

INDIANA READING ASSESSMENT – GRADE 1

TECHNICAL REPORT

June 30, 2005

Center for Innovation in Assessment

Web site: www.cia.indiana.edu

Email: indianareading@cia.indiana.edu

Phone: 1-800-377-1409

Table of Contents

Executive Summary	2
Introduction	4
ROAR System	5
Validity of the <i>Indiana Reading Assessment – Grade 1</i>	6
Reliability of the <i>Indiana Reading Assessment – Grade 1</i>	12
Appendices	
Standards Coverage Chart	Appendix A
Assessment Samples	Appendix B
Test Comparisons	Appendix C
Teacher Feedback	Appendix D
Demographic Data	Appendix E
Descriptive Statistics and Score Distribution	Appendix F

Executive Summary

Reliability and Validity Results

A simplistic explanation of validity is that an assessment evaluates what it claims to assess. For the *Indiana Reading Assessment – Grade 1*, research was conducted to evaluate how well it assesses various reading skills of grade one students. Multiple analyses were conducted to establish the validity of *Indiana Reading Assessment – Grade 1*. While the results of all the analyses were encouraging, the results derived from the concurrent validity study were most impressive. All the correlations were significant beyond the .05 level and the percentages of agreements were high. Thus, the *Indiana Reading Assessment – Grade 1* is a valid instrument for assessing phonemic awareness, phonics, vocabulary, and reading comprehension skills. The validity of the *Indiana Reading Assessment – Grade 1* at assessing overall reading ability is also established by the Cronbach's alpha of .711.

Establishing reliability is important in showing that an assessment obtains the same results when given under the same or similar circumstances. Three types of analysis were performed in order to evaluate whether the *Indiana Reading Assessment – Grade 1* was reliable in terms of parallel form reliability, split-half reliability, and inter-rater reliability. In all three analyses, the resulting correlations were adequate, with the split-half reliability most robust.

Strengths of the *Indiana Reading Assessment – Grade 1*

The *Indiana Reading Assessment – Grade 1* was designed specifically for Indiana teachers to use in assessing students' reading abilities as determined by Indiana's Academic Standards for Reading. The completed research also shows that the *Indiana Reading Assessment – Grade 1* is a valuable tool for assessing a student's phonemic awareness, phonics, vocabulary, reading comprehension, and overall reading abilities.

Research Needs

To date, no research has been conducted on the *Indiana Reading Assessment* that disaggregates data across demographic groups. Studies of this kind are important in determining whether there are any biases in assessments. Conducting this type of research is done by simply collecting the demographic information of a sample group of students and comparing the disaggregated data to national or state averages. With the introduction of the No Child Left Behind legislation, reporting progress among all groups is necessary.

With the increased focus on scientifically-based reading research, experimental research is being used more to establish the effectiveness of assessments, curricula, and programs. While this Technical Report contains results establishing the *Indiana Reading Assessment – Grade 1* as an effective assessment, the goal of the assessment goes beyond simply assessing. The goal is that teachers will identify students at-risk and in need of intervention, and provide intervention to enable students to realize reading success. Further experimental research is necessary to determine

whether educators are effectively using the *Indiana Reading Assessment – Grade 1* to identify at-risk students and provide intervention. There are a variety of ways this research could be conducted. By using the data provided for the predictive validity study and comparing similar data to that of a control group, important information can be gathered about the effectiveness of the assessment in prompting intervention.

While the *Indiana Reading Assessment – Grade 2* has been established as reliable and valid in this report, the ROAR system uses a different form of measurement to create student and class reports. Analyses are necessary to establish those reports as reliable and can be done with data currently collected.

Conclusion

The data in the report show the *Indiana Reading Assessment – Grade 1* as both reliable and valid. Educators can be confident that the assessment can be used to effectively measure students' reading abilities and that the results are indicative of their students' reading skill levels.

Technical Report ***Indiana Reading Assessment – Grade 1***

The Indiana Department of Education, working with Indiana University's Center for Innovation in Assessment, developed the *Indiana Reading Assessment – Grade 1* to serve as a tool for first grade teachers to use in gaining information about the developing reading skills of each of their students. The assessment is administered and scored by teachers three times during the academic year (i.e., October, January, and April).

To maximize instructional time and minimize testing time, nearly all portions of the assessment are designed for full-class administration. By having teachers score the assessment, it is possible for teachers to immediately determine students' developing reading strengths and areas of weakness. Training in how to administer, score, and interpret student results is provided through a web site, a CD-ROM presentation, and optional face-to-face professional development sessions.

Broad Coverage of Indiana Academic Standards for Reading and Writing:

Tasks and items of the *Indiana Reading Assessment – Grade 1* and associated checklists and supplemental resource activities are designed to provide a broad view of student literacy progress that reflects Indiana's Academic Standards for reading and writing at grade one. This coverage is broader than that of commercially available tests and therefore more useful to Indiana classroom teachers. The clear link to Indiana's Academic Standards allows easy access to curriculum support materials also matched to those standards.

*An overview of this broad coverage can be seen in **Appendix A: Standards Coverage Charts**.*

Match to Reading Skills Categories of the National Reading Panel Study:

The National Institute of Child Health and Human Development, the National Institute for Literacy, and the U. S. Department of Education convened the National Reading Panel (NRP) in 1997. Panel members were drawn from several disciplines including reading research, medicine, psychology, economics, and classroom teaching. The NRP was "charged with reviewing research in reading instruction and identifying methods that consistently relate to reading success." The NRP identified and summarized research relating to the acquisition of beginning reading skills under the five headings: Phonemic Awareness, Phonics, Fluency, Vocabulary, and Text Comprehension. The reading skills organization of the National Reading Panel report has become an accepted way to describe and report reading skills. Therefore, this report interprets reliability and validity based on this set of reading skills.

Indiana Reading Assessment – Grade 1

Three parallel forms of the *Indiana Reading Assessment – Grade 1* have been developed. There are three administration periods: October, January, and April. Each form reflects the reading standards listed in Indiana's Academic Standards for grade one. Test items also reflect the National Reading Panel headings as detailed in the above paragraph. Most items are worth one point each; a few open-ended items are scored on a rubric as indicated in the table on page 5.

**Table 1: Indiana Reading Assessment – Grade 1:
Skill Coverage**

Phonemic Awareness (25 items; 25 points)		
Rhyming Words	5 items	5 points
Beginning Sounds	5 items	5 points
Ending Sounds	5 items	5 points
Phoneme Deletion	5 items	5 points
Phoneme Blending	5 items	5 points
Phonics (16 items; 21 points)		
Letter Recognition	5 items	5 points
Initial Sound Recognition	5 items	5 points
Final Sound Recognition	5 items	5 points
Applied Phonics (using phonics in writing; open ended; scored on a rubric)	1 item	6 points
Vocabulary (15 items; 15 points)		
Word Comprehension	8 items	8 points
Sentence Comprehension	4 items	5 points
Text Comprehension (19 items; 20 points)		
Short Passage Comprehension	15 items	15 points
Story Comprehension (mix of open-ended and multiple choice items)	4 items	5 points

ROAR System for Generating Class and Student Reports:

An online score entry tool for generating student and class progress reports is available through the Reading Online Assessment Reports (ROAR) System. Teachers enter student scores that are used to immediately generate the following reports:

Class Reports

Administration Sequence Report: This report indicates which students should take each part of the Assessment next based on their scores from previous parts.

Class Skills Reports: These reports show class strengths and weaknesses in a variety of skills including phonemic awareness, comprehension, vocabulary, and phonics. These reports will assist teachers as they plan instruction that meets the literacy needs of their students.

Class Progress Report: This report displays the reading skills progress that the class has achieved over the course of the school year. It compares the scores from the First Administration to the current Administration.

Student Reports

Student Score Report: This report lists a student's scores for all parts of the Assessment that he or she has taken and indicates the next part of the Assessment that the student should take.

Student Skills Reports: These reports list the student's strengths and weaknesses in a variety of skills including phonemic awareness, comprehension, vocabulary, and phonics. The reports assist teachers as they plan instruction in order to meet the literacy needs of their students.

Student Progress Report: This report displays the reading skills progress that the student has achieved over the course of the school year. Progress is measured in the following areas: phonemic awareness, applied phonics skills, vocabulary, and comprehension.

Establishing and Documenting the Validity of the Indiana Grade 1 Assessment

Several types of validity have been established for the *Indiana Reading Assessment – Grade 1*. These include:

- 1) *Content Validity* (i.e., the test items address the full range of skills appropriate for reading at grade one);
- 2) *Face Validity* (i.e., the tests look like the type of reading material that students encounter in grade one);
- 3) *Construct Validity* (i.e., item scores for constructs such as overall reading plus sub-constructs such as beginning reading skills or reading comprehension correlate with each other at an acceptable level);
- 4) *Predictive Validity* (i.e., performance on the *Indiana Grade 1 Reading Assessment* correlates positively with later scores on standardized reading assessments such as the third grade ISTEP+ reading assessment; and
- 5) *Concurrent Validity* (i.e., scores on sections of the *Indiana Grade 1 Reading Assessment* provide information consistent with information provided by other valid and reliable reading assessments).

1) Content Validity: Content validity was obtained by matching items on the *Indiana Reading Assessment – Grade 1* to Indiana’s Academic Standards for reading in grade one. Teacher surveys during the field tests gathered teachers’ opinions on whether items matched academic standards and indicators and were at an appropriate level of difficulty. Changes were made in a few passages, and changes were made in items judged to be overly confusing for some students.

Additional informal measures were developed for aspects of Indiana’s Academic Standards not directly addressed on the scored portion of the *Indiana Reading Assessment – Grade 1*. These informal measures were incorporated into a Resource Guide and take the form of teacher checklists and rating rubrics designed for use in conjunction with student learning activities (e.g., rhyming exercises, monitoring oral reading fluency, and recognizing elements of fiction during discussions).

A second form of content validity is demonstrated through the match of *Indiana Reading Assessment – Grade 1* items to reporting categories of the National Reading Panel (see earlier discussion on page 4). The scored portion of the assessments relate to four reporting categories: Phonemic Awareness, Phonics, Vocabulary, and Text Comprehension. These reporting areas are further reinforced with the optional teacher checklists and rating rubrics that expand the detail with which teachers can monitor skills in phonemic awareness, phonics, vocabulary, and reading comprehension. There are additional rating scales in the reporting category of Reading Fluency.

2) Face Validity: Because very young students (i.e., first graders) have little familiarity with testing, the *Indiana Reading Assessment – Grade 1* was designed to look as much like actual reading and classroom learning activities as possible. For example, letter/sound recognition assessments are in a format similar to learning activity pages used in many classrooms. Story comprehension is assessed using actual stories in forms similar to those students encounter on class bookshelves and in beginning commercial reading materials. Reading comprehension questions are incorporated into these booklets.

In addition to multiple-choice items assessing reading comprehension of short passages, some of the reading comprehension items parallel classroom learning activities by asking students to draw pictures about stories they have just read and attempt a written explanation of what they have drawn. This sort of drawing and writing/labeling activity approximates learning activities in many elementary classrooms and can be scored with a high degree of inter-rater agreement (see reliability discussion that follows).

Samples of the Assessment can be found in Appendix B.

3) Construct Validity: To demonstrate construct validity of assessments, test items that measure particular constructs or aspects of reading (e.g., beginning reading skills such as phonemic awareness and phonics) should correlate highly with each other. Cronbach's alpha analysis is used to determine the consistency of item scores. Cronbach's alpha is essentially a function of the number of items and the average inter-correlation among the items. The coefficient indicates how well a set of items measures a single unidimensional latent construct. In the case of the *Indiana Reading Assessment – Grade 1*, an analysis was performed on the entire assessment to determine the consistency of items designed to measure overall reading ability. A coefficient of .70 or higher is considered acceptable. The resulting Cronbach's alpha of .711 is above the acceptable level. This indicates that the items of the *Indiana Reading Assessment – Grade 1* relate to a single construct (i.e., overall reading ability).

4) Predictive Validity: In Indiana, all third grade students are required to take ISTEP+ (Indiana Statewide Testing for Educational Progress Plus) assessments of reading. The ISTEP+ reading measure is a standardized reading test matched to Indiana's second-grade academic standards. The test was developed and validated by CTB McGraw-Hill and meets all the technical requirements for a standardized reading measure. One form of validity for a classroom reading assessment such as the *Indiana Reading Assessment – Grade 1* is the degree to which scores correlate with later more extensive assessments such as the ISTEP+ assessment.

Interpreting predictive validity correlations for diagnostic tests is not a simple or straightforward process. One expects diagnostic tests to correlate positively with later assessments, but not to an extremely high degree. This is because classroom diagnostic and monitoring tests are designed for the main purpose of helping classroom teachers make a difference—especially with students experiencing difficulty.

If the test and teachers are successful, many students who were low-level readers in grade one will no longer be at the bottom by grade three. On the other hand, it is expected that there will be a moderately positive correlation between early and later tests because the differentials between top, middle, and lower level students aren't expected to disappear entirely. Zero order correlations and negative correlations would be cause for suspicion that the correlated measures were not assessing the same construct.

In 2001, over 30,000 first grade students from across Indiana took the *Indiana Reading Assessment – Grade 1*. Scores from a randomly selected sample of 2,056 of these students were correlated with their later third-grade ISTEP+ reading test scores. Data analysis performed by comparing the total scores of the two measures resulted in a correlation coefficient of $r = .525$. A correlation coefficient near .50 is generally considered acceptable.

5) Concurrent Validity: In order to document the concurrent validity of the *Indiana Reading Assessment – Grade 1*, student scores on portions of the *Indiana Reading Assessment – Grade 1* were compared with those same students' scores on appropriate portions and sub-tests of five other reading assessment measures of known validity and reliability. The portions and sub-tests were chosen based on their similarities in assessing the same skills as the matching Indiana Reading Assessment sub-test. When possible, sub-tests requiring similar tasks were chosen. The five measures are:

- 1) *Dynamic Indicators of Basic Early Literacy Skills (DIBELS)*;
- 2) *Texas Primary Reading Indicators (TPRI)*;
- 3) *Woodcock-Johnson III Tests of Reading Achievement (W-JIII)*;
- 4) *Stanford Achievement Test (Reading) 9th edition (SAT-9)*; and
- 5) *The Iowa Test of Basic Skills (Word Analysis) (ITBS)*.

These five measures were among 28 early reading assessment measures analyzed by the University of Oregon's Institute for the Development of Educational Achievement (<http://idea.uoregon.edu/assessment/index.html>). In its final report, the committee judged all of the five measures listed above to be technically sound and to provide sufficient evidence for making educational decisions about the early reading of children. The U.S. Department of Education refers to this study when discussing "scientifically" acceptable ways to evaluate children's reading gains.

In order to determine the concurrent validity between the *Indiana Reading Assessment – Grade 1* and the above measures, trained examiners gave to children portions of the *Indiana Reading Assessment – Grade 1* and portions of one or more other reading assessments on the same day. The grade one participants in the concurrent validity studies included 715 students from 38 classrooms in 11 Indiana elementary schools selected by the Indiana Department of Education to provide a range of schools that represented Indiana students both demographically and geographically. The classifications from which schools were drawn included rural, small town, large town, mid-sized city, and urban area. Elementary school enrollments ranged from 221 students to 591 students.

School percentages for student eligibility for free or reduced price lunch ranged from 6% to 91%, and minority enrollment percentages ranged from 5% to 66%.

The *Indiana Reading Assessment – Grade 1* is designed as a criterion-referenced assessment in which students are expected to master the skills assessed by the end of the school year. It also is designed with simpler portions intended to identify students who are at-risk and in need of intervention. Because of these two design characteristics, it is often the case that very large percentages (i.e., 50% to 90%) of students in first grade may “top out” on simpler portions of the assessment (i.e., ceiling effects). This presents a problem when typical correlation computation is used to determine concurrent validity between tests. The computation of correlations between students’ scores on two different measures is typically built on the assumption of normal distributions of scores on both measures. When these assumptions are violated (i.e., when very high percentages of scores top out or bottom out on tests), reporting simple statistical correlations no longer present a completely accurate picture of the concurrent validity existing between two assessments. A quantitative index of the degree of decision consistency can still be calculated, however, by comparing percent agreement (P_A) between the *Indiana Reading Assessment – Grade 1* and the five measures to which it was compared.

Concurrent validity information for the *Indiana Reading Assessment – Grade 1* is, therefore, presented in two analyses in order to provide a full view of how well student assessment results compare to results students would receive on other validated measures. These two presentations are especially important when standard correlational analyses are compromised by large percentages of students “topping-out” on both the *Indiana Reading Assessment – Grade 1* and on the comparison tests. The analyses present:

- 1) the percentage of agreement between the *Indiana Grade 1 Reading Assessment* and other measures on which students have demonstrated mastery (i.e., usually performance at the 80% level or higher) for a particular skill area such as phonemic awareness, phonics, vocabulary or reading comprehension; and
- 2) the degree to which *Indiana Reading Assessment – Grade 1* scores correlate positively with other valid measures as compared to how well the other measures correlate with each other.

**Concurrent Validity Data Analysis I -
Identifying Mastery of Beginning Reading Skills:**

It is important for classroom teachers to identify which students have mastered beginning reading skills (i.e., letter identification, recognizing letter/sound correspondence, and applied phonics) and which still need attention in these areas. The level of agreement about skills mastery between the *Indiana Reading Assessment – Grade 1* and other validated reading assessments is one type of concurrent validity. For purposes of this analysis, students were considered to have demonstrated mastery of beginning reading skills if they correctly responded to 80% or more of items dealing with beginning reading skills. Comparisons between the *Indiana Reading Assessment – Grade 1* and other assessments are presented in Table 2 below:

**Table 2: Percent Agreement (P_A) of Beginning Reading Skills
Grade 1, 2nd Administration**

	Mastery Percentage	Percent Agreement (P_A)¹	
<i>Indiana Assessment (IA) (Letter ID, letter/sound & phonics)</i>	86%	N/A	
<i>TPRI (letter ID + final consonants)</i>	96%	83%	N = 177
<i>Woodcock-Johnson III (spelling sounds)</i>	77%	80%	N = 170
<i>DIBELS² (letter naming fluency)</i>	69%	68%	N = 169

The *Indiana Reading Assessment – Grade 1* demonstrates high levels of agreement with other validated measures in its ability to identify students who have reached mastery level along with those who are below the mastery level (“non-masters”) of beginning reading skills by the mid-point of grade one. Agreement with the *DIBELS Letter Naming Fluency* sub-test is limited by the test’s unusual variable definition of mastery (i.e., 40th percentile or better based on *local* norms). This means the *DIBELS* test will always have an artificial upper limit on the percentage of students who may demonstrate mastery. For the purpose of this study, the mastery level was set at a score of 57 or higher. This score was derived by setting the top *DIBELS* score for grade one students at the average top *DIBELS* score (71) of all students in the study who scored perfectly on the phonics portion of the *Indiana Reading Assessment – Grade 1*.

¹ P_A is defined as the percent of students who were identified as masters on both forms or non-masters on both forms (thus, excluding those students who were identified as masters on one form, but as non-masters on the other form). It can be calculated by the following formula:

$$P_A = \left(\frac{\text{Percent consistent mastery decisions}}{\text{Percent consistent mastery decisions}} \right) + \left(\frac{\text{Percent consistent non-mastery decisions}}{\text{Percent consistent non-mastery decisions}} \right)$$

² *DIBELS* sets no solid mastery point for this measure. It suggests “Students are considered at low risk if they perform above the 40th percentile using local norms.”

**Concurrent Validity Data Analysis II -
Concurrent Validity Correlations**

New reading assessments, such as the *Indiana Reading Assessment – Grade 1*, should correlate positively with established, validated reading measures to approximately the same level as those established measures correlate with each other. Spearman’s Rho³ correlations were calculated to determine relationships among the *Indiana Reading Assessment – Grade 1* and established reading skill measures used in this study (i.e., *W-JIII*, *TPRI*, *DIBELS*, and *SAT-9*). Correlations among the established measures range from $r = .341$ to $r = .412$. These correlations are positive and statistically significant at or beyond the $p < .01$ level. When *Indiana Reading Assessment* sub-test scores are correlated with scores from established reading assessments, correlation coefficients are comparable to correlations of existing validated measures with each other. In several cases, correlations between *Indiana Reading Assessment – Grade 1* subtests and other validated measures exceed the range of how well these validated measures correlate with each other.

**Table 3a: Concurrent Validity Correlations
Indiana Reading Assessment – Grade 1: Beginning Reading Skills**

Phonemic Awareness	
<i>Indiana Grade 1 & TPRI Combined Total (For both assessments: phoneme blending, beginning sounds, ending sounds, rhyming, and phoneme deletion)</i>	$r = .755^{**}$
Phonics	
<i>W-JIII (spelling sounds) & TPRI (letter ID + final consonants)</i>	$r = .341^{**}$
<i>Indiana Grade 1 (letter ID, letter/sound & applied phonics) & TPRI (letter ID + final consonants)</i>	$r = .358^{**}$
<i>Indiana Grade 1 (letter ID, letter/sound & applied phonics) & W-JIII (spelling sounds)</i>	$r = .573^{**}$
<i>DIBELS (LNF) & TPRI (letter ID + final consonants)</i>	$r = .322^{**}$
<i>Indiana Grade 1 (letter ID, letter/sound & applied phonics) & DIBELS (LNF)</i>	$r = .533^{**}$
Vocabulary	
<i>Indiana Grade 1 (word & sentence comprehension) & W-JIII (reading fluency + passage comprehension)</i>	$r = .573^{**}$

** correlation significant at the .01 level (two-tailed)

³ Spearman’s Rho, a non-parametric correlation, was used in these analyses due to the large number of tie-scores on the upper ends of the assessments.

**Table 3b: Concurrent Validity Correlations
Indiana Reading Assessment – Grade 1: Reading Comprehension Skills**

Reading Comprehension	
<i>TPRI Reading Comprehension & SAT-9 Reading Comprehension</i>	<i>r = .412**</i>
<i>Indiana Grade 1 Text & Story Comprehension & TPRI Reading Comprehension</i>	<i>r = .187**</i>
<i>Indiana Grade 1 Text & Story Comprehension & SAT-9 Reading Comprehension</i>	<i>r = .559**</i>

** correlation significant at the .01 level (two-tailed)

Samples of the comparison assessments can be found in Appendix C.

Establishing and Documenting Reliability of the Indiana Reading Assessment – Grade 1:

Parallel Form Reliability

The *Indiana Reading Assessment – Grade 1* was designed with parallel forms of the assessment for each administration in order to gather information on the progress of students' reading skills. Because of this design, parallel form reliability could be established using the equivalent forms of each administration. Students were given one administration of the assessment and then administered the next form within a limited time span to gather the data necessary to complete the analysis. The Pearson analysis produced a **reliability coefficient of .68**.

Split-half Reliability

The split-half reliability coefficients for the *Indiana Reading Assessment – Grade 1* were calculated following the Spearman-Brown split-half reliability procedure. This procedure is designed to measure the potential for measurement error due to fatigue, level of anxiety, and ordering effects of the items. A **reliability correlation of .91** was found for the *Indiana Reading Assessment – Grade 1*. Values of .75 - 1.0 are considered excellent.

Inter-rater Reliability/Agreement of Teacher Scoring

Inter-rater agreement levels for the three administrations (i.e., October, January, and May 2003) of this assessment were determined by correlating teacher scores for 2500+ assessments to scores on the same assessments provided by trained scorers at the Center for Innovation in Assessment. The table that follows summarizes these correlations of agreement.

Table 4: Correlations for Inter-rater Agreement

	October	January	May
<i>Beginning Reading Skills*</i>	N/A	N/A	N/A
<i>Story Comprehension</i>	.746	.702	.646

* Only the open-ended items of the Assessment were subject to re-scoring. It is assumed that the teacher scoring of the multiple-choice items is correct.

APPENDIX A: STANDARDS COVERAGE CHART

Standards Coverage Chart

Indiana Reading Assessment – Grade 1 Coverage of Indiana’s Grade 1 English/Language Arts Standards

Grade 1: Standard 1: READING: Word Recognition, Fluency, and Vocabulary Development		Phonics	Vocabulary	Word & Sentence Comprehension	Reading Comprehension	Phonemic Awareness	Story Comprehension	Resource Guide	Classroom Assessments	Curriculum Frameworks
<i>Concepts About Print</i>										
1.1.1	Match oral words to printed words.		✓					✓		✓
1.1.2	Identify letters, words, and sentences.	✓						✓	✓	✓
1.1.3	Recognize that sentences start with capital letters and end with punctuation, such as periods, question marks, and exclamation points.	✓						✓		✓
<i>Phonemic Awareness</i>										
1.1.4	Distinguish beginning, middle, and ending sounds in single-syllable words (words with only one vowel sound).	✓				✓		✓	✓	✓
1.1.5	Recognize different vowel sounds in orally stated single-syllable words.	✓						✓	✓	
1.1.6	Recognize that vowels’ sounds can be represented by different letters.	✓						✓	✓	✓
1.1.7	Create and state a series of rhyming words.					✓		✓	✓	✓
1.1.8	Add, delete, or change sounds to change words.					✓		✓	✓	✓
1.1.9	Blend two to four phonemes (sounds) into recognizable words.					✓		✓	✓	
<i>Decoding and Word Recognition</i>										
1.1.10	Generate the sounds from all the letters and from a variety of letter patterns, including consonant blends and long- and short-vowel patterns (<i>a, e, i, o, u</i>), and blend those sounds into recognizable words.	✓	✓					✓		✓
1.1.11	Read common sight words (words that are often seen and heard).		✓					✓	✓	✓
1.1.12	Use phonic and context clues as self-correction strategies when reading.			✓	✓			✓		✓
1.1.13	Read words by using knowledge of vowel digraphs (two vowels that make one sound such as the <i>ea</i> in <i>eat</i>) and knowledge of how vowel sounds change when followed by the letter <i>r</i> (such as the <i>ea</i> in the word <i>ear</i>).			✓				✓	✓	
1.1.14	Read common word patterns (<i>-ite, -ate</i>).							✓	✓	✓
1.1.15	Read aloud smoothly and easily in familiar text.							✓		✓

STANDARDS COVERAGE CHART (cont.)

		Phonics	Vocabulary	Word & Sentence Comprehension	Reading Comprehension	Phonemic Awareness	Story Comprehension	Resource Guide	Classroom Assessments	Curriculum Frameworks
<i>Vocabulary and Concept Development</i>										
1.1.16	Read and understand simple compound words (<i>birthday, anything</i>) and contractions (<i>isn't, aren't, can't, won't</i>).		✓					✓	✓	✓
1.1.17	Identify letters, words, and sentences. Read and understand root words (<i>look</i>) and their inflectional forms (<i>looks, looked, looking</i>).		✓					✓	✓	
1.1.18	Classify categories of words.							✓	✓	✓
Grade 1: Standard 2: READING: Reading Comprehension										
<i>Structural Features of Informational and Technical Materials</i>										
1.2.1	Identify the title, author, illustrator, and table of contents of a reading selection.				✓			✓	✓	✓
1.2.2	Identify text that uses sequence or other logical order.				✓			✓	✓	✓
<i>Comprehension and Analysis of Grade-Level-Appropriate Text</i>										
1.2.3	Respond to <i>who, what, when, where, why, and how</i> questions and discuss the main idea of what is read.			✓	✓		✓	✓	✓	✓
1.2.4	Follow one-step written instructions.							✓	✓	✓
1.2.5	Use context (the meaning of the surrounding text) to understand word and sentence meanings.			✓	✓		✓	✓	✓	
1.2.6	Confirm predictions about what will happen next in a text by identifying key words.				✓			✓	✓	
1.2.7	Relate prior knowledge to what is read.				✓			✓	✓	✓
Grade 1: Standard 3: READING: Literary Response and Analysis										
<i>Narrative Analysis of Grade-Level-Appropriate Text</i>										
1.3.1	Identify and describe the plot, setting, and character(s) in a story. Retell a story's beginning, middle, and end.				✓			✓	✓	✓
1.3.2	Describe the roles of authors and illustrators.							✓	✓	✓
Grade 1: Standard 4: WRITING: Writing Process										
<i>Organization and Focus</i>										
1.4.1	Discuss ideas and select a focus for group stories or other writing.							✓	✓	
1.4.2	Use various organizational strategies to plan writing.							✓	✓	✓
<i>Evaluation and Revision</i>										
1.4.3	Revise writing for others to read.							✓		✓

STANDARDS COVERAGE CHART (cont.)

Grade 1: Standard 5: WRITING: Writing Applications (Different Types of Writing and Their Characteristics)

		Phonics	Vocabulary	Word & Sentence Comprehension	Reading Comprehension	Phonemic Awareness	Story Comprehension	Resource Guide	Classroom Assessments	Curriculum Frameworks
1.5.1	Write brief narratives (stories) describing an experience.							✓		
1.5.2	Write brief expository (informational) descriptions of a real object, person, place, or event, using sensory details.							✓	✓	✓
1.5.3	Write simple rhymes.							✓	✓	✓
1.5.4	Use descriptive words when writing.							✓	✓	✓
1.5.5	Write for different purposes and to a specific audience or person.							✓	✓	

Grade 1: Standard 6: WRITING: Written English Language Conventions

<i>Handwriting</i>										
1.6.1	Print legibly and space letters, words, and sentences appropriately.							✓		✓
<i>Sentence Structure</i>										
1.6.2	Write in complete sentences.							✓		
<i>Grammar</i>										
1.6.3	Identify and correctly use singular and plural nouns (<i>dog/dogs</i>).							✓		✓
1.6.4	Identify and correctly write contractions (<i>isn't, aren't, can't</i>).							✓	✓	✓
1.6.5	Identify and correctly write possessive nouns (<i>cat's meow, girls' dresses</i>) and possessive pronouns (<i>my/mine, his/her, hers</i>).							✓	✓	
<i>Punctuation</i>										
1.6.6	Correctly use periods (<i>I am five.</i>), exclamation points (<i>Help!</i>), and question marks (<i>How old are you?</i>) at the end of sentences.							✓	✓	✓
<i>Capitalization</i>										
1.6.7	Capitalize the first word of a sentence, names of people, and the pronoun <i>I</i> .							✓	✓	✓
<i>Spelling</i>										
1.6.8	Spell three- and four-letter words and grade-level-appropriate sight words correctly.							✓	✓	

STANDARDS COVERAGE CHART (cont.)

Grade 1: Standard 7: LISTENING AND SPEAKING: Listening and Speaking Skills, Strategies, and Applications

		Phonics	Vocabulary	Word & Sentence Comprehension	Reading Comprehension	Phonemic Awareness	Story Comprehension	Resource Guide	Classroom Assessments	Curriculum Frameworks
<i>Comprehension</i>										
1.7.1	Listen attentively.							✓	✓	✓
1.7.2	Ask questions for clarification and understanding.							✓	✓	✓
1.7.3	Give, restate, and follow simple two-step directions.							✓		
<i>Organization and Delivery of Oral Communication</i>										
1.7.4	Stay on the topic when speaking.							✓		✓
1.7.5	Use descriptive words when speaking about people, places, things, and events.							✓		✓
<i>Speaking Applications</i>										
1.7.6	Recite poems, rhymes, songs, and stories.							✓		
1.7.7	Retell stories using basic story grammar and relating the sequence of story events by answering <i>who</i> , <i>what</i> , <i>when</i> , <i>where</i> , <i>why</i> , and <i>how</i> questions.							✓	✓	
1.7.8	Relate an important life event or personal experience in a simple sequence.							✓	✓	✓
1.7.9	Provide descriptions with careful attention to sensory detail.							✓	✓	
1.7.10	Use visual aids such as pictures and objects to present oral information.							✓	✓	✓

APPENDIX B: ASSESSMENT SAMPLES – PHONEMIC AWARENESS

Rhyming Words

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills – First Administration:

Directions: The teacher says: “I am going to say three words that rhyme: cat, sat, mat. These three words rhyme. Can you tell me another word (or even a make-believe word) that rhymes with cat, sat, and mat?”

Sound Read by the Teacher	Three Words Read by the Teacher	Student's Oral Response
1. /d/	ban, pan, Dan	
2. /t/	fig, big, wig	
3. /l/	hill, still, pill	

Beginning Sounds

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills – First Administration:

Directions: The teacher says: “I am going to say three words. One of these words begins with the /b/ sound. Listen to the three words and tell me which word begins with the /b/ sound: girl, balloon, cloud. Which of these words begins with the /b/ sound?”

Sound Read by the Teacher	Three Words Read by the Teacher	Student's Response
1. /m/	pail, monkey, hat	
2. /h/	window, thumb, pin	
3. /t/	tree, tall, bug	

Ending Sounds

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills – First Administration:

Directions: The teacher says: “I am going to say three words. One of these words ends with the /n/ sound. Listen to the three words and tell me which word ends with the /n/ sound: duck, dog, sun. Which of these words ends with the /n/ sound?”

Sound Read by the Teacher	Three Words Read by the Teacher	Student's Response
1. /d/	box, hid, boy	
2. /t/	foot, hill, moon	
3. /k/	feet, dip, sock	

Phoneme Deletion

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills – First Administration:

Directions: The teacher says: “I am going to say a word. Then I am going to say a sound that is part of that word. I want you to say the word back to me without that sound. For example, if I say the word band and then ask you to say the word without the /b/ sound, you would say and. And is the word band without the /b/ sound.”

Word Read by the Teacher	Sound Read by the Teacher	Student's Response
pin	1. /p/	
seat	2. /s/	
cat	3. /k/	

ASSESSMENT SAMPLES – PHONEMIC AWARENESS (cont.)

Blending Phonemes

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills - First Administration:

Directions: The teacher says: “I am going to say parts of a word. After I say the sounds, I want you to blend the parts together and tell me what the word is. For example, if I say /d/-/o/-/g/, what would you say?”

Word Read by the Teacher	Student's Response
1. /l/-/i/-/d/ (lid)	
2. /h/-/a/-/t/ (hat)	
3. /b/-/o/-/y/ (boy)	

ASSESSMENT SAMPLES – PHONICS


Letter Recognition

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills - First Administration:

Directions:
SAY: In this row, find the letter **F**. When you find the letter **F**, fill in the circle under it.

Letter Recognition

Sample A

	E	F	L	R
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>


Beginning Sound Recognition

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills - First Administration:

Directions:
SAY: Which of the words in this row begins with the same sound as the sound at the beginning of the word **bed**? Fill in the circle under the word that begins with the sound that you hear at the beginning of the word **bed**.

Beginning Sound Recognition

Sample B

	boy	apple	day	pat
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>


Ending Sound Recognition

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills - First Administration:

Directions:

SAY: Which of the words in this row ends with the same sound as the sound at the end of the word **cave**? Fill in the circle under word that ends with the sound that you hear at the end of the word **cave**.

Ending Sound Recognition

Sample C  home very care move

Story Comprehension

from Indiana Grade 1 Reading Assessment,
Story Comprehension - First Administration:

Directions: The teacher says: “Draw a picture and write about what the girl likes about her pal AI.”

What does the girl like to do with her pal AI?



The Story Comprehension task elicits two scores from one task: a comprehension score and an Applied Phonics score. This sample focuses on the Applied Phonics score.

Applied Phonics Rubric

Each student will receive a score of 2, 1, or 0 for each of three skills based on the evidence listed.

Skill	Evidence
Matches initial sounds	Initial letters of words match initial sounds of those words.
Matches final sounds	Final letters of words match final sounds of those words.
Matches medial sounds	Medial letters of words match medial sounds of those words.

Description of scores of Applied Phonics Skills

2 point score	1 point score	0 point score
The skill is developed. The student applies the skill most to all of the time.	The skill is still developing. The student applies the skill inconsistently.	The skill is not evident. The student does not apply the skill.

Word Comprehension

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills - First Administration:


Directions:

SAY: Put your finger on the picture of the boat.

SAY: Which of the words in this row names this picture? Fill in the circle under the word that names the picture.

Word Comprehension

Sample D

	today	book	start	boat
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sentence Comprehension


from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills - First Administration:

Directions:

SAY: Look at the picture in each row. Then look at the three sentences beside the picture. Find the sentence that tells about the picture. Fill in the circle next to the sentence that tells about each picture.

Sentence Comprehension

26

	<input type="radio"/>	The car is going fast.
	<input type="radio"/>	The rock is in the road.
	<input type="radio"/>	The car is under the rock.

Reading Comprehension

from Indiana Grade 1 Reading Assessment,
Beginning Reading Skills - First Administration:

Directions:

SAY: There are five questions after each story. You will read each story to yourself. Then you will read each question and the choices after each question. Fill in the circle beside the words that answer each question.

Tina's Kite

Tina got a yellow kite.
It had a tail and a string.
It was very pretty.



33

Where is the kite at the end of the story?

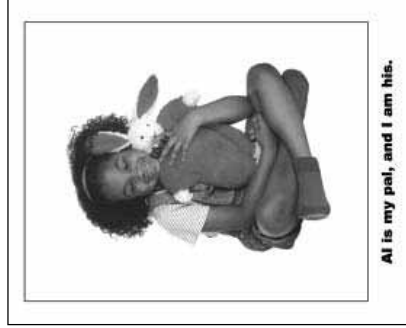
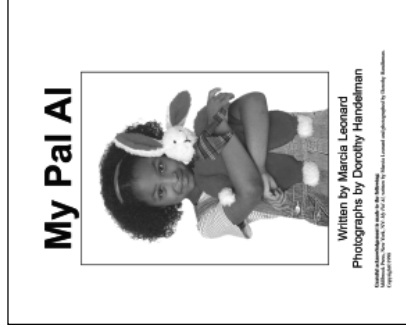
- It is flying up high.
- It is inside the house.
- It is in a tree.

Story Comprehension

from Indiana Grade 1 Reading Assessment, Story Comprehension - First Administration:

Directions:

SAY: You are going to read a story called My Pal AI. This is a story about a girl and her special friend AI. The story tells about the things the girl and AI do together.



SAY: Draw a picture and write about what the girl likes about her pal AI.

What does the girl like to do with her pal AI?



She likes to jump.

The Story Comprehension task elicits two scores from one task: a comprehension score and an Applied Phonics score. This sample focuses on the Comprehension score.

II. Open-ended Comprehension Rubric

This score is based on the following evidence:

1. The picture the student drew in response to the comprehension question.
2. The sentence the student wrote in response to the comprehension question.
3. The student's oral elaboration of what he or she drew and wrote in response to the question.

Description of scores

2 point score	1 point score	0 point score
The student's response indicates a complete understanding of both the question and the story.	The student's response indicates some understanding of both the question and the story.	The student's response indicates no understanding of the question, the story, or both.

APPENDIX C: TEST COMPARISONS

Phonemic Awareness: Rhyming Words

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: The teacher says, “I am going to say three words that rhyme: cat, sat, mat. These three words rhyme. Can you tell me another word (or even a make-believe word) that rhymes with cat, sat, mat?”

from TPRI Kindergarten Inventory,
Rhyming, Inventory Task 1:

Directions: Teacher says, “Listen to these words: ____, ____, ____. All of these words rhyme. Can you tell me another real word or made-up word that rhymes with ____, ____, ____?”

Phonemic Awareness: Beginning Sounds

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: The teacher says, “I am going to say three words. One of these words begins with the /b/ sound. Listen to the three words and tell me which word begins with the /b/ sound: girl, balloon, cloud. Which of these three words begins with the /b/ sound?”

from TPRI Kindergarten Inventory,
Letter to Sound Linking, Inventory Task 7:

Directions: Teacher asks, “What is the first sound in the word ____?”

Phonemic Awareness: Ending Sounds

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: The teacher says, “I am going to say three words. One of these words ends with the /n/ sound. Listen to the three words and tell me which word ends with the /n/ sound: duck, dog, sun. Which of these three ends with the /n/ sound?”

from TPRI Kindergarten Inventory,
Detecting Final Sounds, Inventory Task 5:

Directions: The teacher says, “Say the word _____. Now say (word) again without the ____.” (For example, the teacher would say, “Say the word rain. Now say rain again without the n.”) Do not say the letter name; say the sound of the letter.

TEST COMPARISONS (cont.)

Phonemic Awareness: Phoneme Deletion

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: The teacher says, “I am going to say a word. Then I am going to say a sound that is part of that word. I want you to say the word back to me without that sound. For example, if I say the word band and then ask you to say the word without the /b/ sound, you would say and. And is the word band without the /b/ sound.”

from TPRI 1st Grade Inventory,
Detecting Initial Sounds, Inventory Task 3:

Directions: The teacher says, “Say the word ____.” After the child repeats the word, the teacher says, “Now say (word) again without the _____. (For example, the teacher would say, “Say the word nice. Now say nice without the n.”) Do not say the letter name; say the sound of the letter.

Phonemic Awareness: Blending Phonemes

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: The teacher says, “I am going to say parts of a word. After I say the sounds, I want you to blend the parts together and tell me what the word is. For example, if I say /d/-/o/-/g/, what would you say?”

from TPRI 1st Grade Inventory,
Blending Phonemes, Inventory Task 2:

Directions: The teacher says, “When I say r-u-g, I know the word is rug.” The teacher says, “What would the word be if I say ____?” Say the sound for each letter or cluster of letters, not the letter names at approximately ½-second intervals.

Phonics: Letter Recognition

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: Say: In this row, find the letter F. When you find the letter F, fill in the circle under it.

from DIBELS First Grade Benchmark Assessments,
Letter Naming Fluency - Benchmark I:

Directions: Teacher shows the student a list of letters (upper and lower case mixed together). Teacher says, “Tell me the names of as many letters as you can. When I say begin, start here (point to the first letter) and go across the page. Point to each letter and tell me the name of that letter. If you come to a letter you don’t know, I’ll tell it to you. Put your finger on the first letter. Ready, begin.”

TEST COMPARISONS (cont.)

Phonics: Beginning Sound Recognition

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: Say: Which of the words in this row begins with the same sound as the sound at the beginning of the word **bed**? Fill in the circle under the word that begins with the sound that you hear at the beginning of the word **bed**.

from TPRI Kindergarten Inventory,
Letter to Sound Linking, Inventory Task 7:

Directions: The teacher shows the student a set of letters. The teacher says, “Point to the first letter in the word ____.”

Phonics: Ending Sound Recognition

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: Say: Which of the words in this row ends with the same sound as the sound at the end of the word cave? Fill in the circle under the word that ends with the sound that you hear at the end of the word cave.

from TPRI Kindergarten Inventory,
Letter to Sound Linking, Inventory Task 7:

Directions: Before administering this task, place the following alphabet letters on the right side of the magnetic task board: d,m,t,g,p,k. The student is given the first two letters of a word. The teacher says, “Can you make the word ____.”

Phonics: Story Comprehension

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: The teacher says: “Draw a picture and write about what the girl likes about her pal Al.” For the Applied Phonics score, students are asked to read what they have written. Teachers measure letter-to-sound correspondence.

from Woodcock-Johnson III,
Spelling Sounds, Test 20:

Directions: Say: I am going to ask you to spell some words that are not real words—they are nonsense words. Nonsense words may sound like “bip,” “ost,” or “mib.” Try to spell the nonsense word the way you think it would be spelled if it were a real word.

Vocabulary: Word Comprehension

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: Say: Put your finger on the picture of the boat. Which of the words in this row names this picture? Fill in the circle under the word that names the picture.

from Woodcock-Johnson III,
Passage Comprehension, Test 9:

Directions: The teacher shows the student a page that has words and four pictures. The teacher says “Put your finger on the picture that the words tell about.”

TEST COMPARISONS (cont.)

Vocabulary: Sentence Comprehension

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: Say: Look at the picture in each row. Then look at the three sentences beside the picture. Find the sentence that tells about the picture. Fill in the circle next to the sentence that tells about each picture.

from Woodcock-Johnson III,
Reading Fluency, Test 2:

Directions: Say: Start here (point to first sentence) and read as many sentences as you can. Decide if the answer is “yes” or “no.” After you get to the bottom (point to the bottom of the first column), go to the top (point to the top of the second column). Keep working until I tell you to stop. Work as fast as you can without making mistakes. (Students are timed.)

Comprehension: Reading Comprehension

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: Say: There are five questions after each story. You will read each story to yourself. Then you will read each question and the choices after each question. Fill in the circle beside the words that answer each question.

from SAT 9,
Reading Comprehension:

Directions: Say: First read each story; then read each question and mark the space for the answer you think is right. Keep working until you come to the bottom of the page.

Comprehension: Story Comprehension

from *Indiana Reading Assessment – Grade 1*,
Beginning Reading Skills - First Administration:

Directions: Say: You are going to read a story called My Pal Al. This is a story about a girl and her special friend Al. The story tells about the things the girl and Al do together. For the Comprehension score, students are asked to draw a picture and write an answer to the question. Verbal responses are also accepted.

from TPRI 1st Grade Inventory,
Reading Comprehension, Inventory Task 2:

Directions: Reading Accuracy: The teacher says, “I am going to ask you to read a story. This is a story about two friends and the sun. After you read it, I will ask you a few questions.”

APPENDIX D: TEACHER FEEDBACK

Appendix D: Teacher Feedback

The following teacher feedback data is based on survey results from the 2003-2004 school year.

Table 5. Helpfulness of each part to the instruction of all students.

Assessment Section	Most Helpful	Very Helpful	Helpful	Somewhat Helpful	Not Very Helpful	Least Helpful
<i>Beginning Reading Skills: Part A</i>	17%	16%	12%	10%	12%	12%
<i>Beginning Reading Skills: Part B</i>	9%	23%	20%	14%	10%	1.4%
<i>Beginning Reading Skills: Part C</i>	10%	11%	23%	19%	9%	10%
<i>Phonemic Awareness</i>	18%	9%	9%	14%	9%	23%
<i>Story Comprehension: Listening</i>	4%	14%	14%	9%	22%	19%
<i>Story Comprehension: Reading</i>	28%	15%	11%	14%	15%	13%

Table 6. Effectiveness of the Indiana Reading Assessment – Grade 1 and materials.

	Very Effective	Somewhat Effective	Not Effective
<i>Effectiveness at assessing Indiana Academic Standards</i>	38%	53%	9.5%
<i>Effectiveness of Additional Assessments in Resource & Intervention Guide</i>	32%	53%	15%

TEACHER FEEDBACK (cont.)

Table 7. Clarity of the Indiana Reading Assessment – Grade 1 and materials.

	Very Clear	Generally Clear	Confusing
<i>Clarity of Administration directions</i>	56%	37%	7%
<i>Clarity of material for students</i>	61%	35%	4%

Table 8. Is the Indiana Reading Assessment – Grade 1 helpful?

	Definitely	Probably	Maybe	No	N/A Too hard
<i>Helpful to your instruction of the students who took it?</i>	38%	29%	12%	18%	3%
<i>Helpful to your instruction of all students?</i>	31%	31%	15%	21%	2%

Table 9. Usefulness of the Indiana Reading Assessment – Grade 1 materials.

	Very Useful	Somewhat Useful	Not Useful	Did not use
<i>Usefulness of CD-ROM</i>	8%	24%	5%	63%
<i>Usefulness of Classroom Activities in the Resource Guide</i>	23%	39%	2%	39%

TEACHER FEEDBACK (cont.)

**Table 10. Amount of time to administer each Part.
(Data from the 2002-2003 teacher survey.)**

Assessment Section	Under 20 minutes	21-30 minutes	31-45 minutes	46-60 minutes	Over 60 minutes
<i>Time to administer Part A (Phonics)</i>	57%	27%	8%	5%	1%
<i>Time to administer Part B (Vocabulary)</i>	34%	41%	17%	6%	1%
<i>Time to administer Part C (Comprehension)</i>	8%	37%	39%	12%	3%
<i>Time to administer Phonemic Awareness</i>	8%	29%	30%	14%	5%
<i>Time to administer Story Comprehension: Listening</i>	15%	50%	27%	6%	1%
<i>Time to administer Story Comprehension: Reading</i>	39%	40%	12%	2%	0.4%

APPENDIX E: DEMOGRAPHIC DATA

Appendix E: Demographic Data

The following demographic data is derived from an informal study of 125 schools who have participated in the Indiana Reading Assessments for three consecutive years beginning with the 2002-2003 school year.

Table 11. Locale Data

Locale	% of 125 schools in locale in 2004-2005	% of Indiana schools in locale in 2004-2005
<i>1=Large City</i>	6.03%	9.99%
<i>2=Mid-size City</i>	14.66%	15.79%
<i>3=Urban Fringe of Large City</i>	9.48%	16.36%
<i>4=Urban Fringe of Mid-size City</i>	3.45%	6.78%
<i>5=Large Town</i>	3.45%	2.43%
<i>6=Small Town</i>	14.66%	13.26%
<i>7=Rural, outside MSA</i>	34.48%	18.54%
<i>8=Rural, inside MSA</i>	12.93%	16.83%

Table 12. Achievement Data

Criteria	% of 125 schools meeting criteria in 2002-2003	% of Indiana schools meeting criteria in 2004-2005
<i>Above State Average Percent Passing English/Language Arts on State Test</i>	44%	44.80%
<i>Scores on State Test Increased from 2002-2003 Scores</i>	Not Applicable	72.80%
<i>Scores on State Test Increased by 5 points or more from 2002-2003</i>	Not Applicable	42.40%

DEMOGRAPHIC DATA (cont.)

Table 13. Minority/Ethnicity Data

Minority Data	125 schools	Indiana Public Schools
<i>% Total Enrollment Minority Students</i>	21.77%	21.30%
<i>% of schools with more than 50% minority enrollment in 2004-2005</i>	15.20%	State Data Not Available
Ethnicity Category	Average % of ethnicity population in the 125 schools in 2004-2005	State Ethnicity Enrollment Not Available
<i>Asian</i>	0.72%	
<i>Black</i>	11.12%	
<i>Native American</i>	0.21%	
<i>Hispanic</i>	5.68%	
<i>Mixed Race</i>	3.57%	
<i>White</i>	77.90%	

Table 14. Income Level Data

	125 schools	Indiana Public Schools
<i>% Total Enrollment on Free or Reduced Lunch in 2004-2005</i>	46.14%	34.40%
<i>% of schools with more than 50% on free or reduced lunch in 2004-2005</i>	25.60%	State Data Not Available

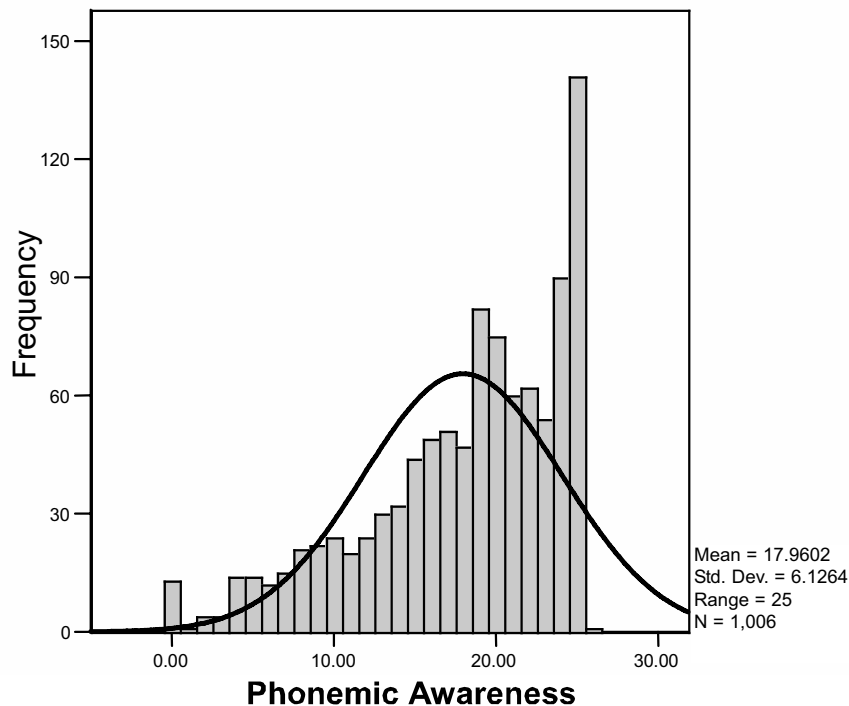
APPENDIX F: DESCRIPTIVE STATISTICS

Appendix F: Descriptive Statistics and Score Distribution

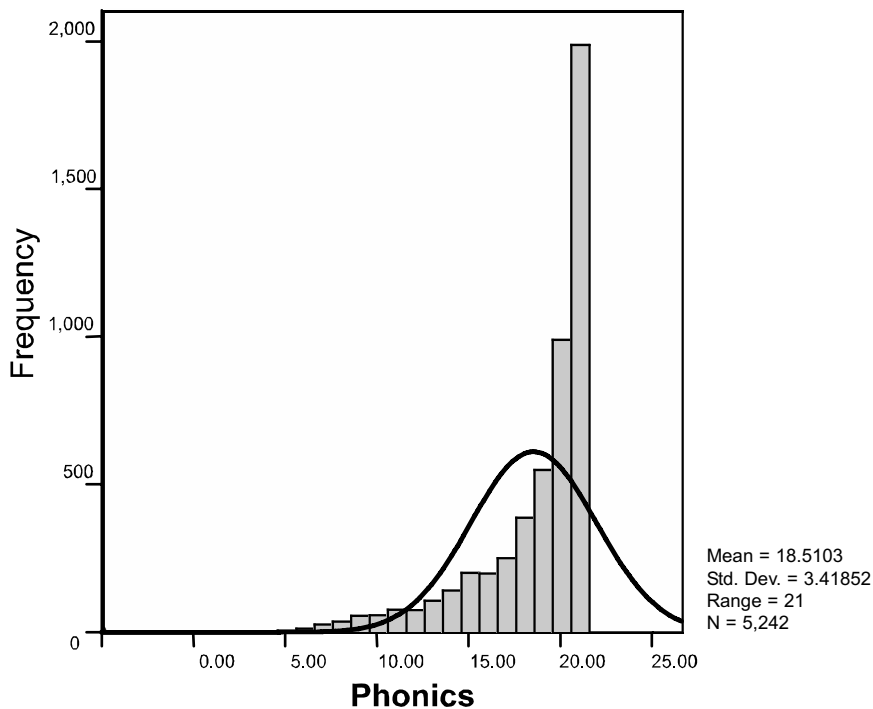
The following descriptive statistics are based on data from the 2003-2004 Random Sample Group.

Appendix F-1 Descriptive Statistics and Score Distribution by Reading Skill

Graph 1. Phonemic Awareness Score Distribution



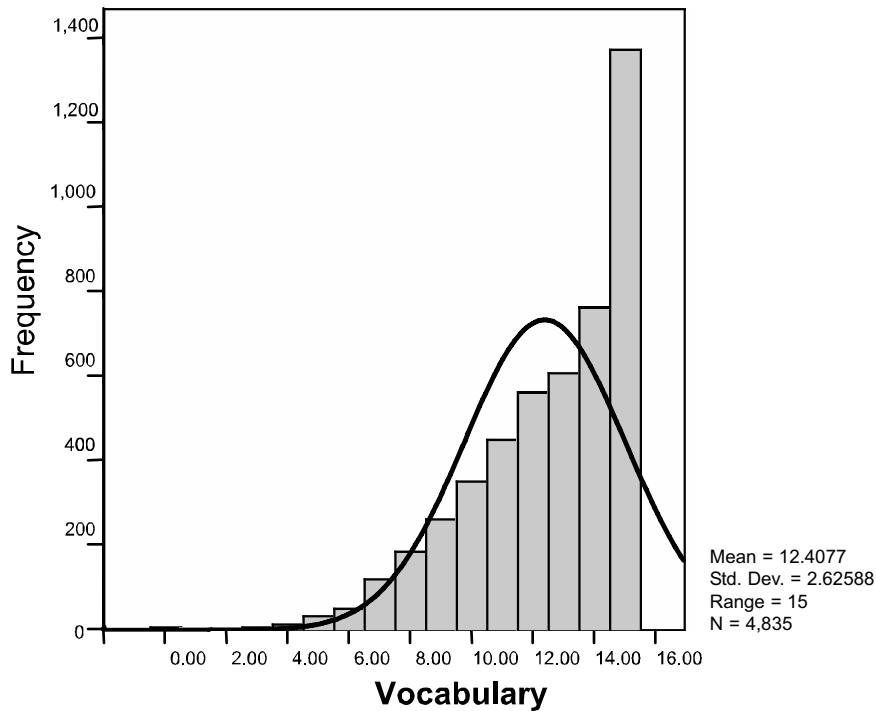
Graph 2. Phonics Score Distribution



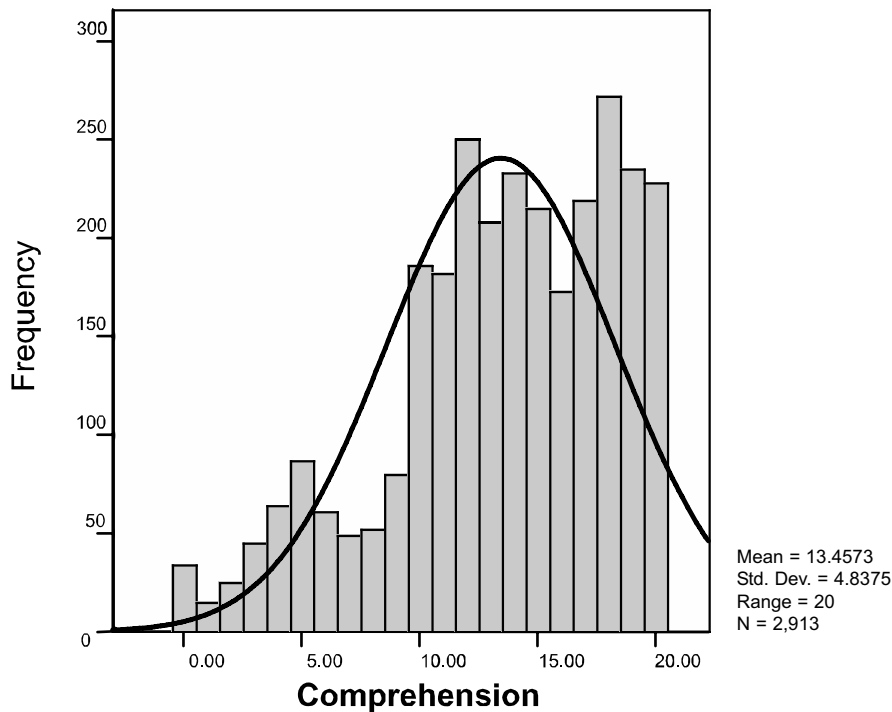
DESCRIPTIVE STATISTICS (cont.)

Appendix F-1 Descriptive Statistics and Score Distribution by Reading Skill (cont.)

Graph 3. Vocabulary Score Distribution



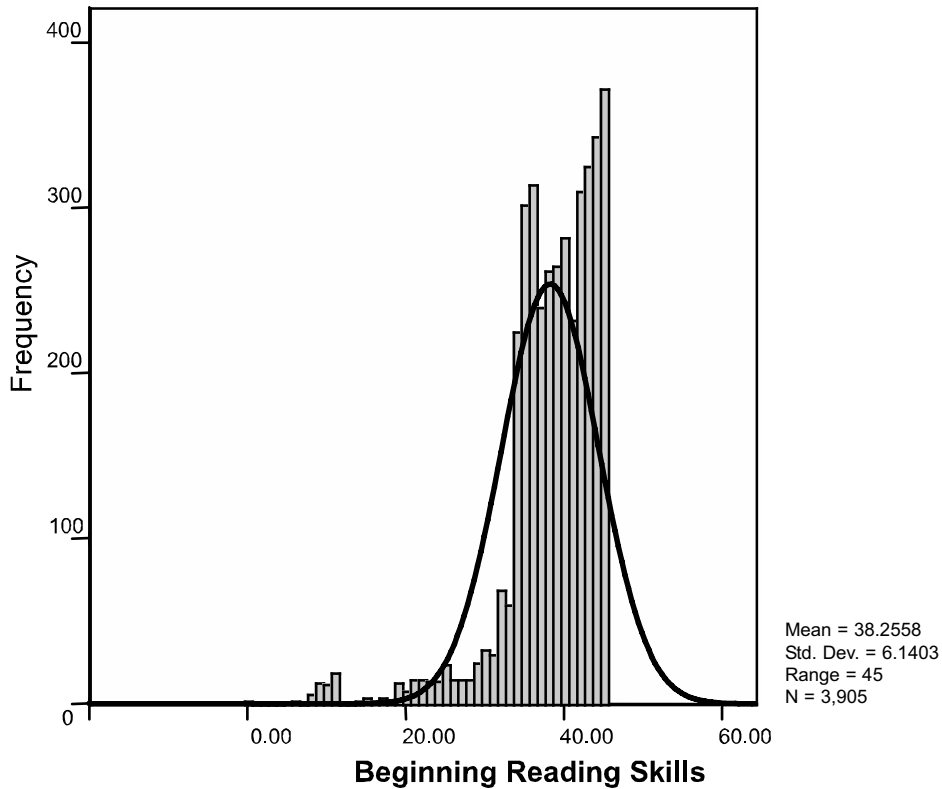
Graph 4. Comprehension Score Distribution



DESCRIPTIVE STATISTICS (cont.)

Appendix F-2 Descriptive Statistics and Score Distribution by Assessment Section

Graph 5. Beginning Reading Skills Score Distribution



Graph 6. Story Comprehension Score Distribution

