
sank	sew	sing	sod	stair	suck
sap	shade	singer	soda	stall	sudden
sash	shadow	single	sofa	stamp	suffer
sat	shady	sink	soft	stand	sugar
satin	shake	sip	soil	star	suit

satisfactory	shaker	sir	sold	stare	sum
Saturday	shaking	sis	soldier	start	summer
sausage	shall	sissy	sole	starve	sun
savage	shame	sister	some	state	Sunday
save	shan't	sit	somebody	station	sunflower
savings	shape	sitting	somehow	stay	sung
saw	share	six	someone	steak	sunk
say	sharp	sixteen	something	steal	sunlight
scab	shave	sixth	sometime	steam	sunny
scales	she	sixty	sometimes	steamboat	sunrise
scare	she'd	size	somewhere	steamer	sunset
scarf	she'll	skate	son	steel	sunshine
school	she's	skater	song	steep	supper
schoolboy	shear	ski	soon	steeple	suppose
schoolhouse	shears	skin	sore	steer	sure
schoolmaster	shed	skip	sorrow	stem	surely
schoolroom	sheep	skirt	sorry	step	surface
scorch	sheet	sky	sort	stepping	surprise
score	shelf	slam	soul	stick	swallow
scrap	shell	slap	sound	sticky	swam
scrape	shepherd	slate	soup	stiff	swamp
scratch	shine	slave	sour	still	swan
scream	shining	sled	south	stillness	swat
screen	shiny	sleep	southern	sting	swear
screw	ship	sleepy	space	stir	sweat
scrub	shirt	sleeve	spade	stitch	sweater
sea	shock	sleigh	spank	stock	sweep
seal	shoe	slept	sparrow	stocking	sweet
seam	shoemaker	slice	speak	stole	sweetness
search	shone	slid	speaker	stone	sweetheart
season	shook	slide	spear	stood	swell
seat	shoot	sling	speech	stool	swept
second	shop	slip	speed	stoop	swift
secret	shopping	slipped	spell	stop	swim
see	shore	slipper	spelling	stopped	swimming
seeing	short	slippery	spend	stopping	swing
seed	shot	slit	spent	store	switch
seek	should	slow	spider	stork	sword
seem	shoulder	slowly	spike	stories	swore

seen	shouldn't	sly	spill	storm
seesaw	shout	smack	spin	stormy
select	shovel	small	spinach	story
self	show	smart	spirit	stove
selfish	shower	smell	spit	straight

T

table	tease	they've	tickle	took	trim
tablecloth	teaspoon	thick	tie	tool	trip
tablespoon	teeth	thief	tiger	toot	trolley
tablet	telephone	thimble	tight	tooth	trouble
tack	tell	thin	till	toothbrush	truck
tag	temper	thing	time	toothpick	true
tail	ten	think	tin	top	truly
tailor	tennis	third	tinkle	tore	trunk
take	tent	thirsty	tiny	torn	trust
taken	term	thirteen	tip	toss	truth
taking	terrible	thirty	tiptoe	touch	try
tale	test	this	tire	tow	tub
talk	than	thorn	tired	toward	Tuesday
talker	thank	those	title	towards	tug
tall	thanks	though	to	towel	tulip
tame	thankful	thought	toad	tower	tumble
tan	Thanksgiving	thousand	toadstool	town	tune
tank	that	thread	toast	toy	tunnel
tap	that's	three	tobacco	trace	turkey
tape	the	threw	today	track	turn
tar	theater	throat	toe	trade	turtle
tardy	thee	throne	together	train	twelve
task	their	through	toilet	tramp	twenty
taste	them	throw	told	trap	twice
taught	then	thrown	tomato	tray	twig
tax	there	thumb	tomorrow	treasure	twin
tea	these	thunder	ton	treat	two
teach	they	Thursday	tone	tree	
teacher	they'd	thy	tongue	trick	
team	they'll	tick	tonight	tricycle	
tear	they're	ticket	too	tried	

U

ugly	undress	unhurt	unless	upper	us
umbrella	unfair	uniform	unpleasant	upset	use
uncle	unfinished	United	until	upside	used
under	unfold	States	unwilling	upstairs	useful
understand	unfriendly	unkind	up	uptown	
underwear	unhappy	unknown	upon	upward	

V

valentine	value	velvet	victory	vine	visitor
valley	vase	very	view	violet	voice
valuable	vegetable	vessel	village	visit	vote

W

wag	way	we're	who'll	wise	worm
wagon	wayside	west	whom	wish	worn
waist	we	western	who's	wit	worry
wait	weak	wet	whose	witch	worse
wake	weakness	we've	why	with	worst
waken	weaken	whale	wicked	without	worth
walk	wealth	what	wide	woke	would
wall	weapon	what's	wife	wolf	wouldn't
walnut	wear	wheat	wiggle	woman	wound
want	weary	wheel	wild	women	wove
war	weather	when	wildcat	won	wrap
warm	weave	whenever	will	wonder	wrapped
warn	web	where	willing	wonderful	wreck
was	we'd	which	willow	won't	wren
wash	wedding	while	win	wood	wring
washer	Wednesday	whip	wind	wooden	write
washtub	wee	whipped	windy	woodpecker	writing
wasn't	weed	whirl	windmill	woods	written
waste	week	whisky	window	wool	wrong
watch	we'll	whiskey	wine	woolen	wrote
watchman	weep	whisper	wing	word	wrung
water	weigh	whistle	wink	wore	
watermelon	welcome	white	winner	work	
waterproof	well	who	winter	worker	

wave
wax

went
were

who'd
whole

wipe
wire

workman
world

X

-

Y

yard
yarn
year
yell

yellow
yes
yesterday
yet

yolk
yonder
you
you'd

you'll
young
youngster
your

yours
you're
yourself
yourselves

youth
you've

Z

Appendix B

Pre-Pilot Tryout Phase Probes

Kindergarten/Early First Grade

Name: _____ Date: _____

I see a  .

ball call

I know a  .

toy boy

I saw the  .

bag bus

He needs to  .

stop mop

Open the  .

door dog

Bake the  .

tape cake

Cat has a new  .

hat had

I see a  .

hope house

I am a good .

friend

father

We  together.

pat

play

He .

rides

bikes

Ending First Grade

Name: _____ Date: _____

the  can fly it is pretty

I see a  the  is old the  is big

give me the  I like yellow  thank you for the 

I had a black  I love my  he knows how to sit

I like to eat  they are good to eat

the  hops he is very fast the  is going home

see the  jump the  jumped over the dog the  is little

I saw a  fly I saw the plane fly over my 

she lives in a  once I played at her 

he will ride his  I will walk she will run

 have some  I think the  are pretty

 are made of  I know how to make a 

I got  when I was four I had  they were red and yellow

we like to play  we play every day playing  is fun

my  is brown he is big and old I got my  from my mom

Ending First Grade

I love sunny days on sunny days I like to ride my bike and play outside when I am outside I like to climb trees

I like to pick white and yellow flowers that grow in my yard sometimes I go to the park I live three houses away from the park I could stay outside all day when it is sunny

my mom told me I was getting a big surprise on Saturday the surprise was a secret I tried to ask my dad but he could not tell me

I want a fast new bike for my birthday I saw the one I want in a store last week my parents know this is the kind of bike I have always wanted

in the morning I looked out the window there was white snow on the ground and on top of cars I was happy

on sunny days I go to the park to play I live with my family three houses away my big brother always takes me to the park

Second Grade Probes

one day as I was walking home from school I saw a something shiny lying upon the ground I decided to move closer to the shiny object the object looked like an old dime even though the top looked new the back was covered in dirt I took the dime home and washed it then I gave the dime to my mom so she could see what I found

I was very tired in the morning before going to school when I got to school I noticed all of my friends sitting quietly the teacher told us to get out a piece of paper for a test the teacher said to write your name at the top of the paper I wish I had stayed in bed I did not feel like taking a test and working today

in the summer Ann always likes to grow plants in the garden she works in the garden and pulls weeds seeing the plants get green and tall makes Ann happy Ann gives the plants water and picks bugs off the plants working in the garden is her favorite thing she wishes she could have a garden even in the winter

once I went camping with my family before we left we packed sleeping bags and a tent at first I was scared about camping I had never been camping in the woods before we walked in the woods and found a good spot for our tent we cooked our dinner over an open fire and then went to sleep under the stars

my favorite food is pizza I like many kinds of pizza I think cheese pizza is the best when my family eats pizza I tell the person what I want I get to buy the pizza I always use manners when I ask for pizza I wish I could eat pizza for dinner every day pizza is great

Third Grade

our class went on a field trip to a building called an art museum on the field trip we were told to bring a lunch with a drink and that we would carry our lunch with us at the museum we saw many different paintings I have never seen so many paintings each room had ten paintings along with other kinds of artwork

the solar system is made up of planets moons stars and the sun the sun is the biggest star in our solar system and gives the Earth light and heat eight planets are also found in the solar system Mercury is the closest planet to the sun and very hot Neptune is far away from the sun and is cold Neptune looks blue and has eight moons the Earth is the fourth planet from the Sun the Earth is the only planet with water that people and animals can drink

Ben and Scott were playing baseball at the city park they noticed dark clouds in the sky but they still wanted to keep playing they decided to try to finish their game before the storm started the sky began to grow dark but they kept playing suddenly they heard thunder and saw a flash of bright light Ben and Scott became scared and ran home as the rain started

Appendix C

Pilot Phase 1 Practice Instructions and Probes

Early First Grade Instructions

Guided Practice

[HAND OUT GUIDED/INDEPENDENT PRACTICE.]

"Today we are going to do some reading."

"Look at the top of the page where there are two hands. We are all going to practice the first passage together."

[Point to Section].

"In this activity you will read short passages and find each idea or thought. You will make a slash with your pencil between each idea where the end mark of a sentence or question would go. We are using slashes today instead of periods or question marks because they are easier to see. Look at the first practice."

"Let's go through Practice 1 together."

[Demonstrate by holding up a G/I Practice exercise]. "Point to the sentence with the dog." (Point to Practice 1). This reads *the dog is little* [Pause] *he is funny*. There are two separate ideas in this passage: *the dog is little* and *he is funny*. Trace the slash between *little* and *he*. This is the same place an end mark or a period for a sentence would go.

Practice 1

the  is little / he is funny/

"Let's try another one."

"Look at Practice 2 and put your finger on the house. [Point to Practice 2]. This reads *I see houses* [Pause] *I like big houses* [Pause]. There are two separate ideas in this passage. The first idea is *I see houses*. Trace the slash between *houses* and *I*. Remember this is the same place an end mark would go or a period for a sentence would go. The second idea is *I like big houses*.

Practice 2

I see   / I like big  

Independent Practice

"Now you will do two practice passages on your own. Find the picture of one hand and put your finger on it. These passages are just for practice."

“Find Practice 3 that has a picture of a ball and put your finger on it. **(Check to ensure students have their finger in the correct place).** “When I say begin start reading Practice 3 then go on to Practice 4. **(Point to Practice 3, then 4).** Remember to read carefully before you make your slash. When you have finished put your finger on the last word you read. Any questions?”
“Ready, begin.”

Example 3

I see a  the  is big it can roll/

Example 4

I see a  the  is fast it can fly/

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS]

Once everyone has completed the Independent Practice say: “Did everyone finish?”

“Now let’s check your answer to Practice 3. **(Hold up paper. Point).** There are three ideas in this passage. The first idea is *I see a ball*. *Everyone* place a slash between *ball* and *the*. The second idea is *the ball is big*. Make a slash between *big* and *it*. The third idea is *it can roll*. “

“Now let’s check your answer to Practice 4. **(Hold up paper. Point).** There are three ideas in this passage. The first idea is *I see a plane* so everyone make a slash between *plane* and *the*. This is the same place we would put an end mark or a period. The second idea is *the plane is fast*. Make a slash between *fast* and *it*. The third idea is *it can fly*.”

“Does anyone have any questions about what to do?”

[Collect practice forms.]

Pilot Probe Practice **(After administering and collecting Guided/Independent Practice).**



1. Say these specific directions:

“ Today you will be doing some reading like we just practiced. Some passages will be easy and some will be hard. Most people do not get all of the correct answers or finish reading. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you come to a passage that is too hard, you can skip it. Try your best but do not spend too much time on one passage.
Remember to read carefully before you make your slash. Any questions?

- Begin

- ☐ 2. **Start your stopwatch.** This practice is for pilot information only, Make a note of how long it takes most students to finish the page of pilot practice probes. Make notes about any problems, apparent sources of confusion, etc.

Early First Grade Bi-Weekly Administration & Scoring Directions
Administration Directions

- ☐ 1. Practice worksheets have been collected.
- ☐ 2. Write the date on the board.
- ☐ 3. Handout student copies of MAP: Reading.
- ☐ 4. Instruct the students to write their name on the paper, then turn the paper face down.
- ☐ 5. Say these specific directions:
- “ Today you will be doing some reading {like we just practiced}. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you finish all the passages on the front page, continue to the back of the page [**TURN YOUR PAPER TO THE BACK**]. If you come to a passage that is too hard give it your best attempt but do not spend too much time on one passage. Remember to read carefully before you make your slash. Any questions?
- Turn your paper over.
 - Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions.
- a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say “**Remember to read carefully before making slashes.**”
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** “Stop, put your finger on the last word you read. Now make an X [**Demonstrate an x in the air with your hand**] over that word. Turn your papers face down.”
- ☐ 10. Collect the papers.

Scoring Directions

1. Using the scoring template, for each page of passages, count the number of correct slashes, the number of slashes in the wrong place (Commissions--including those at the beginning and end of each separate passage), and the number of missing slashes (Omissions). Record these numbers at the bottom of the last page of passages.
2. Add the number of Omissions and Commissions per page (Errors) and record at the bottom of the last page.
3. At the bottom of the last page of the passages, add the number of Omissions, Commissions, Errors and Correct Slashes for each page. These are the student's overall scores that will be entered into the database.
4. Locate the place where the student made the X (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with an X and add these together to determine Total Words Read. Record this on the last page of the passages.

Progress Monitoring
E-1
Guided Practice

Example 1

the  is little / he is funny/

Example 2

I see   / I like big   /

Example 3

I see a  the  is big it can roll/

Example 4

I see a  the  is fast it can fly/

**Example 3
Answer**

I see a  /the  is big / it can roll/

**Example 4
Answer**

I see a  / the  is fast /it can fly/

Name: _____ Date: _____

the  can fly it is pretty/ 7

give me the  I like yellow  thank you for the  /20

I had a black  I love my  he knows how to sit/ 34

I like to eat   they are good to eat/ 45

the  hops he is very fast the  is going home/ 57

see the  jump the  jumped over the dog the  is little/ 71

I saw a  fly I saw the plane fly over my  / 84

she lives in a  once I played at her  / 95

he will ride his  I will walk she will run/ 101

Progress Monitoring E-1



are made of



I know how to make a



/ 114

When I was four I got



I had



they were red and yellow/

130

we like to play



we play every day playing



is fun /

143

my



is brown he is big and old I got my



from my mom/

159

	Correct Slashes	Omissions		Comissions		Total Errors		Total Score		Words Read
Pg. 1			+		=					
Pg. 2			+		=					
			-		=					

Second Grade Practice Instructions

Guided Practice

“Today you will [also] be doing some reading. First we are going to practice.” [HAND OUT GUIDED/INDEPENDENT PRACTICE. Be sure Side 1 is face up].

“Look at the top of the page where it says ‘Guided Practice’ **[Point to Section]**. We are all going to read this passage together”

“In this activity you will read short passages and find each idea or thought. You will make a slash with your pencil between each idea where the end mark or period for a sentence would go. Look at the first example which has been done for you.”

“Let’s go through the first passage together.”

“Look at Example 1 **[Point to Example 1]**.”

Example 1	my favorite time of year is fall /I love the cold weather and watching leaves fall off the trees/ the leaves turn many colors/ my favorite leaves are yellow and orange
------------------	---

“Example 1 reads *my favorite time of year is fall* **[Pause]** *I love the cold weather and watching leaves fall off the trees***[Pause]** *the leaves turn many colors* **[Pause]** *my favorite leaves are yellow and orange*. There are four separate ideas in this passage. The first idea is *my favorite time of year is fall*. So we put a slash between *fall* and *I*. This is the same place an end mark or a period for a sentence would go. The second idea is *I love the cold weather and watching leaves fall off the trees*. The slash should be placed between *trees* and *the*. The third idea is *the leaves turn many colors*. There should be a slash between *colors* and *my*. The fourth idea is *my favorite leaves are yellow and orange*. We do not put slashes at the beginning of the first sentence or at the end of the last sentence in each box, only in between ideas where end marks should go.”

“Let’s try another one. Put your finger on Example 2 **[Point to Example 2]**.”

Example 2	once I went camping with my family/ before we left we packed sleeping bags and a tent/ at first I was scared to go camping/ I had never been camping in the woods/ we walked in the woods and found a good spot for our tent/ we cooked our dinner over an open fire and then went to sleep under the stars
------------------	---

“Example 2 reads *once I went camping with my family* [Pause] *before we left we packed sleeping bags and a tent* [Pause] *at first I was scared to go camping* [Pause] *I had never been camping in the woods* [Pause] *we walked in the woods and found a good spot for our tent* [Pause] *we cooked our dinner over an open fire and then went to sleep under the stars.* There are six separate ideas in this passage. The first idea is *once I went camping with my family*. So we put a slash between *family* and *before*. This is the same place an end mark or a period for a sentence would go. The second idea is *before we left we packed sleeping bags and a tent*. The slash should be placed between *tent* and *at*. The third idea is *at first I was scared to go camping*. There should be a slash between *camping* and *I*. The fourth idea is *I had never been camping in the woods*. There should be a slash between *woods* and *we*. The fifth idea is *we walked in the woods and found a good spot for our tent*. There should be a slash between *tent* and *we*. The sixth idea is *we cooked our dinner over an open fire and then went to sleep under the stars.* We do not put slashes at the beginning of the first sentence or at the end of the last sentence in each box, only in between ideas where end marks should go.”

Independent Practice

“Now you do two practice passages on your own. These passages are just for practice. “Everyone point to Example 3. When I say begin, start reading. Remember to read carefully before you make your slash. Read Examples 3 and 4. When you have finished put your pencil down. Any questions?”
“Ready, begin.”

Example 3	there are many different kinds of insects some insects are large and others are small most insects have wings but some do not these insects without wings will often grow wings as an adult wings help insects move and work many insects have two sets of wings on their bodies
------------------	---

Example 4

I started a new school last fall I did not know anyone at the new school and I was afraid I would not make friends my mother told me to tell my teachers I was a new student and they would help my mother was right I told every teacher I was new and they showed me where to sit and work

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS]

Once everyone has completed the Independent Practice say: “Did everyone finish?”
“Now let’s check your answer to Example 3. The passage reads *there are many different kinds of insects* **[Pause]** *some insects are large and others are small* **[Pause]** *most insects have wings but some do not* **[Pause]** *these insects without wings will often grow wings as an adult* **[Pause]** *wings help insects move and work* **[Pause]** *many insects have two sets of wings on their bodies.* There are six ideas in this passage. The first idea is *there are many different kinds of insects* so a slash should be placed between *insects* and *some*. This is the same place we would put an end mark or a period. The second idea is *some insects are large and others are small*. The slash should be between *small* and *most*. The third idea is *most insects have wings but some do not*. The slash should be between *not* and *these*. The fourth idea is *these insects without wings will often grow wings as an adult*. The slash should be between *adult* and *wings*. The fifth idea is *wings help insects move and work*. The slash should be between *work* and *many*. The sixth idea is *many insects have two sets of wings on their bodies*. We do not put slashes at the beginning of the first sentence or at the end of the last sentence in each box, only in between ideas where end marks should go. Look at Example 3. The slashes are already there.”

Example 3 Answer there are many different kinds of insects/ some insects are large and others are small/ most insects have wings but some do not/ these insects without wings will often grow wings as an adult/ wings help insects move and work /many insects have two sets of wings on their bodies

“Now let’s check your answer to Example 4. The passage reads *I started a new school last fall* **[Pause]** *I did not know anyone at the school and I was afraid I would not make friends* **[Pause]** *my mother told me to tell my teachers I was a new student and they would help* **[Pause]** *my mother was right* **[Pause]** *every teacher showed me where to sit and work.* There are five ideas in this passage. The first idea is *I started a new school last fall* so a slash should be placed between *fall* and *I*. This is the same place we would put an end mark or a period. The second idea is *I did not know anyone at the school and I was afraid I would not make friends.* The slash should be between *friends* and *my*. The third idea is *my mother told me to tell my teachers I was a new student and they would help.* The slash should be between *help* and *my*. The fourth idea is *my mother was right.* The slash should be between *right* and *every*. The fifth idea is *every teacher showed me where to sit and work.* We do not put slashes at the beginning of the first sentence or at the end of the last sentence in each box, only in between ideas where end marks should go. Look at the Example 4 answer. The slashes are already there.”

Example 4 Answer I started a new school last fall/ I did not know anyone at the school and I was afraid I would not make friends/ my mother told me to tell my teachers I was a new student and they would help/ my mother was right/ every teacher showed me where to sit and work

“Does anyone have any questions about what to do?”
[Collect practice forms.]

Progress Monitoring Ending 1
Guided Practice

Example 1

my favorite time of year is fall /I love the cold weather and watching
leaves fall off the trees/ the leaves turn many colors/ my
favorite leaves are yellow and orange /

Independent Practice

Example 3

there are many different kinds of insects some insects are large
and others are small most insects have wings but some do not
these insects without wings will of10 grow wings as an adult
wings help insects move and work many insects have two sets of
wings on their bodies/

Example 4

I started a new school last fall I did not know anyone at the new
school and I was afraid I would not make friends my mother told
me to tell my teachers I was a new student and they would help
my mother was right every teacher told me where to sit and
work/

Example 3 Answer

there are many different kinds of insects/ some insects are large and others are small/ most insects have wings but some do not/ these insects without wings will of10 grow wings as an adult/ wings help insects move and work /many insects have two sets of wings on their bodies/

Example 4 Answer

I started a new school last fall/ I did not know anyone at the school and I was afraid I would not make friends/ my mother told me to tell my teachers I was a new student and they would help/ my mother was right/ every teacher told me where to sit and work/

Name: _____ Date: _____

one day as I was walking home from school I saw something shiny lying upon the ground I decided to move closer to the shiny object the object looked like an old dime even though the top looked new the back was covered in dirt I took the dime home and washed it then I gave the dime to my mom so she could see what I found/

15
28
42
59
68

before planting a flower you must get a seed soil and flowerpot first the seed is placed in a flowerpot next the seed is covered with dirt and water plants need both water and sunlight to grow for plants to grow tall and green they must always have water every day also cold weather is not good for them they need the warmth from the sun to grow strong/

82
97
112
127
136

in the summer Ann always likes to grow plants in the garden she works in the garden and pulls weeds seeing the plants grow green and tall makes Ann happy Ann gives the plants water and picks bugs off the plants working in the garden is her favorite thing to do she wishes she could have a garden even in the winter/

152
165
180
196
198

Progress Monitoring 2

both thunder and lightning are made during storms many storms cause rain
 very bad storms make hail tornadoes are storms that are always dangerous
 these storms have strong winds tornadoes happen fast sitting in a hall is the
 right thing to do with a tornado basements are also safe the radio tells people
 when to seek shelter make sure to take a flashlight and phone with you/

210

222

236

251

265

once I went camping with my family before we left we packed sleeping bags
 and a 10t at first I was scared about camping I had never been camping in the
 woods before we walked in the woods and found a good spot for our 10t we
 cooked our dinner over an open fire and then went to sleep under the stars/

279

296

312

327

snakes are reptiles that don't like cold weather snakes always like warm dry
 climates snakes like to make their homes around rocks they live and sleep
 underneath rocks there are many kinds of snakes most snakes hunt and eat
 small animals such as rats snakes are found in many different sizes shapes and
 colors the way a snake looks and hunts depend on where it lives snakes are
 found in almost every part of the world/

340

353

366

380

395

403

Correct Slashes	Omissions	Commissions	Total Errors	Total Score

(MAP:R)

Third Grade Practice Instructions

Guided Practice

“Today you will [also] be doing some reading. First we are going to practice.” [HAND OUT GUIDED/INDEPENDENT PRACTICE. Be sure Side 1 is face up].

“Look at the top of the page where it says ‘Guided Practice’ **[Point to Section]**. We are all going to read this passage together”

“In this activity you will read short passages and find each idea or thought. You will make a slash with your pencil between each idea where the end mark or a period for a sentence or question would go. Look at the first example which has been done for you.”

“Let’s go through the first passage together.”

“Look at Example 1 **[Point to Example 1]**.”

Example 1	our class went on a field trip to an art museum/ we were told to bring a lunch with a drink and that we would carry our lunch with us/ we saw many different paintings / I have never seen so many paintings/ each room had ten paintings along with other kinds of artwork/
------------------	--

“Example 1 reads *our class went on a field trip to an art museum* **[Pause]** *we were told to bring a lunch with a drink and that we would carry our lunch with us* **[Pause]** *we saw many different paintings* **[Pause]** *I have never seen so many paintings* **[Pause]** *each room had ten paintings along with other kinds of artwork*. There are five separate ideas in this passage. The first idea is *our class went on a field trip to an art museum*. A slash should be placed between *museum* and *we*. Remember this is the same place an end mark or period would go. The second idea is *we were told to bring a lunch with a drink and that we would carry our lunch with us*. The slash should be between *us* and *we*. The third idea is *we saw many different paintings*. The slash should be between *paintings* and *I*. The fourth idea is *I have never seen so many paintings*. The slash should be between *paintings* and *each*. The fifth idea is *each room had ten paintings along with other kinds of artwork*. We do not put slashes at the beginning of the first sentence, only in between ideas where end marks or periods should go.”

Independent Practice

“Now you do two practice passages on your own. These passages are just for practice.”

“Everyone point to Example 3. When I say begin, start reading. Remember to read carefully before you make your slash. Read Examples 3 and 4. When you have finished put your pencil down. Any questions?”

“Ready, begin.”

Example 3

Ben and Scott were playing baseball at the city park they noticed dark clouds in the sky but they still wanted to keep playing they decided to try to finish their game before the storm started the sky began to grow dark but they kept playing suddenly they saw a flash of bright light and heard thunder Ben and Scott became scared and ran home as the rain started/

Example 4

the solar system is made up of planets moons stars and the sun the sun is the biggest star in our solar system and gives the Earth light and heat eight planets are also found in the solar system Mercury is the closest planet to the sun and very hot the planet Neptune is far away from the sun and is cold Neptune looks blue and has eight moons the Earth is the fourth planet from the sun the Earth is the only planet with water that people and animals can drink/

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS]

Once everyone has completed the Independent Practice say: “Did everyone finish?”

“Now let’s check your answer to Example 3. The passage reads *Ben and Scott were playing baseball at the city park* **[Pause]** *they noticed dark clouds in the sky but they still wanted to keep playing* **[Pause]** *they decided to try to finish their game before the storm started* **[Pause]** *the sky began to grow dark but they kept playing* **[Pause]** *suddenly they saw a flash of bright light and heard thunder* **[Pause]** *Ben and Scott became scared and ran home as the rain started.* There are

six ideas in this passage. The first idea is *Ben and Scott were playing baseball at the city park*. A slash should be placed between *park* and *they*. This is the same place we would put an end mark or period. The second idea is *they noticed dark clouds in the sky but they still wanted to keep playing*. The slash should be between *playing* and *they*. The third idea is *they decided to try to finish their game before the storm started*. The slash should be between *started* and *the*. The fourth idea is *the sky began to grow dark but they kept playing*. The slash should be between *playing* and *suddenly*. The fifth idea is *suddenly they saw a flash of bright light and heard thunder*. The slash should be between *thunder* and *Ben*. The sixth idea is *Ben and Scott became scared and ran home as the rain started*. We do not put slashes at the beginning of the first sentence only in between ideas where end marks or periods should go. Look at the Example 3 answer. The slashes are already there.”

Example 3 Answer	Ben and Scott were playing baseball at the city park /they noticed dark clouds in the sky but they still wanted to keep playing/ they decided to try to finish their game before the storm started/ the sky began to grow dark but they kept playing/ suddenly they saw a flash of bright light and heard thunder/ Ben and Scott became scared and ran home as the rain started/
-------------------------	---

“Now let’s check your answer to Example 4. The passage reads *the solar system is made up of planets moons stars and the sun* **[Pause]** *the sun is the biggest star in our solar system and gives the Earth light and heat* **[Pause]** *eight planets are also found in the solar system* **[Pause]** *Mercury is the closest planet to the sun and very hot* **[Pause]** *the planet Neptune is far away from the sun and is cold* **[Pause]** *Neptune looks blue and has eight moons* **[Pause]** *the Earth is the fourth planet from the sun* **[Pause]** *the Earth is the only planet with water that people and animals can drink*. There are eight ideas in this passage. The first idea is *the solar system is made up of planets moons stars and the sun*. A slash should be placed between *sun* and *the*. This is the same place we would put an end mark or period. The second idea is *the sun is the biggest star in our solar system and gives the Earth light and heat*. The slash should be between *heat* and *eight*. The third idea is *eight planets are also found in the solar system*. The slash should be between *system* and *Mercury*. The fourth idea is *Mercury is the closest planet to the sun and very hot*. The slash should be between *hot* and *the*. The fifth idea is *the planet Neptune is far away from the sun and is cold*. The slash should be between *cold* and *Neptune*. The sixth idea is *Neptune looks blue and has eight moons*. The slash should be between *moons* and *the*. The seventh idea is *the Earth is the fourth planet from the sun*. The slash should be between *sun* and *the*. The

eighth idea is *the Earth is the only planet with water that people and animals can drink*. We do not put slashes at the beginning of the first sentence, only in between ideas where end marks or periods should go. Look at the Example 4 answer. The slashes are already there.”

Example 4

the solar system is made up of planets moons stars and the sun/ the sun is the biggest star in our solar system and gives the Earth light and heat/ eight planets are also found in the solar system/ Mercury is the closest planet to the sun and very hot/ the planet Neptune is far away from the sun and is cold/ Neptune looks blue and has eight moons/ the Earth is the fourth planet from the sun/ the Earth is the only planet with water that people and animals can drink/

“Does anyone have any questions about what to do?”
[Collect practice forms.]

Third Grade Bi-Weekly Administration & Scoring Directions

Administration Directions

- ☐ 1. Practice worksheets have been collected.
- ☐ 2. Write the date on the board.
- ☐ 3. Handout student copies of MAP: Reading.
- ☐ 4. Instruct the students to write their name on the paper, then turn the paper face down.
- ☐ 5. Say these specific directions:

“Today you will be doing some reading {like we just practiced}. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you finish all the passages on the front page, continue to the back of the page [**TURN YOUR PAPER TO THE BACK**]. If you come to a passage that is too hard give it your best attempt but do not spend too much time on one passage. Remember to read carefully before you make your slash. Any questions?

 - Turn your paper over.
 - Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions.
 - a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say **“Remember to read carefully before making slashes. “**
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** “Stop, put your finger on the last word you read. Now make an X over that word. Turn your papers face down.”
- ☐ 10. Collect the papers.

Scoring Directions

1. Using the scoring template, for each page of passages, count the number of correct slashes, the number of slashes in the wrong place (Commissions--including those at the beginning and end of each separate passage), and the number of missing slashes (Omissions). Record these numbers at the bottom of the last page of passages.
2. Add the number of omissions and commissions per page (Errors) and record at the bottom of the last page.
3. At the bottom of the last page of the passages, add the number of Omissions, Commissions, Errors and Correct Slashes for each page. These are the student's overall scores that will be entered into the database.
4. Locate the place where the student made the X (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with an X and add these together to determine Total Words Read. Record this on the last page of the passages.

Guided Practice

Example 1

our class went on a field trip to an art museum/ we were told to bring a lunch with a drink and that we would carry our lunch with us/ we saw many different paintings / I have never seen so many paintings/ each room had 10 paintings along with other kinds of artwork/

Independent Practice

Example 3

Ben and Scott were playing baseball at the city park they noticed dark clouds in the sky but they still wanted to keep playing they decided to try to finish their game before the storm started the sky began to grow dark but they kept playing suddenly they saw a flash of bright light and heard thunder Ben and Scott became scared and ran home as the rain started/

Example 4

the solar system is made up of planets moons stars and the sun the sun is the biggest star in our solar system and gives the Earth light and heat eight planets are also found in the solar system Mercury is the closest planet to the sun and very hot the planet Neptune is far away from the sun and is cold Neptune looks blue and has eight moons the Earth is the fourth planet from the sun the Earth is the only planet with water that people and animals can drink/

Example 3 Answer

Ben and Scott were playing baseball at the city park /they noticed dark clouds in the sky but they still wanted to keep playing/ they decided to try to finish their game before the storm started/ the sky began to grow dark but they kept playing/ suddenly they saw a flash of bright light and heard thunder/ Ben and Scott became scared and ran home as the rain started/

Example 4 Answer

the solar system is made up of planets moons stars and the sun/ the sun is the biggest star in our solar system and gives the Earth light and heat/ eight planets are also found in the solar system/ Mercury is the closest planet to the sun and very hot/ the planet Neptune is far away from the sun and is cold/ Neptune looks blue and has eight moons/ the Earth is the fourth planet from the sun/ the Earth is the only planet with water that people and animals can drink/

Progress Monitoring 2

Name: _____ Date: _____

I want to tell you about an exciting event that happened it all started when I woke up at seven in the morning my mother told me she had a surprise for me and to come downstairs we walked down the stairs together and she told me to close my eyes I was so excited then she asked me to slowly open my eyes I opened my eyes and saw a new 10t for camping/

16
33
47
65
75

the Earth is made up of living and non-living things non-living things are water and air together plants and animals make up living things animals and plants need both water and air to grow they need air and water to live it is important to keep water and air clean for living things clean water and air will help plants and animals/

89
102
119
135
137

my favorite class in school is art because I love to draw and make pictures in art class I like to draw pictures and then show them to my closest friends sometimes the pictures I make are so funny that they make my friends laugh I got to work for a long time in art class and I made six pictures to share with my friends I always try to give my best friends funny drawings that will make them happy but I keep my favorites for myself/

153
168
183
201
216
225

a science notebook is a useful tool the notebooks can be used for many things
 you can keep pictures you draw of living and non-living things these notebooks
 will also hold much of the data you need to keep t the notebooks are easy to
 carry and you can bring them anywhere/

240

252

267

277

today at school I got hurt on the playground during recess everything started
 when I was climbing on the high monkey bars with my friends I tried to hold
 on to the monkey bars but my hands slipped and I took a hard fall to the ground
 my teacher saw what happened and helped me she was kind and helped me
 clean the cut and pick myself up next time I will hold on tighter/

290

306

323

336

352

leaves come in many different shapes and sizes and are found on plants each
 kind of leaf makes food for the plant that helps it grow leaves have veins and
 these veins help bring water to every part of the plan they also carry food to
 different parts of the plant some special leaves even have spines or bud scales
 that catch insects only some leaves will change color in the fall when they start
 to die after leaves change colors it is not long until they die and fall off /

366

382

398

412

426

443

Correct
Slashes

Omissions

Commissions

Total Errors

Total Score

Appendix D

Pilot Study 2 and 3 Probes

**Early First Grade Instructions
Guided Practice**

[HAND OUT GUIDED/INDEPENDENT PRACTICE.]

"Today we are going to do some reading. Before we start, write your first and last name on your paper. **(GIVE STUDENTS ADEQUATE TIME TO DO THIS AND MAKE SURE BOTH FIRST AND LAST NAME ARE WRITTEN ON PAPERS)**. Now write the date on your paper. Today's date is **(SAY THE DATE AND WRITE THE DATE WITH SLASH (/) MARKS ON THE BOARD [mm/dd/yy])**. Look at the date. Notice how I put a slash mark **(POINT TO SLASH)** in between the numbers. This is the same kind of slash you will make in today's reading."

"Look at the top of the page where there are two hands. **[POINT TO SECTION]**. We are all going to practice the first passage together."

"In this activity you will read short passages and find each word. You will make a slash with your pencil between each word. Look at the first passage."

"Let's go through Passage 1 together."

[DEMONSTRATE BY HOLDING UP THE PRACTICE EXERCISE]. "Point to the first passage." **[POINT TO PASSAGE 1]**. "This reads *the dog runs* **[PAUSE]** *he is fast*. There are six words in this passage. The first word is *the*. Trace the slash between *the* and *dog*. The second word is *dog*. Trace the slash between *dog* and *runs*. **[POINT]**. The third word is *runs*. Trace the slash between *runs* and *he*. **[POINT]**. The fourth word is *he*. Trace the slash between *he* and *is*. The fifth word is *is*. Trace the slash between *is* and *fast*. The last word is *fast*. We do not put a mark after *fast* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between **[SAY WITH EMPHASIS]** words."

Passage 1

t h e / d o g / r u n s / h e / i s / f a s t

"Let's try another one."

"Look at Passage 2 and put your finger on it **[POINT TO PASSAGE 2]**. This reads *the dog runs away* **[PAUSE]** *he runs far*. There are seven words in this passage. The first word is *the*. Trace the slash between *the* and *dog*. The second word is *dog*. Trace the slash between *dog* and *runs*. The third word is *runs*. Trace the slash between *runs* and *away*. The fourth word is *away*. Trace the slash between *away* and *he*. Notice that you have to read carefully to know where to put your slashes. Look at the word *away*. We do not **[SAY WITH EMPHASIS]** put a mark between *a* and *way* because that would not make sense. So, read carefully before you make your slash. The fifth word is *he*. Trace the slash between *he*

and *runs*. The sixth word is *runs*. Trace the slash between *runs* and *far*. The seventh word is *far*. We do not put a slash after *far* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between words.”

Passage 2

t h e / d o g / r u n s / a w a y / h e / r u n s / f a r

Independent Practice

“Now you will do two practice passages on your own. Find the picture of one hand and put your finger on it. These passages are just for practice.”

“Find Passage 3 and put your finger on it. When I say begin, start reading and make slashes between words in Passage 3, then go on to Passage 4 and do the same thing. **[POINT TO PASSAGE 3, THEN 4].** Remember to make a slash between **[SAY WITH EMPHASIS]** each word but not at the beginning or end of the passage. Remember to read carefully before you make your slashes. When you have finished put your finger on the last word you read. Any questions?”

“Ready, begin.”

Passage 3

I l o o k u p I s e e a b i r d

Passage 4

t h e d o g l o o k s u p h e s e e s t h e s k y

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS; If a student stops at Passage 3, say “Continue on to Passage 4.”]

AT THE END OF EXACTLY 2 MINUTES SAY:

“Now let’s check your answers to Passage 3. **[HOLD UP PAPER. POINT]**. You will look to see if your slashes are in the right place as we go along. If you left out a slash, please put it in the right place. **[If at any time during the practice a child asks what to do if he/she made a slash in the wrong place, say:** “That’s okay, just put an X on the answer you don’t want and let’s keep going.”] There are seven words in this passage, *I look up* **[PAUSE]** *I see a bird*. The first word is *I*. You should have made a slash between *I* and *look*. **[POINT]**. The second word is *look*. You should have made a slash between *look* and *up*. The third word is *up*. You should have made a slash between *up* and *I*. **[POINT]**. The fourth word is *I*. You should have made a slash between *I* and *see* **[POINT]**. The fifth word is *see*. You should have made a slash between *see* and *a* **[POINT]**. The sixth word is *a*. You should have made a slash between *a* and *bird*. **[POINT]**. The seventh word is *bird* **[POINT]**. Remember we do not make a slash after *bird* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between words.”

“Now let’s check your answers to Passage 4. **[HOLD UP PAPER. POINT]**. There are eight words in this passage, *the dog looks up* **[PAUSE]** *he sees the sky*. The first word is *the*. You should have made a slash between *the* and *dog*. The second word is *dog*. You should have made a slash between *dog* and *looks*. **[POINT]**. The third word is *looks*. You should have made a slash between *looks* and *up*. **[POINT]**. We don’t put a slash after the *k* in *look* because that wouldn’t make sense. You have to read carefully to be sure it makes sense before you make your slash. The fourth word is *up*. You should have made a slash between *up* and *he*. **[POINT]**. The fifth word is *he*. You should have made a slash between *he* and *sees* **[POINT]**. The sixth word is *sees*. You should have made a slash between *sees* and *the*. **[POINT]**. The seventh word is *the*. You should have made a slash between *the* and *sky* **[POINT]**. The last word is *sky*. **[POINT]**. Remember we do not make a slash after *sky* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between words.”

“Does anyone have any questions about what to do?”

[Collect practice forms.]

Early First Grade Bi-Weekly Administration & Scoring Directions
Administration Directions

- ☐ 1. Make sure all practice worksheets have been collected.
- ☐ 2. Distribute copies of MAP: Reading. Be sure students have the correct side up.
- ☐ 3. Instruct students to write their first and last name on their paper.
- ☐ 4. Write the date on the board (using slashes mm/dd/yy). Instruct students to write the date on their paper.
- ☐ 5. Say these specific directions:
“Today you will be doing some reading {like we just practiced}. You will read passages and make a slash between each word but not at the beginning or end of each passage. Some will be easy and some will be hard. Most people will not get all of the correct answers or finish reading. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you finish reading on the front page, go on to the back **[TURN YOUR PAPER TO THE BACK]**. If you come to a passage that is too hard, try your best but do not spend too much time on one passage. We will do this for three minutes. Remember to read carefully before you make your slash. If you change your mind, do not erase. Just make an X on the wrong answer and keep working. Any questions?”
 - Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions
 - a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
 - c. Do they have the correct side of the paper up?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say **“Remember to read carefully before making slashes.”**
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** “Stop, put your finger on the last word you read. Now draw a circle **[Demonstrate a circle in the air with your hand]** around that word. Turn your papers face down. Put your pencil on your desk.”
- ☐ 10. Collect the papers.

Scoring Directions

- 1. Using the scoring template, for each page of passages, count the number of words read for each passage. Locate the place where the student made the circle (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with a circle and add these together to determine Words Read. Record this on the last page of the passages.
- 2. Next count the number of missing slashes (Omissions) and the number of slashes in the wrong place (Commissions) (Note: Do NOT count slashes made at the beginning or end of each separate passage). Record the number of Omissions and Commissions at the bottom of the last page of passages.
- 3. Add the number of Omissions and Commissions to determine Total Errors and record at the bottom of the last page.
- 4. At the bottom of the last page of passages, subtract the number of Total Errors from the number of Words Read. This will give you the student's Total score. The scores at the bottom of the last page of passages are the student's scores that will be entered into the database.



Progress Monitoring 1
Guided Practice



Name: _____

Date: _____

Passage 1

t h e / d o g / r u n s / h e / r u n s / f a s t

Passage 2

t h e / d o g / r u n s / a w a y / h e / r u n s / f a r



Independent Practice

Passage 3

I l o o k u p I s e e a b i r d

Passage 4

t h e d o g l o o k s u p h e s e e s t h e s k y



Progress Monitoring 1

Name: _____

Date: _____

I w a n t t h e b a l l g i v e m e t h e y e l l o w b a l l

O _____ C _____ 9

I s e e a b l a c k d o g m y d o g k n o w s h o w t o s i t

O _____ C _____ 20

w e l i k e t o e a t a p p l e s t h e y a r e g o o d t o e a t

O _____ C _____ 30

t h e r a b b i t h o p s h e i s r u n n i n g v e r y f a s t

O _____ C _____ 38

s e e t h e f r o g j u m p t h e f r o g i s l i t t l e

O _____ C _____ 46

I s a w a b i r d f l y i t f l e w o v e r m y h o u s e

O _____ C _____ 56

s h e l i v e s i n a h o u s e I p l a y e d a t h e r h o u s e

O _____ C _____ 66

Progress Monitoring 1

h e w i l l r i d e h i s w a g o n I w i l l w a l k s h e w i l l r u n

O _____ C _____ 77

I s e e a p r e t t y b i r d i t i s b l u e a n d w h i t e

O _____ C _____ 87

m y m o t h e r i s f u n s h e h e l p s m e s h e l o v e s m e

O _____ C _____ 97

t h e s u n i s h o t a n d y e l l o w w e l i k e t h e s u n

O _____ C _____ 107

Words Read	Omissions	Commissions	Total Errors	Total Score

Second Grade Instructions
Guided Practice

[HAND OUT GUIDED PRACTICE/INDEPENDENT PRACTICE]

"Today we are going to do some reading. Before you get started go ahead and write your first and last name on your paper. **(GIVE STUDENTS ADEQUATE TIME TO DO THIS AND MAKE SURE BOTH FIRST AND LAST NAME ARE WRITTEN ON PAPERS.)** Now write the date on your paper. Today's date is **(SAY THE DATE AND WRITE THE DATE WITH SLASH (/) MARKS ON THE BOARD [mm/dd/yy])**. Notice how I put a slash mark (/) **(POINT TO SLASH)** in between the numbers. This is the same kind of slash you will make in today's reading."

"Look at the top of the page where there are two hands.**[POINT TO SECTION]**. We are all going to read the first passage together."

"In this activity you will read short passages and find each idea or thought. You will make a slash with your pencil between each idea where the end mark of a sentence or question would go. Look at the first passage. We will do this one together."

Passage 1

my favorite time of year is fall / I love the cold weather / leaves
fall off the trees / the leaves turn many colors

"Passage 1 reads *my favorite time of year is fall* **[PAUSE]** *I love the cold weather* **[PAUSE]** *leaves fall off the trees* **[PAUSE]** *the leaves turn many colors*. The first idea is *my favorite time of year is fall*. So we trace the slash between *fall* and *I*. This is the same place an end mark or a period for a sentence would go. The second idea is *I love the cold weather*. Trace the slash between *weather* and *leaves*. The third idea is *leaves fall off the trees*. Trace the slash between *trees* and *the*. The fourth idea is *the leaves turn many colors*. We do not put slashes at the beginning or end of a passage. We only put them in between **[SAY WITH EMPHASIS]** ideas where end marks or periods should go."

Independent Practice

"Now you will do two practice passages on your own. Find the picture of one hand and put your finger on it. These passages are just for practice."

"Find Passage 2 and put your finger on it. When I say begin, start reading and marking between ideas in Passage 2, then go on to Passage 3 and do the same thing. **[POINT TO PASSAGE 2, THEN 3]**. Remember to make a slash between **[SAY WITH EMPHASIS]** each idea but not at the beginning or end of the passage. Remember to read carefully before you make your slashes. When you have finished put your finger on the last word you read. Any questions?"

"Ready, begin."

Passage 2

there are many different kinds of insects some insects are large
others are small most insects have wings some insects do not

Passage 3

I started a new school last fall I did not know anyone at the
new school I was afraid that I would not make friends my
mother told me to tell my teachers that I was a new student
the teachers helped me

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS; If a student stops at Passage 2, say "Continue on to Passage 3."]

AT THE END OF 2 MINUTES SAY:

"Now let's check your answers to Passage 2. **[HOLD UP PAPER.POINT]** You will look to see if your slashes are in the right place as we go along. If you left out a slash, please put it in the right place. **[IF AT ANY TIME DURING THE PRACTICE A CHILD ASKS WHAT TO DO IF HE/SHE MADE A SLASH IN THE WRONG PLACE, SAY: "That's okay, just put an X on the answer you don't want and let's keep going."]** The

passage reads *there are many different kinds of insects* [PAUSE] *some insects are large* [PAUSE] *some insects are small* [PAUSE] *most insects have wings* [PAUSE] *some insects do not*. The first idea is *there are many different kinds of insects* so a slash should be placed after *insects* and before *some*. You should have made a slash after *insects* and before *some*. This is the same place we would put an end mark or a period. The second idea is *some insects are large*. You should have made a slash between *large* and *some*. The third idea is *some insects are small*. You should have made a slash between *small* and *most*. The fourth idea is *most insects have wings*. You should have made a slash between *wings* and *some*. The last idea is *some insects do not*. We do not put slashes at the beginning or end of a passage. We only put them in between ideas."

"Now let's check your answer to Passage 3. [HOLD UP PAPER.POINT]. The passage reads *I started a new school last fall* [PAUSE] *I did not know anyone at the new school* [PAUSE] *I was afraid that I would not make friends* [PAUSE] *my mother told me to tell my teachers that I was a new student* [PAUSE] *the teachers helped me*. The first idea is *I started a new school last fall* so a slash should be placed between *fall* and *I*. You should have made a slash between *fall* and *I*. The second idea is *I did not know anyone at the new school*. You should have made a slash between *school* and *I*. The third idea is *I was afraid that I would not make friends*. You should have made a slash between *friends* and *my*. The fourth idea is *my mother told me to tell my teachers that I was a new student*. You should have made a slash between *student* and *the*. The last idea is *the teachers helped me*. Remember we do not put slashes at the beginning or end of a passage. We only put them in between ideas."

"Does anyone have any questions about what to do?"

[Collect practice forms.]

Second Grade Bi-Weekly Administration & Scoring Directions
Administration Directions

- ☐ 1. Make sure all practice worksheets have been collected.
- ☐ 2. Distribute student copies of MAP: Reading. Be sure students have the correct side up.
- ☐ 3. Instruct students to write their first and last name on their paper.
- ☐ 4. Write the date on the board (using slashes mm/dd/yy). Instruct students to write the date on their paper.
- ☐ 5. Say these specific directions:
“Today you will be doing some reading {like we just practiced}. You will read passages and make a slash between ideas but not at the beginning or end of each passage. Some will be easy and some will be hard. Most people will not get all of the correct answers or finish reading. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you finish reading on the front page, continue to the back of the page **[TURN YOUR PAPER TO THE BACK]**. If you come to a passage that is too hard give it your best attempt but do not spend too much time on one passage. We will do this for three minutes. Remember to read carefully before you make your slash. If you change your mind, do not erase. Just make an X on the wrong answer and keep working. Any questions?”
 - Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions.
 - a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say **“Remember to read carefully before making slashes.”**
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** “Stop, put your finger on the last word you read. Now draw a circle around that word. Turn your papers face down. Put your pencils on your desk.”
- ☐ 10. Collect the papers.

Scoring Directions

- 1. Using the scoring template, for each page of passages, count the number of words read for each passage. Locate the place where the student made the circle (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with a circle and add these together to determine Words Read. Record this on the last page of the passages.
- 2. Next count the number of missing slashes (Omissions) and the number of slashes in the wrong place (Commissions) (Note: Do NOT count slashes made at the beginning or end of each separate passage). Record the number of Omissions and Commissions at the bottom of the last page of passages.
- 3. Add the number of Omissions and Commissions to determine Total Errors and record at the bottom of the last page.
- 4. At the bottom of the last page of passages, subtract the number of Total Errors from the number of Words Read. This will give you the student's Total score. The scores at the bottom of the last page of passages are the student's scores that will be entered into the database.



Progress Monitoring 2
Guided Practice



Name: _____

Date: _____

Passage 1

my favorite time of year is fall, I love the cold weather, leaves fall off the trees, the leaves turn many colors



Independent Practice

Passage 2

there are many different kinds of insects some insects are large some insects are small most insects have wings some insects do not

Passage 3

I started a new school last fall I did not know anyone at the new school I was afraid I would not make friends my mother told me to tell my teachers that I was a new student they helped me



Progress Monitoring 2

Name: _____

Date: _____

both thunder and lightning are made during storms many storms cause rain
very bad storms make hail tornadoes are storms that are always dangerous
these storms have strong winds tornadoes happen fast sitting in a hall is the
right thing to do basements are also safe the radio tells people when to seek
shelter make sure to take a flashlight and phone with you

12
24
38
53
64

once I went camping with my family before we left we packed sleeping bags
and a tent I was scared about camping I had never been camping in the woods
we walked in the woods and found a good spot for our tent we cooked our
dinner over an open fire and then went to sleep under the stars

78
94
110
123

snakes are reptiles that don't like cold weather snakes always like warm dry
climates snakes like to make their homes around rocks they live and sleep
underneath rocks there are many kinds of snakes most snakes hunt and eat
small animals such as rats snakes are found in many different sizes shapes and
colors the way a snake looks and hunts depends on where it lives snakes are
found in almost every part of the world

136
149
162
176
191
199

Words Read	Omissions	Commissions	Total Errors	Total Score

Mario's family grows crops in a large garden the sun and rain help the crops grow and stay healthy when there is not much rain Mario helps water the crops his family picks the crops in the fall they have a lot of food to eat in winter

214
228
246
247

Third Grade Instructions
Guided Practice

[HAND OUT GUIDED/INDEPENDENT PRACTICE.]

"Today we are going to do some reading. Before you get started go ahead and write your first and last name on your paper. **(GIVE STUDENTS ADEQUATE TIME TO DO THIS AND MAKE SURE BOTH FIRST AND LAST NAME ARE WRITTEN ON THEIR PAPERS)**. Now write the date on your paper. Today's date is **(SAY THE DATE AND WRITE THE DATE WITH SLASH (/) MARKS ON THE BOARD [mm/dd/yy])**. Notice how I put a slash mark (/) **(POINT TO THE SLASH)** in between the numbers. This is the same kind of slash you will make in today's reading."

"Look at the top of the page where there are two hands **(POINT TO SECTION)**. We are all going to practice the first passage together."

"In this activity you will read short passages and find each idea or thought. You will make a slash with your pencil between each idea where the end mark of a sentence or question would go. Look at the first practice."

"Let's go through Passage 1 together. "Passage 1 reads *our class went on a field trip to an art museum* **[PAUSE]** *we were told to bring a lunch with a drink* **[PAUSE]** *we carried our lunch with us* **[PAUSE]** *we saw many different paintings*. The first idea is *our class went on a field trip to an art museum*. Trace the slash between *museum* and *we*. Remember this is the same place an end mark or period would go. The second idea is *we were told to bring a lunch with a drink*. Trace the slash between *drink* and *we*. The third idea is *we carried our lunch with us*. Make a slash between *us* and *we*. The fourth idea is *we saw many different paintings*. We do not put slashes at the beginning or end of a passage. We only put them in between **[SAY WITH EMPHASIS]** ideas."

Passage 1	our class went on a field trip to an art museum; we were told to bring a lunch with a drink; we carried our lunch with us; we saw many different paintings
------------------	--

Independent Practice

"Now you will do two practice passages on your own. Find the picture of one hand and put your finger on it. These passages are just for practice."

"Find Passage 2 and put your finger on it. When I say begin, start reading and marking between ideas for Passage 2, then go on to Passage 3 and do the same thing. **[POINT TO PASSAGE 2 THEN 3]**. Remember to make slash between **[SAY WITH EMPHASIS]** each idea but not at the beginning or end of the passage. Remember to read carefully before you make your slash. When you have finished put your finger on the last word you read. Any questions?"

"Ready, begin."

Passage 2	at the city park Ben and Scott were playing baseball they noticed dark clouds in the sky they wanted to keep playing the boys decided to try to finish their game before the storm started
------------------	---

Passage 3	the solar system is made up of planets moons stars and the sun the sun is the biggest star in our solar system the sun gives the Earth light and heat eight planets are also found in the solar system
------------------	---

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS] If a student stops at Passage 2, say "Continue on to Passage 3."

AT THE END OF EXACTLY 2 MINUTES SAY:

"Now let's check your answers to Passage 2. **[HOLD UP PAPER.POINT]**. You will look to see if your slashes are in the right place as we go along. If you left out a slash, please put it in the right place. **[IF AT ANY TIME DURING THE PRACTICE A CHILD ASKS WHAT TO DO IF HE/SHE MADE A SLASH IN THE WRONG PLACE, SAY:** "That's okay, just put an X on the answer you don't want and let's keep going."'] The passage reads *at the city park Ben and Scott were playing baseball* **[PAUSE]** *they noticed dark clouds in the sky* **[PAUSE]** *they wanted to keep playing* **[PAUSE]** *the boys decided to try to finish their game before the storm started*. The first idea is *at the city park Ben and Scott were playing baseball*. You should have made a slash between *baseball* and *they*. This is the same place we would put an end mark or period. The second idea is *they noticed dark clouds in the sky*. You should have made a slash between *sky* and *they*. The third idea is *they wanted to keep playing*. You should have made a slash between *playing* and *the*. The fourth idea is *the boys decided to try to finish their game before the storm started*. We do not put slashes at the beginning or end of a passage. We only put them in between ideas."

© Monitoring Academic Progress: Reading

“Now let’s check your answer to Passage 3. **[HOLD UP PAPER. POINT]**. The passage reads *the solar system is made up of planets moons stars and the sun* **[PAUSE]** *the sun is the biggest star in our solar system* **[PAUSE]** *the sun gives the Earth light and heat* **[PAUSE]** *eight planets are also found in the solar system*. The first idea is *the solar system is made up of planets moons stars and the sun*. You should have made a slash after *sun* and before *the*. This is the same place we would put an end mark or period. The second idea is *the sun is the biggest star in our solar system*. Make a slash between *system* and *the*. The third idea is *the sun gives the Earth light and heat*. Make a slash between *heat* and *eight*. The fourth idea is *eight planets are also found in the solar system*. We do not put slashes at the beginning or end of a passage. We only put them in between words.”

“Does anyone have any questions about what to do?”

[Collect practice forms.]

Third Grade Bi-Weekly Administration & Scoring Directions
Administration Directions

- ☐ 1. Practice worksheets have been collected.
- ☐ 2. Distribute student copies of MAP: Reading. Be sure students have the correct side up.
- ☐ 3. Instruct students to write their first and last name on their paper.
- ☐ 4. Write the date on the board (using slashes mm/dd/yy). Instruct students to write the date on their paper.
- ☐ 5. Say these specific directions:
"Today you will be doing some reading {like we just practiced}. You will read passages and make a slash between ideas but not at the beginning or end of each passage. Some passages will be easy and some will be hard. Most people do not get all the correct answers or finish reading. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you come to a passage that is too hard, try your best but do not spend too much time on one passage. We will do this for three minutes. Remember to read carefully before you make your slash. If you change your mind, do not erase. Just make an X on the wrong answer and keep working. Any questions?"
 - Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions.
 - a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
 - c. Do they have the correct side of the paper up?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say **"Remember to read carefully before making slashes."**
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** "Stop, put your finger on the last word you read. Now draw a circle around that word. Turn your papers face down. Put your pencils on your desk."
- ☐ 10. Collect the papers.

Scoring Directions

- 1. Using the scoring template, for each page of passages, count the number of words read for each passage. Locate the place where the student made the circle (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with a circle and add these together to determine Words Read. Record this on the last page of the passages.
- 2. Next count the number of missing slashes (Omissions) and the number of slashes in the wrong place (Commissions) (Note: Do NOT count slashes made at the beginning or end of each separate passage). Record the number of Omissions and Commissions at the bottom of the last page of passages.
- 3. Add the number of Omissions and Commissions to determine Total Errors and record at the bottom of the last page.
- 4. At the bottom of the last page of passages, subtract the number of Total Errors from the number of Words Read. This will give you the student's Total score. The scores at the bottom of the last page of passages are the student's scores that will be entered into the database.



Progress Monitoring 3
Guided Practice



Name: _____

Date: _____

Passage 1

our class went on a field trip to an art museum, we were told to bring a lunch and a drink, we carried our lunch with us, we saw many different paintings



Independent Practice

Passage 2

at the city park Ben and Scott were playing baseball they noticed dark clouds in the sky they wanted to keep playing the boys decided to try to finish their game before the storm started

Passage 3

the solar system is made up of planets moons stars and the sun the sun is the biggest star in our solar system the sun gives the Earth light and heat eight planets are also found in the solar system



Progress Monitoring 3

Name: _____

Date: _____

a science notebook is a useful tool the notebooks can be used for many things
you can keep pictures you draw of living and non-living things they will also
hold much of the data you need to keep the notebooks can be used to show
others your findings these notebooks are easy to carry you can bring them
anywhere

15
29
45
58
59

on the playground during recess today at school I got hurt everything started
when I was climbing on the high monkey bars with my friends I tried to hold
on to the monkey bars but my hands slipped I took a hard fall to the ground
my teacher saw what happened and helped me she was kind she helped me
clean the cut and pick myself up off the ground next time I will try to hold on
better

72
88
105
119
137
138

leaves come in many different shapes and sizes and are found on plants each
kind of leaf makes food for the plant that helps it grow fast leaves have veins
and these veins help bring water to every part of the plant they also carry food
to different parts of the plant some special leaves even have spines or bud
scales that catch insects only some leaves will change color in the fall after
leaves change colors it is not long until they die and fall off the plant

152
168
184
198
212
227

Progress Monitoring 3

Daniel is a good reader who enjoys reading about history he also likes to draw
he drew an airplane after reading a book about airplanes used in warfare the
airplane is a fighter plane and has guns on the wings it is a plane his great
grandfather flew in the war this plane was made in England and was called a
Spitfire it was the most famous plane flown in World War II many pilots flew
this plane in the skies over England and France

242
256
273
288
303
312

Words Read	Omissions	Commissions	Total Errors	Total Score

Appendix E

Directions and Practice Exercises for MAP:R US1-P10

Early First Grade Instructions
Guided Practice

[HAND OUT GUIDED/INDEPENDENT PRACTICE.]

"Today we are going to do some reading. Before we start, write your first and last name on your paper. **(GIVE STUDENTS ADEQUATE TIME TO DO THIS AND MAKE SURE BOTH FIRST AND LAST NAME ARE WRITTEN ON PAPERS)**. Now write the date on your paper. Today's date is **(SAY THE DATE AND WRITE THE DATE WITH SLASH (/) MARKS ON THE BOARD [mm/dd/yy])**. Look at the date. Notice how I put a slash mark **(POINT TO SLASH)** in between the numbers. This is the same kind of slash you will make in today's reading."

"Look at the top of the page where there are two hands. **(POINT TO SECTION)**. We are all going to practice the first passage together."

"In this activity you will silently read short passages and find each word. You will make a slash with your pencil between each word. Look at the first passage."

"Let's go through Passage 1 together."

[DEMONSTRATE BY HOLDING UP THE PRACTICE EXERCISE]. "Point to the first passage." **(POINT TO PASSAGE 1)**. This reads *the dog runs* **[PAUSE]** *he is fast*. There are six words in this passage. The first word is *the*. Trace the slash between *the* and *dog*. The second word is *dog*. Trace the slash between *dog* and *runs*. **[POINT]**. The third word is *runs*. Trace the slash between *runs* and *he*. **[POINT]**. The fourth word is *he*. Trace the slash between *he* and *is*. The fifth word is *is*. Trace the slash between *is* and *fast*. The last word is *fast*. We do not put a mark after *fast* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between **[SAY WITH EMPHASIS]** words.

Passage 1

t h e / d o g / r u n s / h e / i s / f a s t

"Let's try another one."

"Look at Passage 2 and put your finger on it [POINT TO PASSAGE 2]. This reads *the dog runs away* [PAUSE] *he runs far*. There are seven words in this passage. The first word is *the*. Trace the slash between *the* and *dog*. The second word is *dog*. Trace the slash between *dog* and *runs*. The third word is *runs*. Trace the slash between *runs* and *away*. The fourth word is *away*. Trace the slash between *away* and *he*. Notice that you have to read carefully to know where to put your slashes. Look at the word *away*. We do not [SAY WITH EMPHASIS] put a mark between *a* and *way* because that would not make sense. So, read carefully before you make your slash. The fifth word is *he*. Trace the slash between *he* and *runs*. The sixth word is *runs*. Trace the slash between *runs* and *far*. The seventh word is *far*. We do not put a slash after *far* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between words."

Passage 2

t h e / d o g / r u n s / a w a y / h e / r u n s / f a r

Independent Practice

"Now you will do two practice passages on your own. Find the picture of one hand and put your finger on it. These passages are just for practice."

"Find Passage 3 and put your finger on it. When I say begin, start reading and make slashes between words in Passage 3, then go on to Passage 4 and do the same thing. (POINT TO PASSAGE 3, THEN 4). Remember to make a slash between (SAY WITH EMPHASIS) each word but not at the beginning or end of the passage. Remember to read carefully before you make your slashes. When you have finished put your finger on the last word you read. Any questions?"

[SET TIMER FOR EXACTLY 2 MINUTES]. "Ready, begin."

Passage 3

I l o o k u p I s e e a b i r d

Passage 4

t h e d o g l o o k s u p h e s e e s t h e s k y

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS; if a student stops at Passage 3, say “Continue on to Passage 4.”]

AT THE END OF EXACTLY 2 MINUTES SAY:

“Now let’s check your answers to Passage 3. **(HOLD UP PAPER. POINT)**. You will look to see if your slashes are in the right place as we go along. If you left out a slash, please put it in the right place. **[If at any time during the practice a child asks what to do if he/she made a slash in the wrong place, say: “That’s okay, just put an X on the answer you don’t want and let’s keep going.”]** There are seven words in this passage, *I look up* **[PAUSE]** *I see a bird*. The first word is *I*. You should have made a slash between *I* and *look*. **[POINT]**. The second word is *look*. You should have made a slash between *look* and *up*. The third word is *up*. You should have made a slash between *up* and *I*. **[POINT]**. The fourth word is *I*. You should have made a slash between *I* and *see* **[POINT]**. The fifth word is *see*. You should have made a slash between *see* and *a* **[POINT]**. The sixth word is *a*. You should have made a slash between *a* and *bird*. **[POINT]**. The seventh word is *bird* **[POINT]**. Remember we do not make a slash after *bird* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between words.”

“Now let’s check your answers to Passage 4. **(HOLD UP PAPER. POINT)**. There are eight words in this passage, *the dog looks up* **[PAUSE]** *he sees the sky*. The first word is *the*. You should have made a slash between *the* and *dog*. The second word is *dog*. You should have made a slash between *dog* and *looks*. **[POINT]**. The third word is *looks*. You should have made a slash between *looks* and *up*. **[POINT]**. We don’t put a slash after the *k* in look because that wouldn’t make sense. You have to read carefully to be sure it makes sense before you make your slash. The fourth word is *up*. You should have made a slash between *up* and *he*. **[POINT]**. The fifth word is *he*. You should have made a slash between *he* and *sees* **[POINT]**. The sixth word is *sees*. You should have made a slash between *sees* and *the*. **[POINT]**. The seventh word is *the*. You should have made a slash between *the* and *sky* **[POINT]**. The last word is *sky*. **[POINT]**. Remember we do not make a slash after *sky* because it is the last word. We do not put slashes at the beginning or end of a passage. We only put them in between words.”

“Does anyone have any questions about what to do?”

[Collect practice forms.]

Early First Grade Bi-Weekly Administration & Scoring Directions
Administration Directions

- ☐ 1. Make sure all practice worksheets have been collected.
- ☐ 2. Distribute copies of MAP: Reading. Be sure students have the correct side up.
- ☐ 3. Instruct students to write their first and last name on their paper.
- ☐ 4. Write the date on the board (using slashes mm/dd/yy). Instruct students to write the date on their paper.
- ☐ 5. Say these specific directions:
 - “ Today you will be doing some reading (like we just practiced). You will silently read passages and make a slash between each word but not at the beginning or end of each passage. **[SAY WITH EMPHASIS]** Remember you are making a slash between each word. Some will be easy and some will be hard. Most people will not get all of the correct answers or finish reading. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you finish reading on the front page, go on to the back **[TURN YOUR PAPER TO THE BACK]**. If you come to a passage that is too hard, try your best but do not spend too much time on one passage. We will do this for three minutes. Remember to read carefully before you make your slash. If you change your mind, do not erase. Just make an X on the wrong answer and keep working. Any questions?
 - Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions.
 - a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
 - c. Do they have the correct side of the paper up?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say **“Remember to read carefully before making slashes.”**
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** “Stop, put your finger on the last word you read. Now draw a circle **[Demonstrate a circle in the air with your hand]** around that word. Put your pencil on your desk.”
- ☐ 10. Collect the papers.

Scoring Directions

- 1. Using the scoring template, for each page of passages, count the number of words read for each passage. Locate the place where the student made the circle (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with a circle and add these together to determine Words Read. Record this on the last page of the passages.
 - 2. Next count the number of missing slashes (Omissions) and the number of slashes in the wrong place (Commissions) (Note: Do NOT count slashes made at the beginning or end of each separate passage). Record the number of Omissions and Commissions at the bottom of the last page of passages.
 - 3. Add the number of Omissions and Commissions to determine Total Errors and record at the bottom of the last page.
 - 4. At the bottom of the last page of passages, subtract the number of Total Errors from the number of Words Read. This will give you the student's Total score. The scores at the bottom of the last page of passages are the student's scores that will be entered into the database.



Progress Monitoring 1
Guided Practice



Name: _____

Date: _____

Passage 1

t h e / d o g / r u n s / h e / i s / f a s t

Passage 2

t h e / d o g / r u n s / a w a y / h e / r u n s / f a r



Independent Practice

Passage 3

I l o o k u p I s e e a b i r d

Passage 4

t h e d o g l o o k s u p h e s e e s t h e s k y

Second Grade Instructions
Guided Practice

[HAND OUT GUIDED PRACTICE/INDEPENDENT PRACTICE]

"Today we are going to do some reading. Before you get started go ahead and write your first and last name on your paper. **(GIVE STUDENTS ADEQUATE TIME TO DO THIS AND MAKE SURE BOTH FIRST AND LAST NAME ARE WRITTEN ON PAPERS.)** Now write the date on your paper. Today's date is **(SAY THE DATE AND WRITE THE DATE WITH SLASH (/) MARKS ON THE BOARD [mm/dd/yy])**. Notice how I put a slash mark (/) **(POINT TO SLASH)** in between the numbers. This is the same kind of slash you will make in today's reading."

"Look at the top of the page where there are two hands.**[POINT TO SECTION]**. We are all going to read the first passage together."

"In this activity you will silently read short passages and find each idea or thought. You will make a slash with your pencil between each idea where the end mark of a sentence or question would go. Look at the first passage. We will do this one together."

Passage 1	my favorite time of year is fall ; I love the cold weather ; leaves fall off the trees ; the leaves turn many colors
------------------	---

"Passage 1 reads *my favorite time of year is fall* **[PAUSE]** *I love the cold weather* **[PAUSE]** *leaves fall off the trees* **[PAUSE]** *the leaves turn many colors*. The first idea is *my favorite time of year is fall*. So we trace the slash between *fall* and *I*. This is the same place an end mark or a period for a sentence would go. The second idea is *I love the cold weather*. Trace the slash between *weather* and *leaves*. The third idea is *leaves fall off the trees*. Trace the slash between *trees* and *the*. The fourth idea is *the leaves turn many colors*. We do not put slashes at the beginning or end of a passage. We only put them in between **[SAY WITH EMPHASIS]** ideas where end marks or periods should go."

Independent Practice

"Now you will do two practice passages on your own. Find the picture of one hand and put your finger on it. These passages are just for practice."

"Find Passage 2 and put your finger on it. When I say begin, start reading and marking slashes between ideas in Passage 2, then go on to Passage 3 and do the same thing. **[POINT TO PASSAGE 2, THEN 3]**. Remember to make a slash between **[SAY WITH EMPHASIS]** each idea but not at the beginning or end of the passage. Remember to read carefully before you make your slashes. When you have finished put your finger on the last word you read. Any questions?"

[SET TIMER FOR EXACTLY 2 MINUTES]. "Ready, begin."

Passage 2

there are many different kinds of insects some insects are large
others are small most insects have wings some insects do not

Passage 3

I started a new school last fall I did not know anyone at the
new school I was afraid that I would not make friends my
mother told me to tell my teachers that I was a new student
they helped me

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS; If a student stops at Passage 2, say "Continue on to Passage 3."]

AT THE END OF 2 MINUTES SAY:

"Now let's check your answers to Passage 2. **[HOLD UP PAPER.POINT]** You will look to see if your slashes are in the right place as we go along. If you left out a slash, please put it in the right place. **[IF AT ANY TIME DURING THE PRACTICE A CHILD ASKS WHAT TO DO IF HE/SHE MADE A SLASH IN THE WRONG PLACE, SAY:** "That's okay, just put an X on the answer you don't want and let's keep going.") The passage reads *there are many different kinds of insects* **[PAUSE]** *some insects are large* **[PAUSE]** *some insects are small* **[PAUSE]** *most insects have wings* **[PAUSE]** *some insects do not*. The first idea is *there are many different kinds of insects* so a slash should be placed after *insects* and before *some*. You should have made a slash after *insects* and before *some*. This is the same place we would put an end mark or a period. The second idea is *some insects are large*. You should have made a slash between *large* and *some*. The third idea is *some insects are small*. You should have made a slash between *small* and *most*. The fourth idea is *most insects have wings*. You should have made a slash between *wings* and *some*. The last idea is *some insects do not*. We do not put slashes at the beginning or end of a passage. We only put them in between ideas.

"Now let's check your answer to Passage 3. **[HOLD UP PAPER.POINT]**. The passage reads *I started a new school last fall* **[PAUSE]** *I did not know anyone at the new school* **[PAUSE]** *I was afraid that I would not make friends* **[PAUSE]** *my mother told me to tell my teachers that I was a new student* **[PAUSE]** *they helped me*. The first idea is *I started a new school last fall* so a slash should be placed between *fall* and *I*. You should have made a slash between *fall* and *I*. The second idea is *I did not know anyone at the new school*. You should have made a slash between *school* and *I*. The third idea is *I was afraid that I would not make friends*. You should have made a slash between *friends* and *my*. The fourth idea is *my mother told me to tell my teachers that I was a new student*. You should have made a slash between *student* and *they*. The last idea is *they helped me*. Remember we do not put slashes at the beginning or end of a passage. We only put them in between ideas.

"Does anyone have any questions about what to do?"

[Collect practice forms.]

Second Grade Bi-Weekly Administration & Scoring Directions

Administration Directions

- ☐ 1. Make sure all practice worksheets have been collected.
- ☐ 2. Distribute student copies of MAP: Reading. Be sure students have the correct side up.
- ☐ 3. Instruct students to write their first and last name on their paper.
- ☐ 4. Write the date on the board (using slashes mm/dd/yy). Instruct students to write the date on their paper.
- ☐ 5. Say these specific directions:
 - “ Today you will be doing some reading {like we just practiced}. You will silently read passages and make a slash between ideas but not at the beginning or end of each passage. Some will be easy and some will be hard. Most people will not get all of the correct answers or finish reading. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you finish reading on the front page, continue to the back of the page **[TURN YOUR PAPER TO THE BACK]**. If you come to a passage that is too hard give it your best attempt but do not spend too much time on one passage. We will do this for three minutes. Remember to read carefully before you make your slash. If you change your mind, do not erase. Just make an X on the wrong answer and keep working. When I tell you to stop, draw a circle around the last word you read. Any questions?
 - Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions.
 - a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say **“Remember to read carefully before making slashes.”**
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** “Stop, put your finger on the last word you read. Now draw a circle around that word. Put your pencils on your desk.”
- ☐ 10. Collect the papers.

Scoring Directions

1. Using the scoring template, for each page of passages, count the number of words read for each passage. Locate the place where the student made the circle (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with a circle and add these together to determine Words Read. Record this on the last page of the passages.
2. Next count the number of missing slashes (Omissions) and the number of slashes in the wrong place (Commissions) (Note: Do NOT count slashes made at the beginning or end of each separate passage). Record the number of Omissions and Commissions at the bottom of the last page of passages.
3. Add the number of Omissions and Commissions to determine Total Errors and record at the bottom of the last page.
4. At the bottom of the last page of passages, subtract the number of Total Errors from the number of Words Read. This will give you the student's Total score. The scores at the bottom of the last page of passages are the student's scores that will be entered into the database.



Progress Monitoring 2
Guided Practice



Name: _____

Date: _____

Passage 1

my favorite time of year is fall I love the cold weather leaves fall off the
trees the leaves turn many colors



Independent Practice

Passage 2

there are many different kinds of insects some insects are large some insects
are small most insects have wings some insects do not

Passage 3

I started a new school last fall I did not know anyone at the new school I was
afraid I would not make friends my mother told me to tell my teachers that I
was a new student they helped me

Third Grade Instructions
Guided Practice

[HAND OUT GUIDED/INDEPENDENT PRACTICE.]

"Today we are going to do some reading. Before you get started go ahead and write your first and last name on your paper. **(GIVE STUDENTS ADEQUATE TIME TO DO THIS AND MAKE SURE BOTH FIRST AND LAST NAME ARE WRITTEN ON THEIR PAPERS)**. Now write the date on your paper. Today's date is **(SAY THE DATE AND WRITE THE DATE WITH SLASH (/) MARKS ON THE BOARD [mm/dd/yy])**. Notice how I put a slash mark (/) **(POINT TO THE SLASH)** in between the numbers. This is the same kind of slash you will make in today's reading."

"Look at the top of the page where there are two hands **(POINT TO SECTION)**. We are all going to practice the first passage together."

"In this activity you will silently read short passages and find each idea or thought. You will make a slash with your pencil between each idea where the end mark of a sentence or question would go. Look at the first practice."

"Let's go through Passage 1 together. "Passage 1 reads *our class went on a field trip to an art museum* **[PAUSE]** *we were told to bring a lunch with a drink* **[PAUSE]** *we carried our lunch with us* **[PAUSE]** *we saw many different paintings*. The first idea is *our class went on a field trip to an art museum*. Trace the slash between *museum* and *we*. Remember this is the same place an end mark or period would go. The second idea is *we were told to bring a lunch with a drink*. Trace the slash between *drink* and *we*. The third idea is *we carried our lunch with us*. Make a slash between *us* and *we*. The fourth idea is *we saw many different paintings*. We do not put slashes at the beginning or end of a passage. We only put them in between **[SAY WITH EMPHASIS]** ideas.

Passage 1	our class went on a field trip to an art museum / we were told to bring a lunch with a drink / we carried our lunch with us / we saw many different paintings
------------------	---

Independent Practice

"Now you will do two practice passages on your own. Find the picture of one hand and put your finger on it. These passages are just for practice."

"Find Passage 2 and put your finger on it. When I say begin, start reading and marking slashes between ideas for Passage 2, then go on to Passage 3 and do the same thing. **(POINT TO PASSAGE 2 THEN 3)**. Remember to make slash between **[SAY WITH EMPHASIS]** each idea but not at the beginning or end of the passage. Remember to read carefully before you make your slash. When you have finished put your finger on the last word you read. Any questions?"

[SET TIMER FOR EXACTLY 2 MINUTES]. "Ready, begin."

Passage 2	at the city park Ben and Scott were playing baseball they noticed dark clouds in the sky they wanted to keep playing the boys decided to try to finish their game before the storm started
-----------	--

Passage 3	the solar system is made up of planets moons stars and the sun the sun is the biggest star in our solar system the sun gives the Earth light and heat eight planets are also found in the solar system
-----------	--

[ENSURE EVERYONE IS ACTIVELY ENGAGED AND UNDERSTANDS THE DIRECTIONS If a student stops at Passage 2, say "Continue on to Passage 3."]

AT THE END OF EXACTLY 2 MINUTES SAY:

"Now let's check your answers to Passage 2. **[HOLD UP PAPER. POINT]**. You will look to see if your slashes are in the right place as we go along. If you left out a slash, please put it in the right place. **[IF AT ANY TIME DURING THE PRACTICE A CHILD ASKS WHAT TO DO IF HE/SHE MADE A SLASH IN THE WRONG PLACE, SAY: "That's okay, just put an X on the answer you don't want and let's keep going."]**

The passage reads *at the city park Ben and Scott were playing baseball [PAUSE] they noticed dark clouds in the sky [PAUSE] they wanted to keep playing [PAUSE] the boys decided to try to finish their game before the storm started*. The first idea is *at the city park Ben and Scott were playing baseball*. You should have made a slash between *baseball* and *they*. This is the same place we would put an end mark or period. The second idea is *they noticed dark clouds in the sky*. You should have made a slash between *sky* and *they*. The third idea is *they wanted to keep playing*. You should have made a slash between *playing* and *the*. The fourth idea is *the boys decided to try to finish their game before the storm started*. We do not put slashes at the beginning or end of a passage. We only put them in between ideas.

"Now let's check your answer to Passage 3. **[HOLD UP PAPER. POINT]**. The passage reads *the solar system is made up of planets moons stars and the sun [PAUSE] the sun is the biggest star in our solar system [PAUSE] the sun gives the Earth light and heat [PAUSE] eight planets are also found in the solar system*. The first idea is *the solar system is made up of planets moons stars and the sun*. You should have made a slash after *sun* and before *the*. This is the same place we would put an end mark or period. The second idea is *the sun is the biggest star in our solar system*. You should have made slash between *system* and *the*. The third idea is *the sun gives the Earth light and heat*. You should have made a slash

© Monitoring Academic Progress: Reading

between *heat* and *eight*. The fourth idea is *eight planets are also found in the solar system*. We do not put slashes at the beginning or end of a passage. We only put them in between words."

"Does anyone have any questions about what to do?"

[Collect practice forms.]

Third Grade Bi-Weekly Administration & Scoring Directions
Administration Directions

- ☐ 1. Practice worksheets have been collected.
- ☐ 2. Distribute student copies of MAP: Reading. Be sure students have the correct side up.
- ☐ 3. Instruct students to write their first and last name on their paper.
- ☐ 4. Write the date on the board (using slashes mm/dd/yy). Instruct students to write the date on their paper.
- ☐ 5. Say these specific directions:

“Today you will be doing some reading {like we just practiced}. You will silently read passages and make a slash between ideas but not at the beginning or end of each passage. Some passages will be easy and some will be hard. Most people do not get all the correct answers or finish reading. When I say begin you will start working. Begin with the first passage, then go to the next passage, until you finish the page. If you finish reading on the front page, continue to the back of the page **[TURN YOUR PAPER TO THE BACK]**. If you come to a passage that is too hard, try your best but do not spend too much time on one passage. We will do this for three minutes. Remember to read carefully before you make your slash. If you change your mind, do not erase. Just make an X on the wrong answer and keep working. Read until I tell you to stop. When I tell you to stop, draw a circle around the last word you read. Any questions?

– Begin
- ☐ 6. **Start your stopwatch.**
- ☐ 7. Observe students to ensure they understand the directions.
 - a. Are they actively engaged?
 - b. Are they making slashes in the correct places?
- ☐ 8. If a student is not actively engaged or repeatedly making slashes in the incorrect place, say **“Remember to read carefully before making slashes.”**
- ☐ 9. **Stop the stopwatch at 3 minutes and say:** “Stop, put your finger on the last word you read. Now draw a circle around that word. Put your pencils on your desk.”
- ☐ 10. Collect the papers.

Scoring Directions

- 1. Using the scoring template, for each page of passages, count the number of words read for each passage. Locate the place where the student made the circle (for last word read). Find the number to the right of the passage of the last complete sentence the student read. Count the additional words, including the word marked with a circle and add these together to determine Words Read. Record this on the last page of the passages.
- 2. Next count the number of missing slashes (Omissions) and the number of slashes in the wrong place (Commissions) (Note: Do NOT count slashes made at the beginning or end of each separate passage). Record the number of Omissions and Commissions at the bottom of the last page of passages.
- 3. Add the number of Omissions and Commissions to determine Total Errors and record at the bottom of the last page.
- 4. At the bottom of the last page of passages, subtract the number of Total Errors from the number of Words Read. This will give you the student's Total score. The scores at the bottom of the last page of passages are the student's scores that will be entered into the database.



Progress Monitoring 3 Guided Practice



Name: _____

Date: _____

Passage 1

our class went on a field trip to an art museum, we were told to bring a lunch and a drink, we carried our lunch with us, we saw many different paintings



Independent Practice

Passage 2

at the city park Ben and Scott were playing baseball they noticed dark clouds in the sky they wanted to keep playing the boys decided to try to finish their game before the storm started

Passage 3

the solar system is made up of planets moons stars and the sun the sun is the biggest star in our solar system the sun gives the Earth light and heat eight planets are also found in the solar system

Appendix F

MAP: R Examples



Progress Monitoring 1

Name: _____

Date: _____

t h e c a t i s b i g h e i s v e r y f a t

O _____ (7) C _____ (14) 8

I c a n r u n f a s t I w i l l r u n w i t h y o u

O _____ (8) C _____ (17) 17

w e p l a y a t t h e p a r k I l o v e t h e p a r k

O _____ (8) C _____ (18) 26

m y m o m l o v e s m e m y d a d l o v e s m e I l o v e t h e m

O _____ (10) C _____ (22) 37

I h a v e a p e t d o g h e i s b r o w n

O _____ (7) C _____ (13) 45

I l i k e t o s w i m I g e t w e t w h e n I s w i m

O _____ (9) C _____ (17) 55

I p l a y w i t h a b a t a n d b a l l I h i t t h e b a l l

O _____ (10) C _____ (20) 66

t h e g i r l i s s a d s h e l o s t h e r y e l l o w h a t

O _____ (8) C _____ (22) 75

I s i t a t a d e s k I w o r k h a r d

O _____ (7) C _____ (12) 83

w e l o o k e d a t t h e m a p t h e m a p h e l p e d u s

O _____ (8) C _____ (21) 92

Progress Monitoring 1

I c a n p i c k u p t h e p i g h e i s n o t t o o b i g	O _____ (10) C _____ (18) 103
k i c k t h e b a l l w e w a n t t o w i n	O _____ (6) C _____ (15) 110
I s e e a t r e e t h e t r e e i s t a l l	O _____ (7) C _____ (14) 118
h e i s m a d a t m e I a m s a d	O _____ (7) C _____ (9) 126
s h e o p e n s t h e b o x s h e s e e s a n e w t o y	O _____ (8) C _____ (19) 135
t h e d u c k i s w h i t e t h e d u c k g e t s w e t	O _____ (7) C _____ (20) 143
w e h i d i n t h e o l d h o u s e t h e y d i d n o t f i n d u s	O _____ (10) C _____ (23) 154
t h e j e t w a s s l o w i t w a s n o t f a s t	O _____ (7) C _____ (17) 162
I w i l l s i n g t h i s i s f u n	O _____ (5) C _____ (12) 168

Words Read	Omissions	Commissions	Total Errors	Total Score



Progress Monitoring 2

Name: _____

Date: _____

I was tired before going to school when I went to school I saw all of my 17
 friends sitting in the classroom then the teacher told us to get out a piece of 33
 paper and to write our names at the top I did not want to take a test the teacher 52
 said we were going to learn how to write a poem we learned to write a poem 69
 with seven lines I wrote about going to the ocean writing the poem was fun I 85
 am glad I came to school today 92

O C
(8)

energy is very important it is used for many things energy runs lights video 106
 games and computers plugging games and computers into an outlet causes 117
 them to get energy they would not work without energy some energy is made 131
 from coal the coal is burned to make energy some energy comes from the 145
 sun we use energy every day life would be hard without energy we could not 160
 watch TV we could only take baths with cold water homes would be dark at 175
 night because we need energy for lights 182

O C
(12)

my favorite food is pizza I like many kinds of pizza pizza with cheese and	197
pepperoni is my favorite pizza sometimes my family goes out to eat pizza I	211
love going out to eat pizza with my family I tell the person who brings the	227
food to our table what kind of pizza I want I get to buy the pizza with money	245
from my parents I always use good manners when I ask for pizza I wish I	261
could eat pizza for dinner every day	268
O C (8) — —	

the center of the Solar System is the Sun the Sun is a very hot star that gives	286
off light the Earth is pulled toward the Sun the Sun heats the Earth and makes	302
it warm without the Sun the Earth would be too cold for people and animals	317
to live the Sun looks very big but it is really a medium sized star the Sun is	335
bigger than each of the planets in our Solar System the Sun is made of many	351
gasses and has spots called sunspots these sunspots cannot be seen without the	364
help of special tools	368
O C (8) — —	

Words Read	Omissions	Commissions	Total Errors	Total Score



Progress Monitoring 3

Name: _____

Date: _____

Steve is extremely excited because today his family is leaving on a trip to the	15
ocean he likes to walk on the beach when the weather is warm when he walks	31
he enjoys taking his dog with him Steve loves to feel the bright sunshine on	46
his face and the warm grainy sand on his feet fishing from the boardwalk is	61
his favorite thing to do he always brings his fishing rod on these trips so he	77
can go fishing with his father once before sunrise Steve caught eight fish the	91
last time they went fishing together one of the fish was so big his mother took	107
a picture of Steve with the fish Steve was very proud of this fish	121
O C (8) — —	

there are many different types of plants on the planet Earth all plants begin	135
life as seed regardless of how diverse they are plants that humans eat such as	150
fruits and vegetables come from seeds beautiful flowers also come from seeds	162
seeds may come in many different sizes and shapes seeds certainly do not all	176
look the same seeds are planted in soil where roots grow from the seed and	191
into the ground stems also grow out of the seed and up through the soil leaves	207
sprout from the stems and so do leafy vegetables fruits and flowers seeds need	221
sunlight and water to grow healthy and strong	229
O C (9) — —	

Progress Monitoring 3

my favorite class in my elementary school is art because I love to draw and	244	
make pictures being creative in art class is the best part of my school day I	260	
enjoy drawing pencil and ink prints and then showing them to my closest	273	
friends the pictures I make are so funny that they make my friends giggle	287	
today I worked for a long time in art class and made six pictures to share with	304	
my friends each of the pictures was a cartoon strip with silly drawings my	318	
friends could not stop chuckling when they saw them I always try to give my	333	
best friends funny drawings that will make them happy making my friends	345	
laugh brings me happiness	349	O C (8)

black widow spiders are interesting they have markings on their bodies that	461	
help people identify that they are black widow spiders the female spiders are	374	
black with a red hourglass shape on their back baby black widow spiderlings	387	
are orange brown and white male black widow spiders are black with white	400	
stomachs and red markings on their sides black widow spiders can be	412	
dangerous the female spiders bite and can make a person very sick the male	426	
spiders do not bite people black widow spiders like to eat other insects such	440	
as flies beetles and moths these spiders normally like to live under rocks and	454	
other quiet dark places these unusual spiders like to be left alone and do not	469	
like to be disturbed by people	475	O C (10)

Words Read	Omissions	Commissions	Total Errors	Total Score

VITA

Angela Nicole Hilton-Prillhart was raised in Kingsport, TN and graduated from Sullivan North High School in 1991. She attended East Tennessee State University and received a B.A. in History and English in 1997 and a M.Ed. in Special Education in 1998. She worked as a special education teacher for Fairfax County Schools in Virginia and the Washington County Board of Education in Maryland from 1998-2005. She enrolled at the University of Tennessee to pursue a Ph.D. in School Psychology in 2007. Angela completed requirements for her Ph.D. in School Psychology in August 2011 following completion of a year-long internship with Frontier Health located in Johnson City, TN.