INDIANA READING ASSESSMENT – KINDERGARTEN

TECHNICAL REPORT

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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 – Kindergarten*, research was conducted to evaluate how well it assesses various reading skills of kindergarten students. Multiple analyses were conducted to establish the validity of the *Indiana Reading Assessment – Kindergarten*. 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. Thus, the *Indiana Reading Assessment – Kindergarten* is a valid instrument for assessing phonemic awareness, phonics, vocabulary, and reading comprehension skills. The validity of the *Indiana Reading Assessment – Kindergarten* at assessing overall reading ability is also established by the Cronbach's alpha of .838.

Establishing reliability is important in showing that an assessment obtains the same results when given under the same or similar circumstances. Two types of analysis were performed in order to evaluate whether the *Indiana Reading Assessment – Kindergarten* was reliable—split-half reliability and inter-rater reliability. In both analyses, the resulting correlations were quite robust.

Strengths of the *Indiana Reading Assessment – Kindergarten*

The *Indiana Reading Assessment – Kindergarten* was designed specifically for Indiana teachers to assess students' reading abilities as defined by Indiana's Academic Standards for Reading. The research completed, however, designates the *Indiana Reading Assessment – Kindergarten* as valuable to other educators as being effective at assessing a student's phonemic awareness, phonics, vocabulary, reading comprehension, and overall reading ability.

Research Needs

To date, minimal research has been conducted on the *Indiana Reading Assessment – Kindergarten* that disaggregates data across demographic groups. Studies of this kind are important in determining if there are any biases in assessments. Conducting this type of research is done in two ways. Researchers can collect demographic information of a sample group of students and compare the disaggregated data to national or state averages. Analysis can also be done by comparing progress between different demographic groups within the same sample. With the introduction of the *No Child Left Behind* legislation, reporting progress among all groups is necessary.

While the *Indiana Reading Assessment – Kindergarten* 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.

At the time that the research was completed for the *Indiana Reading Assessment – Kindergarten* Technical Report, the first administration of the kindergarten assessment (Initial Screening) did not offer quantitative scores, but instead required teachers to write an informal qualitative assessment of students' early reading skills. Due to teacher requests, a quantitative scoring system has since been added to the first administration (Initial Screening) of the *Indiana Reading Assessment – Kindergarten*. To establish the validity and reliability of this first administration, further data must be gathered and analyzed. The research results presented in this report focuses on the second and third administrations of the *Indiana Reading Assessment – Kindergarten*.

From the results of the various studies conducted in conjunction with this report, it is evident that two sections of the *Indiana Reading Assessment – Kindergarten* provide limited diagnostic value for teachers to use in identifying students' strengths and weaknesses. Over ninety-nine percent of the students taking the *Indiana Reading Assessment – Kindergarten* received a passing score for the Picture-Word Matching subsection of the Assessment, with ninety-one percent receiving a perfect score. This task is typically found on developmental or readiness tests for young children. Since the time of this study, this section has been changed to assess skills more applicable to kindergarten students, therefore providing teachers with pertinent information about the developing reading skills of their students. Analysis of the items in this updated section is currently being done. Further analysis is also being conducted on the comprehension items of the *Indiana Reading Assessment – Kindergarten* to confirm the validity of the listening comprehension tasks.

With the increased focus on scientifically-based reading research, experimental research is more desirable to establish the effectiveness of assessments, curricula, and programs. While this Technical Report contains results establishing the *Indiana Reading Assessment – Kindergarten* 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; then teachers can provide that intervention so that students can realize reading success. Further experimental research is planned to determine whether educators are effectively using the *Indiana Reading Assessment – Kindergarten* 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 and comparing similar data among a control group, some important information can be gathered about the effective use of the assessment in providing intervention.

Conclusion

The data in this report show the *Indiana Reading Assessment – Kindergarten* 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 – Kindergarten

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

To maximize instructional time and minimize testing time, many portions of the assessment are designed for small group administration. Teacher scoring of the assessment makes it 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 teacher materials as well as 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 – Kindergarten* 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 in kindergarten. 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 for easy access of curriculum support materials also matched to those standards.

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 that set of reading skills.

Indiana Reading Assessment - Kindergarten

Indiana's Academic Standards and skills indicators for reading in kindergarten are comprehensive. It is not possible to assess all these indicators in a single administration that could be completed in a reasonable time by a kindergarten student. The *Indiana Reading Assessment – Kindergarten* progressively introduces increasingly difficult reading skills in the three administrations of the assessment while dropping simpler skills likely to be mastered by nearly all students. This progression allows comprehensive coverage of Indiana's Academic Standards for Reading while

maintaining reasonable time limitations for a single reading assessment. The Standards Coverage Chart (Appendix A) reflects how the *Indiana Reading Assessment* – *Kindergarten* items assess Indiana's Academic Standards. A presentation of how the *Indiana Reading Assessment* – *Kindergarten* Assessment items reflect National Reading Panel reporting categories follows.

Table 1a: Indiana Reading Assessment – Kindergarten: Second Administration

| Second Administration (January) | | | | | | | |
|---|-----------------|------------|--|--|--|--|--|
| Phonemic Awareness (12 items; 12 points) | | | | | | | |
| Beginning Sounds | 4 items | 4 points | | | | | |
| Ending Sounds | 4 items | 4 points | | | | | |
| Phoneme Blending | 4 items | 4 points | | | | | |
| Picture-Word Matching and Sentence Comprehen | sion (10 items; | 10 points) | | | | | |
| Picture-Word Matching | 5 items | 5 points | | | | | |
| Sentence Comprehension | 5 items | 5 points | | | | | |
| Listening Comprehension and Rhyming (8 items; | 8 points) | | | | | | |
| Listening Comprehension | 3 items | 3 points | | | | | |
| Rhyming | 5 items | 5 points | | | | | |
| Beginning and Ending Sounds (10 items; 10 point | ts) | | | | | | |
| Beginning Sounds | 5 items | 5 points | | | | | |
| Ending Sounds | 5 items | 5 points | | | | | |
| Letter and Word Recognition (10 items; 10 points) | | | | | | | |
| Letter Recognition | 5 items | 5 points | | | | | |
| Word Recognition | 5 items | 5 points | | | | | |
| Story Listening Comprehension (6 items; 8 points | 5) | | | | | | |
| Story comprehension | 5 items | 6 points | | | | | |
| Applied Phonics | 1 item | 2 points | | | | | |

Table 1b: Indiana Reading Assessment – Kindergarten: Third Administration

| Third Administration (May) | | | | | | |
|---|-------------------|------------|--|--|--|--|
| Phonemic Awareness (12 items; 12 points) | | | | | | |
| Phoneme Deletion | 4 items | 4 points | | | | |
| Sound Segmentation | 4 items | 4 points | | | | |
| Syllables | 4 items | 4 points | | | | |
| Picture-Word Matching and Sentence Comprehen | sion (10 items; ' | 10 points) | | | | |
| Picture-Word Matching | 5 items | 5 points | | | | |
| Sentence Comprehension | 5 items | 5 points | | | | |
| Listening Comprehension and Rhyming (8 items; | 8 points) | | | | | |
| Listening Comprehension | 3 items | 3 points | | | | |
| Rhyming | 5 items | 5 points | | | | |
| Beginning and Ending Sounds (10 items; 10 point | ts) | | | | | |
| Beginning Sounds | 5 items | 5 points | | | | |
| Ending Sounds | 5 items | 5 points | | | | |
| Letter and Word Recognition (10 items; 10 points) | | | | | | |
| Letter Recognition | 5 items | 5 points | | | | |
| Word Recognition | 5 items | 5 points | | | | |
| Story Listening Comprehension (6 items; 8 points | 5) | | | | | |
| Story comprehension | 5 items | 6 points | | | | |
| Applied Phonics | 1 item | 2 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 ROAR (*Reading Online Assessment Reports*) System. Teachers enter student scores that are used to immediately generate the following reports:

Class Reports

Class Scores Reports: This report shows the scores of all students in your class. The report is designed to look similar to the Score Recording Form located on the back of the General Information Guide.

Class Skills Reports: This report displays skills developed in Phonics, Vocabulary, and Comprehension. It displays the data in a bar graph form that lists each administration and creates an "at-a-glace" report that shows the class' progress throughout the year.

Student Reports

Student Score Report: This report shows the scores of an individual student.

Student Skills Reports: This report displays skills developed in Phonics, Vocabulary, and Comprehension in bar graph form. It also displays the expected level of performance for each of these skills for easy comparison of how your students are performing.

Establishing and Documenting the Validity of the Indiana Reading Assessment – Kindergarten

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

- 1) Content Validity (i.e., the test items address the full range of skills appropriate for reading at kindergarten);
- 2) Face Validity (i.e., the tests look like the sorts of reading materials that students encounter in kindergarten);
- 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 (i.e., Cronbach's alpha of .70 or higher);
- 4) Predictive Validity (i.e., performance on the Indiana Reading Assessment Kindergarten correlates positively with later scores on standardized reading assessments; The predictive validity study was not completed at the time of publishing this preliminary report; and
- 5) Concurrent Validity (i.e., scores on sections of the Indiana Reading Assessment Kindergarten 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 Kindergarten* to Indiana's Academic Standards for reading in kindergarten. Teacher surveys during the field tests gathered information on teachers' judgments on the match of items to academic standards and indicators as well as the appropriate difficulty level of items. Changes were made in a few passages and changes were made to 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 – Kindergarten*. These informal measures were incorporated into a Resource & Intervention 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 distinguishing between fantasy and reality).

A second form of content validity is demonstrated through the match of *Indiana* Reading Assessment – Kindergarten items to reporting categories of the National Reading Panel (see earlier discussion on page 2). 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 text comprehension. There are additional rating scales in the reporting category of reading fluency.

2) Face Validity: Because young students (i.e., kindergartners) have little familiarity with testing, the *Indiana Reading Assessment – Kindergarten* 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 in children's books found 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 that have just been read to them 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).

The *Indiana Reading Assessment – Kindergarten* matches a kindergartner's small motor skill development; the multiple-choice portions of the assessment require that the student circle the correct answers (rather than filling in a bubble).

3) Construct Validity: To demonstrate construct validity of assessments, test items claiming to measure particular constructs or aspects of reading (e.g., beginning reading skills such as phonemic awareness and phonics) should correlate highly with each other. An analysis using Cronbach's alpha 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 – Kindergarten*, 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 coefficient of .838 is well above the acceptable level of .70. This indicates that the items of the *Indiana Reading Assessment – Kindergarten* relate to a single construct (i.e., overall early reading skills).

4) Predictive Validity: One form of validity for a classroom reading assessment such as the *Indiana Reading Assessment – Kindergarten* is the degree to which scores correlate with later standardized assessments. In Indiana, students are first required to take a standardized test in third grade (ISTEP+—Indiana Statewide Tests of Educational Progress+). Students who participated in the *Indiana Reading Assessment*

- Kindergarten's first full-year (non-field test) implementation have not yet reached third grade. Therefore, an informal study has been conducted to find a standardized test that is given at the first grade level in an adequate number of Indiana schools. A predictive validity research study is currently being developed using the *Indiana Reading Assessment* Kindergarten and another standardized assessment. The results of this study will be published when data has been fully analyzed.
- **5) Concurrent Validity:** In order to document the concurrent validity of the *Indiana Reading Assessment Kindergarten*, student scores on portions of the *Indiana Reading Assessment Kindergarten* 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 Kindergarten* sub-test. When possible, sub-tests requiring similar tasks were chosen. The five measures are:
 - 1) Metropolitan Achievement Test 8th Edition (MAT8);
 - 2) Texas Primary Reading Indicators (TPRI);
 - 3) Woodcock-Johnson III Tests of Reading Achievement (W-JIII);
 - 4) Dynamic Indicators of Basic Early Literacy Skills (DIBELS); and
 - 5) Phonological Awareness Test (PAT).

These five measures have demonstrated effectiveness by research as evidenced in validity and reliability studies as well as other types of meta-analyses.

In order to determine the concurrent validity between the *Indiana Reading Assessment – Kindergarten* and the above measures, trained examiners gave to children portions of the *Indiana Reading Assessment – Kindergarten* and portions of one or more other reading assessments on the same day. The kindergarten participants in the concurrent validity studies included 237 students from 14 classrooms in 6 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 schools from which students participated were primarily in rural localities with one school classified as "small town" and one private school. Enrollments ranged from 145 students to 520 students, with minority percentages ranging from 1% to 7% and percentages of students receiving free or reduced lunches from 5% to 42%. Of the six schools, four had ISTEP+ passing percentages above the state's average, one had a passing percentage at the state's average, and one was below the state's average for the year prior to the concurrent validity study.

New reading assessments, such as the *Indiana Reading Assessment – Kindergarten*, should correlate positively with established, validated reading measures. Pearson Correlations were calculated to determine relationships among the *Indiana Reading Assessment – Kindergarten* and established reading skill measures used in this study (i.e., *TPRI*, *W-JIII*, *PAT*, *ITBS*, and *MAT8*). Correlations between the *Indiana Reading Assessment – Kindergarten* and these established measures range from r = .349 to r = .774. With the exception of the second administration comprehension comparisons to MAT8 and vocabulary comparisons to W-JIII, these correlations are positive and statistically significant at or beyond the p < .01 level. The correlation between the second administration comprehension sub-sections to MAT8 and the vocabulary subsections to W-JIII are positive and statistically significant at or beyond the p < .05 level.

Table 2a: Indiana Reading Assessment – Kindergarten: Second Administration

| Second Administration (January) | | | | | |
|---|------------|--|--|--|--|
| Phonemic Awareness | | | | | |
| Indiana Reading Assessment – Kindergarten (Beginning Sounds, Ending Sounds, Phoneme Blending, Rhyming) & TPRI (Final Sounds, Letter Sounds, Blending) | r = .746** | | | | |
| Indiana Reading Assessment – Kindergarten (Beginning Sounds, Ending Sounds, Phoneme Blending, Rhyming) & DIBELS (Initial Sound Fluency) | r = .517** | | | | |
| Indiana Reading Assessment – Kindergarten (Beginning Sounds, Ending Sounds, Phoneme Blending, Rhyming) & W-JIII (Sound Awareness Rhyming) | r = .374** | | | | |
| Phonics | | | | | |
| Indiana Reading Assessment – Kindergarten (Letter & Word Recognition, Applied Phonics) & W-JIII (Letter & Word Identification) | r = .736** | | | | |
| Vocabulary | | | | | |
| Indiana Reading Assessment – Kindergarten (Picture-Word Matching, Sentence Comprehension) & W-JIII (Picture Vocabulary, Oral Comprehension) | r = .372* | | | | |
| Reading Comprehension | | | | | |
| Indiana Reading Assessment – Kindergarten (Text and Story Listening Comprehension) & TPRI (Listening Comprehension) | r = .455** | | | | |
| Indiana Reading Assessment – Kindergarten (Text and Story Listening Comprehension) & MAT8 Language (Listening Comprehension) | r = .361* | | | | |

^{*}Correlation is significant at the 0.01 level (2-tailed).

^{**}Correlation is significant at the 0.05 level (2-tailed).

Table 2b: Indiana Reading Assessment – Kindergarten: Third Administration

| Third Administration (May) | | | | |
|--|------------|--|--|--|
| Phonemic Awareness | | | | |
| Indiana Reading Assessment – Kindergarten (Beginning Sounds, Ending Sounds, Phoneme Deletion, Phoneme Segmentation, Syllabication, Rhyming) & W-JIII (Sound Awareness Rhyming) | r = .568** | | | |
| Indiana Reading Assessment – Kindergarten (Beginning Sounds, Ending Sounds, Phoneme Deletion, Phoneme Segmentation, Syllabication, Rhyming) & DIBELS (Phoneme Segmentation Fluency) | r = .774** | | | |
| Indiana Reading Assessment – Kindergarten (Beginning Sounds, Ending Sounds, Phoneme Deletion, Phoneme Segmentation, Syllabication, Rhyming) & TPRI (Initial Sounds) | r = .686** | | | |
| Indiana Reading Assessment – Kindergarten (Beginning Sounds, Ending Sounds, Phoneme Deletion, Phoneme Segmentation, Syllabication, Rhyming) & Phonological Awareness Test (Syllables) | r = .447** | | | |
| Phonics | | | | |
| Indiana Reading Assessment – Kindergarten (Letter & Word Recognition, Applied Phonics) & W-JIII (Letter & Word Identification) | r = .755** | | | |
| Vocabulary | | | | |
| Indiana Reading Assessment – Kindergarten (Picture-Word Matching, Sentence Comprehension) & W-JIII (Picture Vocabulary, Oral Comprehension) | r = .349** | | | |
| Reading Comprehension | | | | |
| Indiana Reading Assessment – Kindergarten (Text and Story Listening Comprehension) & TPRI (Listening Comprehension) | r = .398** | | | |
| Indiana Reading Assessment – Kindergarten (Text and Story Listening Comprehension) & MAT8 Language (Listening Comprehension) | r = .410** | | | |

^{*}Correlation is significant at the 0.01 level (2-tailed).

It can be concluded that the *Indiana Reading Assessment – Kindergarten* demonstrates acceptable levels of concurrent validity with other reliable and validated measures of reading assessment designed to measure similar reading skills.

^{**}Correlation is significant at the 0.05 level (2-tailed).

Establishing and Documenting Reliability of the Indiana Reading Assessment – Kindergarten:

Split-half Reliability

The split-half reliability coefficients for the *Indiana Reading Assessment – Kindergarten* were calculated using 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 order effects of the items. Values of .75 – 1.0 are considered excellent.

The Spearman-Brown split-half reliability coefficient for the *Indiana Reading* Assessment – Kindergarten is .844. This correlation is considered excellent. A correlation of this magnitude is indicative that fatigue, anxiety level, and order effects are not contributing to measurement error.

Inter-rater Reliability/Agreement of Teacher Scoring

Inter-rater agreement levels for two administrations (i.e., January and April 2005) of this assessment were determined by correlating teacher scores for student assessments to scores on the same assessments provided by trained scorers at the Center for Innovation in Assessment. 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. The first administration of the *Indiana Reading Assessment — Kindergarten* is a screening only and contains no open-ended items. The *Indiana Reading Assessment — Kindergarten* is designed as a criterion-referenced assessment in which students are expected to master the skills assessed by the end of the school year. This design characteristic results in many students "topping out" on the text comprehension portion of the Story Comprehension assessment. This ceiling effect skews the inter-rater correlations of the April administration of the Text Comprehension data. This is evidenced by the slightly lower correlation of .744, but is not an indication of less agreement between the teacher scores and trained scorers' data. The table that follows summarizes these correlations of agreement.

Table 7: Correlations for Inter-rater Agreement

| | January | April |
|--------------------|---------|--------|
| Applied Phonics | .829** | .853** |
| Text Comprehension | .888** | .744** |

^{**}Correlation is significant at the 0.01 level (2-tailed).

APPENDIX A: STANDARDS COVERAGE CHART

Standards Coverage Chart

Indiana Reading Assessment - Kindergarten Coverage of Indiana's Kindergarten English/Language Arts Standards

| Kinderga | arten: Standard 1: READING: Word Recognition, Fluency, an | oo Administration 1 | Administration 2 & 3 | Administration 2 & 3 Phonics | Administration 2 & 3 Vocabulary | Administration 2 & 3 Phonemic Awareness | Administration 2 & 3 Story Comprehension | Resource & Intervention Guide | Indiana Academic Standards Resource |
|----------|---|---------------------|----------------------|-------------------------------|---------------------------------|---|---|----------------------------------|--|
| С | oncepts About Print | | | | | | | | |
| K.1.1 | Identify the front cover, back cover, and title page of a book. | ✓ | | | | | ✓ | ✓ | ✓ |
| K.1.2 | Follow words from left to right and from top to bottom on the printed page. | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| K.1.3 | Understand that printed materials provide information. | √ | ✓ | | | | √ | √ | ✓ |
| K.1.4 | Recognize that sentences in print are made up of separate words. | ✓ | ✓ | | | | ✓ | ✓ | ✓ |
| K.1.5 | Distinguish letters from words. | \ | | | | | √ | ✓ | ✓ |
| K.1.6 | Recognize and name all capital and lowercase letters of the alphabet. | √ | | ✓ | | | | ✓ | ✓ |
| P | honemic Awareness | | | | | | | | |
| K.1.7 | Listen to two or three phonemes (sounds) when they are read aloud, and tell the number of sounds heard, whether they are the same or different, and the order. | ✓ | | | | ✓ | | ✓ | ✓ |
| K.1.8 | Listen and say the changes in spoken syllables (a word or part of a word that contains one vowel sound) and words with two or three sounds when one sound is added, substituted, omitted, moved, or repeated. | | | | | ✓ | | ✓ | ✓ |
| K.1.9 | Blend consonant-vowel-consonant (cvc) sounds aloud to make words. | | | | | ✓ | | ✓ | ✓ |
| K.1.10 | Say rhyming words in response to an oral prompt. | √ | | √ | | | | \checkmark | √ |
| K.1.11 | Listen to one-syllable words and tell the beginning or ending sounds. | ✓ | | ✓ | | ✓ | | ✓ | |
| K.1.12 | Listen to spoken sentences and recognize individual words in the sentence; listen to words and recognize individual sounds in the words. | | | ✓ | | ✓ | ✓ | ✓ | √ |
| K.1.13 | Count the number of sounds in a syllable; count the number of syllables in words. | | | | | ✓ | | ✓ | ✓ |

STANDARDS COVERAGE CHART (cont.)

| | | Administration 1 | Administration 2 & 3 Comprehension | Administration 2 & 3 Phonics | Administration 2 & 3 Vocabulary | Administration 2 & 3 Phonemic Awareness | Administration 2 & 3 Story Comprehension | Resource & Intervention Guide | Indiana Academic Standards Resource |
|---------|---|------------------|---------------------------------------|---------------------------------|------------------------------------|--|---|-------------------------------|--|
| | Decoding and Word Recognition | | | | | - | | | |
| K.1.14 | Match all consonant sounds (<u>mad</u> , <u>red</u> , <u>pin</u> , <u>top</u> , <u>sun</u>) to appropriate letters. | ✓ | | | | | ✓ | ✓ | ✓ |
| K.1.15 | Read one-syllable and high-frequency (often-heard) words by sight. | ✓ | | | ✓ | | | ✓ | ✓ |
| K.1.16 | Use self-correcting strategies when reading simple sentences. | ✓ | | | | | ✓ | ✓ | ✓ |
| K.1.17 | Read their own names. | √ | | | | | | √ | \checkmark |
| K.1.18 | Understand the alphabetic principle, which means that as letters in words change, so do the sounds. | ✓ | | | ✓ | | | ✓ | ✓ |
| K.1.19 | Learn and apply knowledge of alphabetical order when using a classroom or school library/media center. | | | | | | | ✓ | ✓ |
| V | Ocabulary and Concept Development | | | | | | | | |
| K.1.20 | Identify and sort common words in basic categories. | | | | | | | √ | |
| K.1.21 | Identify common signs and symbols. | 1 | | | | | | √ | ✓ |
| Kinderg | arten: Standard 2: READING: Comprehension | | | | | | | | |
| S | tructural Features of Informational and Technical Materials | | | | | | | | |
| K.2.1 | Locate the title and the name of the author of a book. | \ | | | | | | | |
| (| Comprehension and Analysis of Grade-Level-Appropriate Text | 1 | | | | | | | |
| K.2.2 | Use picture clues and context to aid comprehension and to make predictions about story content. | ✓ | ✓ | | | | ✓ | ✓ | ✓ |
| K.2.3 | Connect the information and events in texts to life experiences. | | | | | | ✓ | ✓ | ✓ |
| K.2.4 | Retell familiar stories. | | | | | | | √ | \checkmark |
| K.2.5 | Identify and summarize the main ideas and plot of a story. | | √ | | | | √ | √ | \checkmark |
| Kinderg | arten: Standard 3: READING: Literary Response and Analys | sis | | | | | | | |
| A | nalysis of Grade-Level-Appropriate Narratives (Stories) | | | | | | | | |
| K.3.1 | Distinguish fantasy from reality. | | | | | | ✓ | √ | |
| K.3.2 | Identify types of everyday print materials. | √ | | | | | | √ | \checkmark |
| K.3.3 | Identify characters, settings, and important events in a story. | | √ | | | | √ | √ | \checkmark |
| K.3.4 | Identify favorite books and stories. | | | | | | | √ | \checkmark |

STANDARDS COVERAGE CHART (cont.)

| | | Administration 1 | Administration 2 & 3 Comprehension | Administration 2 & 3 Phonics | Administration 2 & 3 Vocabulary | Administration 2 & 3 Phonemic Awareness | Administration 2 & 3 Story Comprehension | Resource & Intervention Guide | Indiana Academic Standards Resource |
|----------|---|------------------|---------------------------------------|---------------------------------|------------------------------------|--|---|-------------------------------|--|
| Kinderg | arten: Standard 4: WRITING: Process | | | | | | | | |
| C | Organization and Focus | | | | | | | | |
| K.4.1 | Discuss ideas to include in a story. | | | | | | | √ | √ |
| K.4.2 | Tell a story that the teacher or some other person will write. | | | | | | | √ | √ |
| K.4.3 | Write using pictures, letters, and words. | √ | | | | | \checkmark | √ | ✓ |
| K.4.4 | Write phonetically spelled words (words that are written as they sound) and consonant-vowel-consonant words (demonstrating the alphabetic principle). | ✓ | | | | | ✓ | ✓ | ✓ |
| K.4.5 | Write by moving from left to right and from top to bottom. | √ | | | | | √ | √ | √ |
| Kinderga | rten: Standard 5: WRITING: Applications (Different Types of Writ | ing ar | d The | ir Cha | ractei | istics) | | | |
| K.5.1 | Draw pictures and write words for a specific reason. | √ | | | | | \checkmark | √ | \checkmark |
| K.5.2 | Draw pictures and write for specific people or persons. | √ | | | | | √ | √ | √ |
| Kinderg | arten: Standard 6: WRITING: English Language Convention | S | | | | | | | |
| I. | Handwriting | | | | | | | | |
| K.6.1 | Write capital and lowercase letters of the alphabet, correctly shaping and spacing the letters. | ✓ | | | | | ✓ | ✓ | ✓ |
| S | pelling | | | | | | | | |
| K.6.2 | Spell independently using an understanding of the sounds of the alphabet and knowledge of letter names. | ✓ | | | | | ✓ | ✓ | ✓ |
| Kinderg | arten: Standard 7: LISTENING AND SPEAKING: Skills, Str | ategie | es, and | d App | licatio | ons | | | |
| (| Comprehension | | | | | | | | |
| K.7.1 | Understand and follow one- and two-step spoken directions. | ✓ | ✓ | ✓ | √ | √ | \checkmark | √ | \checkmark |
| (| Oral Communication | | | | | | | | |
| K.7.2 | Share information and ideas, speaking in complete, coherent sentences. | ✓ | | | | | ✓ | ✓ | ✓ |
| S | Speaking Applications | | | | | | | | |
| K.7.3 | Describe people, places, things (including their size, color, and shape), locations, and actions. | | | | | | ✓ | ✓ | ✓ |
| K.7.4 | Recite short poems, rhymes, and songs. | | | | | √ | | 1 | |
| 13.7.7 | receite short poems, my mes, and songs. | L | L | | | | | ┸ | |

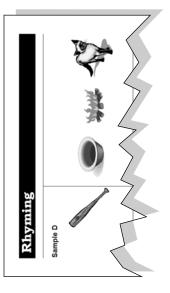
APPENDIX B: ASSESSMENT SAMPLES – PHONEMIC AWARENESS

Rhyming

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills:

Directions: The teacher says:

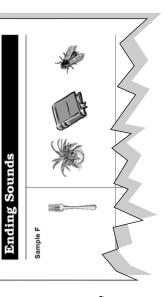
the picture of the word the picture of the word that rhymes with <u>bat</u>." another word. Next to "Now we are going to rhyme. You will circle fire, and a cat. Circle pictures of a bowl, a listen to words that that rhymes with the bat you see



Ending Sounds (Beginning Reading Skills)

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills:

that ends with the same a book, and a fly. Circle see pictures of a plant, the picture of the word sound that you hear at picture of the fork you Directions: The teacher says: the sounds at the end "Now we will listen to of words. Next to the the end of fork."

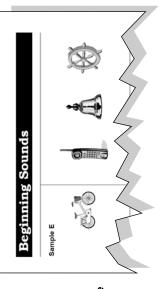


Beginning Sounds (Beginning Reading Skills)

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills:

Directions: The teacher says:

Circle the picture of the listen to sounds at the pictures of a phone, a "Now we are going to Next to the picture of word that starts with the same sound that beginning of words. beginning of bike." bell, and a wheel. the bike you see you hear at the



Beginning Sounds

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills - Phonemic Awareness:

Directions: The teacher says: hear at the beginning of _____." beginning sounds in sound. Let's begin. "Let's listen to the begins with the /_/ Say the sound you words. Your name



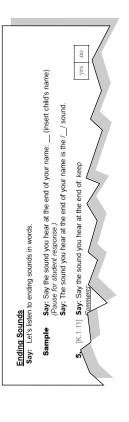
Appendix B-1

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ASSESSMENT SAMPLES - PHONEMIC AWARENESS (cont.)

Ending Sounds

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills - Phonemic Awareness: Directions: The teacher says: "Let's listen to the ending sounds in words. Your name ends with the /_/ sound. Let's begin. Say the sound you hear at the end of ____."



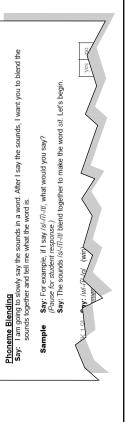
Sound Segmentation

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills - Phonemic Awareness: Directions: The teacher says: "I am going to say some words. Listen to the sounds you hear in each word. For example, what sounds do you hear when I say the word read? You hear the sounds /r/ /e/ /d/ in the word read. Let's begin." The teacher says words for the student to segment.



Phoneme Blending

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills - Phonemic Awareness: Directions: The teacher says: "I am going to say sounds. After I say the sounds, I want you to blend the sounds together and tell me what the word is. For example, if I say /s/i/t/, what would you say? (sit) Let's begin."

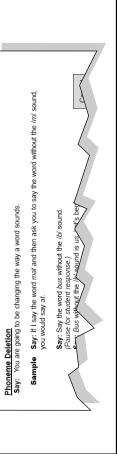


Phoneme Deletion

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills - Phonemic Awareness: Directions: The teacher says: "You are going to be changing the way a word sounds.

For example, if I say the word mat and then ask you to say the word without the /m/ sound, you would say at. Let's begin.

Say the word ___ with out the /_/ sound."



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Syllables

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills - Phonemic Awareness: Directions: The teacher says: "A syllable is a word part. For example the word cracker word cake have? The word cake has one syllable or word part. Let's try some has two syllables or word parts. How many syllables or word parts does the more words. How many syllables do you hear in the word

Say: A syllable is a word part. For example the word cracker has two syllables or word parts. sample Say: The word morning has two syllables or word parts: morn-ing. Syllables
You may suggest that students clap each word part to help count syllables.

ASSESSMENT SAMPLES – PHONICS

Letter Recognition

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills:

at some letters. You will picture of the clock you say. Put your finger on Directions: The teacher says: "We are going to look the clock. Next to the see four letters. Circle circle the letter that I the letter a."

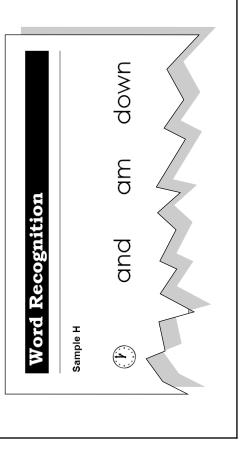
Letter Recognition Sample G Technical Report February 2007

Appendix B-3

ASSESSMENT SAMPLES – PHONICS (cont.)

Word Recognition

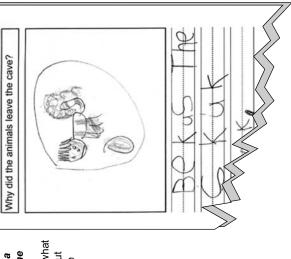
from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills: Directions: The teacher says: "We are going to read some words. You will circle the word that I say. I will help you with the first one. Put your finger on the clock. Next to the clock you see three words. Circle the word and."



Story Comprehension

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills - Story Listening Comprehension:

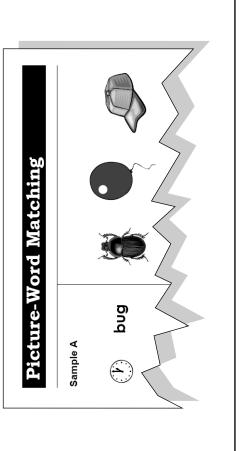
Directions: The teacher says: "Draw a picture and write about why the animals left the cave." For the score, student is asked to read what they have written or explain about their drawing. Teachers measure letter-to-sound correspondence.



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Picture Word Matching

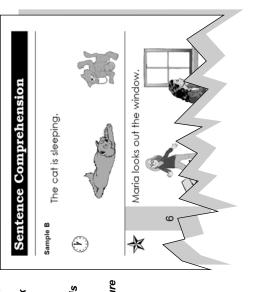
from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills: Directions: The teacher says: "We are going to look at some pictures. You will circle the picture that goes with the word. Put your finger on the clock. Next to the clock is the word bug. Circle the picture of the bug.



Sentence Comprehension

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills:

Directions: The teacher says: "I am going to read a sentence. Then I will ask you to circle the picture that shows what the sentence is about. The sentence says: The cat is sleeping. Under the sentence there are two pictures. Circle the picture that shows what the sentence is about."



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Listening Comprehension

from Indiana Reading Assessment - Kindergarten, Beginning Reading Skills:

Directions: The teacher says:

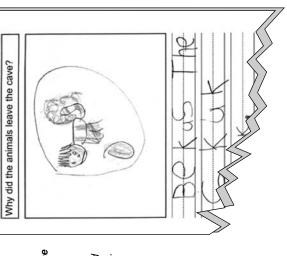
The girls ate the cookies. shows what the story is cookies with her friend. pictures. Jasmine took some cookies out of a story about one of the Circle the picture that "Listen as I tell you a bag. She shared the

Listening Comprehension Sample C Q

Story Comprehension

Beginning Reading Skills - Story Listening Comprehension: from Indiana Reading Assessment - Kindergarten,

about animals and a cave. The are asked to draw a picture and write an answer to the question. comprehension score, students Directions: The teacher says: "I am running into a cave." For the going to read a story called The Cave. This is a story story tells about animals Verbal answers are also accepted.



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APPENDIX C: TEST COMPARISONS

Phonemic Awareness: Rhyming

(Beginning Reading Skills)

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills:

Directions: The teacher says, "Now we are going to listen to words that rhyme. You will circle the picture of the word that rhymes with another word. Next to the *bat* you see pictures of a *bowl*, a *fire*, and a *cat*. Circle the picture of the word that rhymes with *bat*."

from Woodcock-Johnson III, Sound Awareness–Rhyming:

Directions: Teacher says, "I am going to say a word and then tell you another word that ends like it or rhymes. Cat ends like hat. Day ends like play. Now you try one. What rhymes with ____?"

Phonemic Awareness: Beginning Sounds

(Beginning Reading Skills)

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills:

Directions: The teacher says, "Now we are going to listen to sounds at the beginning of words. Next to the picture of the *bike* you see pictures of a *phone*, a *bell*, and a *wheel*. Circle the picture of the word that starts with the same sound that you hear at the beginning of *bike*."

from DIBELS Kindergarten Benchmark Assessments, Initial Sound Fluency:

Directions: Teacher shows students four pictures. Teacher says, "This is a banana, plate, dog, and cake. (points to pictures) Which picture begins with /d/?" "What sound does 'plate' begin with?"

Phonemic Awareness: Ending Sounds

(Beginning Reading Skills)

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills:

Directions: The teacher says, "Now we will listen to the sounds at the end of words. Next to the picture of the *fork* you see pictures of a *plant*, a *book*, and a *fly*. Circle the picture of the word that ends with the same sound that you hear at the end of *fork*."

from TPRI 1st Grade Inventory, Detecting Final Sounds, Inventory Task 4:

Directions: Teacher says, "Say the word _____. Now say (word) again without the _____." (For example, the teacher would say, "Say the word bloom. Now say bloom again without the /m/.") Do not say the letter name; say the sound of the letter.

Phonemic Awareness: Beginning Sounds

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills - Phonemic Awareness:

Directions: The teacher says, "Let's listen to the beginning sounds in words. Your name begins with the /_/ sound. Let's begin. Say the sound you hear at the beginning of _____."

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

Directions: Teacher says, "What is the first sound in the word?"

Phonemic Awareness: Ending Sounds

from *Indiana Reading Assessment* – *Kindergarten*, Beginning Reading Skills - Phonemic Awareness:

Directions: The teacher says, "Let's listen to the ending sounds in words. Your name ends with the /_/ sound. Let's begin. Say the sound you hear at the end of_____."

from TPRI 1st Grade Inventory, Detecting Final Sounds, Inventory Task 4:

Directions: Teacher says, "Say the word _____."

Now say (word) again without the ____."

(For example, the teacher would say, "Say the word grain. Now say grain again without the /n/.") Do not say the letter name; say the sound of the letter.

Phonemic Awareness: Phoneme Blending

from *Indiana Reading Assessment* – *Kindergarten*, Beginning Reading Skills - Phonemic Awareness:

Directions: The teacher says, "I am going to say sounds. After I say the sounds, I want you to blend the sounds together and tell me what the word is. For example, if I say /s/i/t/, what would you say? (*sit*) Let's begin."

from TPRI Kindergarten Inventory, Blending Phonemes, Inventory Task 3:

Directions: The teacher says, "When I say r-u-g, I know the word is rug. What would the word be if I say s-u-m?" Say the sound for each letter, not the letter name, at approximately half second intervals.

Phonemic Awareness: Sound Segmentation

from *Indiana Reading Assessment* – *Kindergarten*, Beginning Reading Skills - Phonemic Awareness:

Directions: The teacher says, "I am going to say some words. Listen to the sounds you hear in each word. For example, what sounds do you hear when I say the word *read*? You hear the sounds /r/ /ē/ /d/ in the word *read*. Let's begin." The teacher says words for the student to segment.

from DIBELS Kindergarten Benchmark Assessments, Phoneme Segmentation Fluency:

Directions: The teacher says, "I am going to say a word. After I say it, you tell me all the sounds in the word. So, if I say, 'hat', you would say /h/ /a/ /t/. Let's try one. Tell me the sounds in 'mop'."

Phonemic Awareness: Phoneme Deletion

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills - Phonemic Awareness:

Directions: The teacher says, "You are going to be changing the way a word sounds. For example, if I say the word *mat* and then ask you to say the word without the */m/* sound, you would say *at*. Let's begin.

Say the word ___ with out the /_/ sound."

from TPRI Kindergarten Inventory, Detecting Initial Sounds, Inventory Task 4:

Directions: The teacher says, "Say the word nice. Now say nice again with the /n/."

Phonemic Awareness: Syllables

from *Indiana Reading Assessment* – *Kindergarten*, Beginning Reading Skills - Phonemic Awareness:

Directions: The teacher says, "A syllable is a word part. For example the word *cracker* has two syllables or word parts. How many syllables or word parts does the word *cake* have? The word *cake* has one syllable or word part. Let's try some more words. How many syllables do you hear in the word _____?"

from Phonological Awareness Test, Syllables:

Directions: The teacher says, "I'm going to say a word, and I want you to clap one time for each word part or syllable I say. *Elephant*. Now, clap it with me." The teacher would say the word again and clap once as each syllable is said. "*El-e-phant*. Now, you try it by yourself. *Elephant*."

Phonics: Letter Recognition

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills:

Directions: The teacher says, "We are going to look at some letters. You will circle the letter that I say. Put your finger on the **clock**. Next to the picture of the **clock** you see four letters. Circle the letter a."

from Woodcock-Johnson III, Letter/Word Identification:

Directions: The teacher points to the letter at the top of the student's page and says, "This is the letter 'P'." The teacher runs hand across the four letters below and says, "Find the 'P' down here."

Phonics: Word Recognition

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills:

Directions: The teacher says, "We are going to read some words. You will circle the word that I say. I will help you with the first one. Put your finger on the **clock**. Next to the **clock** you see three words. Circle the word **and**."

from Woodcock-Johnson III, Letter/Word Identification:

Directions: The teachers runs his/her finger across the words on subject's page and says, "Point to the word 'cat.' "

Phonics: Story Comprehension

from *Indiana Reading Assessment* – *Kindergarten*, Beginning Reading Skills - Story Listening Comprehension:

Directions: The teacher says, "Draw a picture and write about why the animals left the cave." For the score, student is asked to read what they have written. Teachers measure letter-to-sound correspondence.

from Woodcock-Johnson III, Letter/Word Identification:

Directions: Teachers point to the word "on" and say, "What word is this?"

Vocabulary: Picture-Word Matching

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills:

Directions: The teacher says, "We are going to look at some pictures. You will circle the picture that goes with the word. Put your finger on the **clock**. Next to the **clock** is the word **bug**. Circle the picture of the **bug**."

from Woodcock-Johnson III, Picture Vocabulary:

Directions: The teacher points to a picture of a giraffe and says, "What animal is this?"

Vocabulary: Sentence Comprehension

from *Indiana Reading Assessment* – *Kindergarten*, Beginning Reading Skills:

Directions: The teacher says, "I am going to read a sentence. Then I will ask you to circle the picture that shows what the sentence is about. The sentence says: *The cat is sleeping.* Under the sentence there are two pictures. Circle the picture that shows what the sentence is about."

from TPRI Kindergarten Inventory, Detecting Initial Sounds, Inventory Task 4:

Directions: The teacher says, "Listen carefully as I read and finish what I am saying. Tell me one word that finishes the sentence. Cereal is for breakfast, a sandwich is for ____."

Comprehension: Listening Comprehension

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills:

Directions: The teacher says, "Listen as I tell you a story about one of the pictures. *Jasmine took some cookies out of a bag. She shared the cookies with her friend. The girls ate the cookies.* Circle the picture that shows what the story is about."

from TPRI Kindergarten Inventory, Listening Comprehension, Story 1-Middle of the Year:

Directions: The teacher reads the student a short story out loud. After reading the story, the teacher asks the student a few questions about it

Comprehension: Story Comprehension

from *Indiana* Reading Assessment – Kindergarten, Beginning Reading Skills - Story Listening Comprehension:

Directions: The teacher says, "I am going to read a story called <u>The Cave</u>. This is a story about animals and a cave. The story tells about animals running into a cave." For the comprehension score, students are asked to draw a picture and write an answer to the question. Verbal answers are also accepted.

from TPRI Kindergarten Inventory, Listening Comprehension, Story 1-Middle of the Year:

Directions: The teacher reads the student a short story out loud. After reading the story, the teacher asks the student a few questions about it.

APPENDIX D: TEACHER FEEDBACK

Appendix D: Teacher Feedback

Responses from 2005-2006 Kindergarten End-of-Year survey

Accuracy of Indiana Reading Assessment-Kindergarten sections compared to specific Indiana Academic Standards

| Assessment Section | Very Accurate | Accurate | Not Accurate |
|---------------------|------------------|----------|-----------------|
| Comprehension | 36% | 60% | 4% |
| Phonics | 43% | 53% | 4% |
| Vocabulary | 32% | 60% | 8% |
| Phonemic Awareness | 45% | 49% | 6% |
| Story Comprehension | 39% | 56% | 5% |

Administration time per section for Administration 1 (Initial Screening)

| Assessment Section | Less than 5 minutes | 5-10 minutes | 10-15 minutes | More than 15 minutes | Did not use |
|---------------------------------|------------------------|-----------------|------------------|-------------------------|----------------|
| Letter Identification | 37% | 47% | 9% | 0% | 7% |
| Sound Identification | 37% | 44% | 10% | 1% | 8% |
| Concepts About Print | 60% | 38% | 5% | 0% | 7% |
| Phonemic Awareness | 42% | 43% | 8% | 0% | 7% |
| Environmental Print | 69% | 19% | 3% | 0% | 9% |
| Decoding/Sight Word Recognition | 58% | 29% | 5% | 0% | 8% |
| Writing | 23% | 45% | 21% | 3% | 8% |

TEACHER FEEDBACK (cont.)

Administration time per section for Administrations 2 & 3

| Assessment Section | Less than 5 minutes | 5-10 minutes | 10-15 minutes | More than 15 minutes |
|---------------------|------------------------|-----------------|------------------|-------------------------|
| Comprehension | 38% | 44% | 16% | 2% |
| Phonics | 30% | 50% | 20% | 0% |
| Vocabulary | 40% | 48% | 12% | 0% |
| Phonemic Awareness | 31% | 53% | 13% | 3% |
| Story Comprehension | 10% | 47% | 33% | 10% |

Use of Indiana Reading Assessment-Kindergarten results

| Shared with administrator | 53% |
|---|-----|
| Discussed as a team | 55% |
| Shared with students | 10% |
| Shared with parents | 70% |
| Compared to other assessment results | 64% |
| Used to create flexible groups for differentiated instruction | 58% |
| Used for diagnostic purposes to adjust class instruction | 69% |
| Used to identify at-risk students | 69% |
| Used to identify gifted students | 26% |

TEACHER FEEDBACK (cont.)

Difficulty of Indiana Reading Assessment-Kindergarten sections by administration

| Assessment Section | Too Difficult | Appropriate | Too Easy | Did not use |
|---------------------------------|---------------|-------------|----------|-------------|
| Administration 1 (Initial Sc. | | • | | |
| Letter Identification | 3% | 81% | 10% | 6% |
| Sound Identification | 16% | 73% | 4% | 7% |
| Concepts About Print | 3% | 82% | 9% | 6% |
| Phonemic Awareness | 21% | 68% | 4% | 7% |
| Environmental Print | 2% | 73% | 16% | 9% |
| Decoding/Sight Word Recognition | 14% | 74% | 4% | 8% |
| Writing | 19% | 68% | 5% | 8% |
| Administration 2 | | | | |
| Comprehension | 1% | 89% | 10% | |
| Phonics | 2% | 91% | 7% | |
| Vocabulary | 1% | 79% | 20% | |
| Phonemic Awareness | 16% | 76% | 8% | |
| Story Comprehension | 4% | 90% | 6% | |
| Administration 3 | | | | |
| Comprehension | 0% | 84% | 16% | |
| Phonics | 1% | 88% | 11% | |
| Vocabulary | 0% | 82% | 18% | |
| Phonemic Awareness | 8% | 83% | 9% | |
| Story Comprehension | 1% | 90% | 9% | |

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 |
|---------------------------------|---|---|
| 1=Large City | 6.03% | 9.99% |
| 2=Mid-size City | 14.66% | 15.79% |
| 3=Urban Fringe of Large City | 9.48% | 16.36% |
| 4=Urban Fringe of Mid-size City | 3.45% | 6.78% |
| 5=Large Town | 3.45% | 2.43% |
| 6=Small Town | 14.66% | 13.26% |
| 7=Rural, outside MSA | 34.48% | 18.54% |
| 8=Rural, inside MSA | 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 |
|---|--|--|
| Above State Average Percent Passing English/Language Arts on State Test | 44% | 44.80% |
| Scores on State Test Increased from 2002-2003 Scores | Not Applicable | 72.80% |
| Scores on State Test Increased by 5 points or more from 2002- 2003 | Not Applicable | 42.40% |

DEMOGRAPHIC DATA (cont.)

Table 13. Minority/Ethnicity Data

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

Table 14. Income Level Data

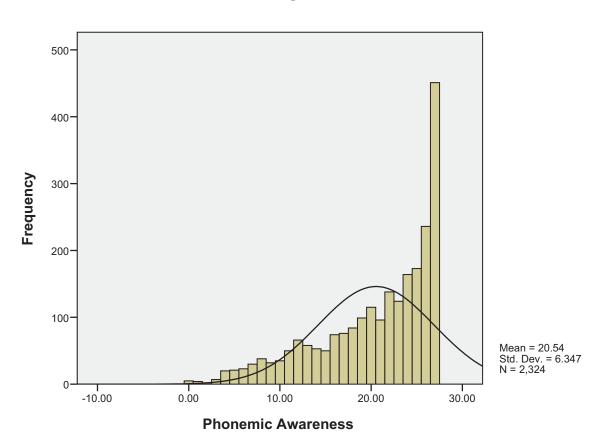
| | 125 schools | Indiana Public Schools |
|---|-------------|--------------------------|
| % Total Enrollment on Free or Reduced Lunch in 2004-2005 | 46.14% | 34.40% |
| % of schools with more than 50% on free or reduced lunch in 2004-2005 | 25.60% | State Data Not Available |

APPENDIX F: DESCRIPTIVE STATISTICS

Appendix F: Descriptive Statistics and Score Distribution

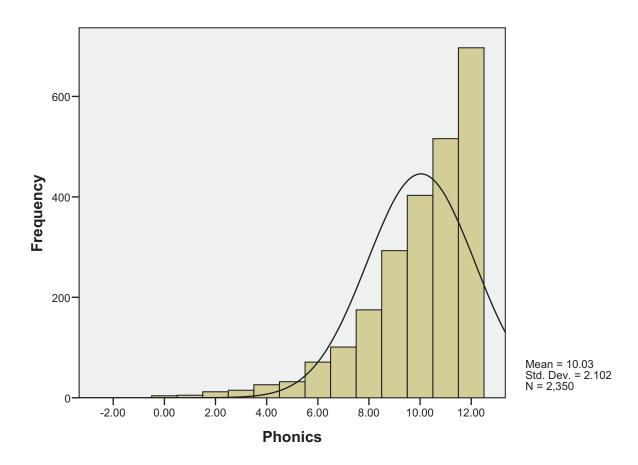
The following descriptive statistics are based on data from the 2003-2004 Random Sample Group.

Histogram



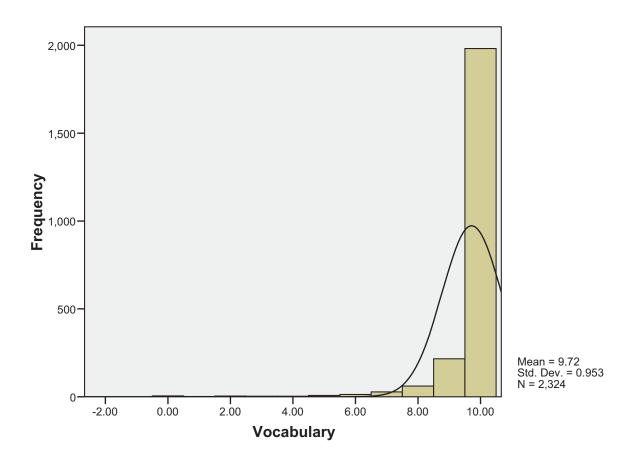
DESCRIPTIVE STATISTICS (cont.)

Histogram



DESCRIPTIVE STATISTICS (cont.)

Histogram



DESCRIPTIVE STATISTICS (cont.)



