

Interpretive Guide for the Achievement Levels Report (2003 Revision)

ITBS/ITED Testing Program

The purpose of this Interpretive Guide is to provide information to individuals who will use the *Achievement Levels Report* for monitoring the achievement of student grade groups, both at the building level and system-wide, and for reporting the progress of those groups to others. This document describes what is on the report, how this reporting service was developed, and how the report information can be used to accomplish each of several purposes.

What Is This Report?

The *Achievement Levels Report* is a building/system report of achievement based on scores from the *Iowa Tests of Basic Skills* and the *Iowa Tests of Educational Development*. It is provided as a standard-service report for each of grades 4, 8, and 11 when there are at least 10 students per grade level in the processing order. One report is for mathematics, based on the *ITBS* Mathematics Total scores or the *ITED* Math Concepts and Problems scores. A second report, for reading, is based on the *ITBS* and *ITED* Reading Comprehension scores. The report for science in grades 8 and 11 only is based on the *ITBS* and *ITED* Science scores. This service is not available for any other grades or for scores in any other test areas of the *ITBS* or *ITED*. The report also is provided for subgroups of students on the basis of gender, racial/ethnic group, free or reduced-price meal eligibility, migrant status, IEP status, and status as an English Language Learner (ELL).

How Can This Report Be Used?

This reporting service was designed primarily (a) to help school districts monitor the achievement of grade groups of students as part of their school improvement plans and (b) to facilitate the reporting of achievement results of school buildings and the district to the local community, the school board, and the Iowa Department of Education. Specifically, the report might be used to:

1. describe the achievement levels of 4th, 8th, and 11th grade students this year in terms of content skills, rather than only comparing their scores with the scores of their peers throughout the state. The focus of this kind of interpretation is on the content expertise of the students—what they are able to do in relation to the content expectations (or standards) established by your district, as measured by the tests.
2. monitor year-to-year changes in the percentages of students scoring at the very lowest or very highest parts of the score scale rather than only comparing average scores from year to year. Assuming comparable groups from year to year, this type of report makes it possible to view the changes in achievement of the very lowest- or very highest-achieving subgroups in a grade instead of just looking at how the achievement of the average student in that grade may have changed.
3. facilitate reporting achievement data to the Iowa Department of Education as required by Chapter 12 of the Iowa Code or by one or more federally funded programs. Some federal guidelines call for accountability data—scores that speak to improvement and that relate to schools attaining adequate progress toward locally established achievement goals. This report is intended to help schools report such information when the *ITBS* or *ITED* has been chosen by the local district as one of the assessment tools for this purpose.

4. report student achievement to your community and school board or to prepare news releases for your local newspaper (as may be appropriate to meet state or federal guidelines for local involvement in school improvement efforts).

It is also important to understand what this reporting system is not intended to be. For example, it was not developed to help interpret the scores of individual students. The achievement levels and descriptions of them are meant to be used to characterize the performance of groups of students. Within any grade group, there are likely to be students whose individual performance does not necessarily fit the description that has been attached to their achievement-level group. Individual students should not be classified as *Skilled* or *Weak* or *Accomplished*: these are labels used for convenience to describe subgroups of students who have demonstrated a particular level of test performance.

Another significant aspect of this reporting system to note is that the report describes how students actually performed, not how they should have performed or how they are expected to perform. In other words, *there are no performance standards built into this reporting scheme*. Any standards used to decide whether student performance is “good enough” should be developed and imposed locally by the community.

How Was This Reporting System Developed?

The achievement levels that form the basis for this report were developed using an approach called “achievement level benchmarking.” This approach involves partitioning the score scale from a norm-referenced test like the *ITBS* and *ITED* into achievement regions that, altogether, cover the entire achievement continuum. Then, actual test-item responses of students in the national standardization sample are used to describe the specific achievement of students who scored within each region. Benchmarking of this type involves establishing a baseline of performance and using it as a basis for comparing student performance in subsequent years. Such comparisons show whether student groups in successive years are gaining, remaining steady, or losing ground relative to the baseline performance. The baseline performance also can be used along with long-term goals to help establish annual improvement expectations. Then year-to-year changes can be interpreted in light of the expectations that had been established for reaching the long-term goals.

For this particular reporting system, the baseline performance for the set of achievement levels was the set of scores obtained by a national standardization sample of grades 4 and 8 *ITBS* test takers and grade 11 *ITED* test takers. The samples are nationally representative groups who were tested with Form A in the spring of 2000. (Previous reports based on scores from Forms K/L were based on 1992 national norms.)

Achievement Levels Were Defined

The national percentile rank score scale was partitioned in two ways to create two sets of achievement levels. For the first set, achievement levels were defined by the percentile-rank groupings 1-40, 41-89, and 90-99. The use of these three regions meets the reporting requirements of Title I, as described by current federal guidelines and Iowa code (Chapter 12): achievement should be reported as *Less-than-Proficient*, *Proficient*, and *Advanced* as defined by state (“local” in the case of Iowa) performance standards. For the *Achievement Levels Report*, these three regions were labeled by Iowa Testing Programs as *Low Performance*, *Intermediate Performance*, and *High Performance*.

The set of three achievement levels described above may be useful for meeting state/federal reporting responsibilities of local districts, but they are probably too broad for monitoring local achievement, for determining just where changes are or are not being made within the full achievement range. Consequently, an expanded set of regions was defined to allow for greater

precision in viewing the changes in achievement of student subgroups within a district. Essentially, each of the three regions was subdivided into a pair of regions to form a six-level system. The national percentile rank groupings formed in this way were:

Levels	NPR Ranges	Levels	NPR Ranges
Weak	1-9	Skilled	76-89
Marginal	10-40	Accomplished	90-94
Moderate	41-75	Distinguished	95-99

For both of these sets of achievement-level labels, names used by Title I and those used by the National Assessment of Educational Progress (NAEP) were avoided intentionally. Because this achievement level benchmarking approach does not build performance standards into it (what students should be able to do), as do those used by some states for Title I or those used by NAEP, unique names for Iowa achievement levels were important for reducing possible inappropriate comparisons across reporting systems.

Achievement Level Descriptions Were Created

The same general procedures were used in mathematics, reading, and science to create performance descriptions for each achievement level in the grades included. For the sake of brevity, only the mathematics procedures for grades 4 and 8 will be detailed here. Within each of the nine groupings of students noted above (the three original ones and the six formed by subdividing them), the proportion (p) of students correctly answering each question was computed. Then within each grouping, these p-values were clustered according to the content skill measured by the item. (For example, all geometry items were grouped together, all single-step problem solving items were grouped together, and so on.) The median p-value was calculated for each skill cluster, and then a judgment was made about each skill according to the following guide:

<u>Median p</u>	<u>Code</u>	<u>Descriptors</u>
.00-.39	N	Can't do the skill, rarely can do, or seldom can do
.40-.69	B	Beginning to develop; sometimes can do; does some
.70-.89	D	Is developing skill; usually or often can; does most
.90-.99	Y	Can do it (implies always, all, and every)

The letter codes formed the basis for writing content descriptions for each of the nine achievement levels. For this purpose, mathematics skills were grouped so that statements could be limited to performance with regard to four broad skill areas: concepts, estimation, problem solving, and data interpretation. Upon completion of these descriptions, a second person used the descriptions to translate back to the four letter symbols. Differences in the classifications resulting from this reverse translation task were cause for making small adjustments in the wording of the original content descriptions. (All descriptors are listed in the Appendix.)

The Stability of the Results Was Checked

Because the scores used for this work were from spring testing with Form A, but the results will be used statewide at all times of year (for the *ITBS*) and with both Forms A and B, it was necessary to ensure that the relationships found in the content descriptions also were accurate for Form B and for fall and midyear testing. Therefore, the procedures noted above for creating descriptions were followed with the Form A 2000 fall standardization sample data. The results showed that descriptions for spring and fall for the same test form were consistent in pattern and that the fall p-values were lower, as should be expected. The same procedure was carried out with the Form B fall standardization sample data. Some minor adjustments to the original descriptions were made as a result of the Form B replication.

How Can the *Achievement Levels Report* Be Used?

Locating Information on the Report

The sample report for Mathematics, which is attached to this Guide, is used here to identify the various segments of the report and to describe how those parts relate to one another. In the upper right corner, information about system name and Iowa code, test date, test form used, and processing order number are given. This area is separated from the rest of the report by two banner lines that show the two sets of achievement level labels and how these regions differ from one another in size. For example, it can be seen that the Intermediate Performance level is in the middle, and it occupies the largest portion of the full score range. Further, the Moderate and Skilled levels are subdivisions of the Intermediate Performance level, and the Moderate level is both the lower and the larger of the two.

The bar graph in the lower left shows how students in the fourth grade of this system were distributed throughout the entire score range. In particular, 21.9% are in the Low Performance level, most of those being in the Marginal portion. About 60% exhibited Intermediate Performance, most in the Moderate level, and 17.1% were in the High Performance region, with about two-thirds of those being in the Distinguished level. The exact percentages are listed in the columns of numbers that separate the bar graph from the descriptions of achievement.

The right part of the page provides written descriptions of the types of math skills the students in each of the six achievement levels are typically able to demonstrate, as measured by the *ITBS* Math Total score. These descriptions are constant for all Iowa schools for each grade level and subject area combination: the description for Moderate, for example, is the same for the fourth-grade groups in math for all systems in the state. The written descriptions for the set of three broader achievement levels are the same for all Iowa fourth-grade groups in math, regardless of the school system.

For the subgroup report based on students with IEPs, the written descriptions are not printed. The descriptors for each grade were developed with the test level that is most often given for the grade: Level 10 for grade 4, Level 14 for grade 8, and Level 17/18 for grade 11. Because many of the students with IEPs are tested out of level, usually with a lower test level than is used in their grade, the descriptions for the on-level-test would not be appropriate for describing their performance.

Describing Achievement Status

The achievement status of a given grade group can be seen most readily by examining the bar graph. The graph shows such things as: where the largest concentration of students has scored; how large the Low Performance group is and whether most of the students in it are near the top or near the bottom of that region; and how large the High Performance group is and where the largest concentration of scores is located within that region.

The percentages on the bars, and those in the middle columns of the report, describe how the grade group distributed itself along the score continuum. There is no established set of numbers with which these should be compared, and there is no set of numbers for the “average” Iowa school system with which the numbers can be or should be compared. This report encourages the use of criterion-referenced interpretations rather than norm-referenced ones. (See the *ITBS* or *ITED* interpretive guide for further explanation of these two types of score interpretation.) That is, the report helps describe the kinds of knowledge and skill a group of students have demonstrated through their test performance within an area like reading or mathematics. The report users must decide whether this performance is sufficient, acceptable, extraordinary, or on target for meeting the school system’s preset performance goals.

For the most part, schools will benefit from using the set of six achievement levels with the school staff in trying to understand the levels of student achievement. The set of three levels is more effective for inclusion in an Annual Progress Report (APR) or for reporting to the community or school board. The set of three levels is a more gross level of reporting, and the percentages associated with it are likely to be more stable than those from the six-level set. Of course, the percentages reported with both sets of achievement levels contain a certain amount of error, in one sense because the scores of the individuals within each grouping contain some measurement error. However, usually the error is not likely to be large enough to distort the general impression about the distribution of achievement among students in a building or system grade group.

In differentiating the performance of groups in any of the six achievement levels, it is important to realize that differences between adjacent groups are qualitatively quite small. For example, the differences between students in the Moderate and Skilled groups are far smaller than those between students in the Moderate and Accomplished groups. Most certainly some students who are part of the Skilled level would end up in the Moderate group if the students were to be retested, and vice versa. This is one good reason for not using the achievement levels for classifying individual students.

Monitoring Changes Each Year

Because the *Achievement Levels Report* is prepared for only grades 4, 8, and 11, reliance on this report alone to check district or building achievement status and monitor change is inadvisable. Schools also should be concerned with the progress students make prior to the end of fourth grade, and four years is probably too long to wait to determine whether new instructional strategies implemented in each of grades 4-8 are having their intended effects. Annual testing in all grades provides the information necessary to monitor change in a timely manner so that indications of program ineffectiveness can be obtained before too many students have progressed too far through the program. Scoring services that have been available to Iowa schools for a number of years can assist in monitoring change on an annual basis with every grade. For example, the Frequency Distribution service provides building and system reports that show how students in various regions of the score scale have performed. In addition, the Group Narrative Summary report consists of bar graphs for building and system grade groups in each test area. The *Interpretive Guide for School Administrators* has sample copies of reports from both of these services and further information about them can be obtained by calling the Iowa Testing Programs staff.

When the *Achievement Levels Report* is available for a particular grade level for two or more consecutive years, change can be examined by comparing the distribution of percentages from each successive year. Several related questions are reasonable to pose in the context of monitoring change in achievement:

- How much have scores changed from last year?
- Were there differences in the amount of change among the high achievers, low achievers, or middle achievers?
- Were the changes of a size that would have been expected based on the achievement goals that had been established?
- Were the changes in the direction predicted, given the general achievement level of the current group relative to that of last year's group?

Before any one of these questions is addressed directly, it is important to consider some of the cautions that should be observed when looking at change in this way. First, the test from which the change scores were obtained may not completely measure all of the important skills within the subject area. For example, the *ITBS* Mathematics Total score does not indicate directly how well students can *create* graphs and tables, how well they can *explain* problem solutions, or whether they can solve *extensive* problems working in a small group. To the extent that these are significant learning outcomes of the local mathematics curriculum, the achievement level information on this report only tells part of the achievement story. In other words, achievement status and change probably can only be determined for a single curriculum area by using the results from multiple assessments that collectively cover the full set of curriculum goals. A single assessment tool—no matter what it is—is not likely to be sufficient for describing achievement in such a broad curriculum area.

A second caution has to do with the changing composition of the grade group from one year to the next. Regardless of group size, teachers often comment about differences they observe in grade groups they have taught in various years. Some classes are more serious, higher in achievement, more motivated, more boisterous, or more talented than other recent groups at that grade level. In addition, students transfer in and out of a school system each year throughout the year. Unless a longitudinal approach is used to monitor achievement (i.e., following the same group from one grade to the next), differences in group characteristics that directly influence achievement may mask real changes that occur over time. That is, when achievement is viewed over several years, it may appear to go up and down in almost random fashion because of the fluctuation of talent from year to year rather than because of the effectiveness of instructional strategies that may have been implemented to help meet improvement goals. Obviously small groups are particularly susceptible to these types of annual fluctuations. For example, with a group of 50 students, each one counts as 2% of the group, and for a group of 25, each student counts as 4% of the total. Consequently, monitoring the achievement of grade groups in smaller schools is especially challenging.

An example. With these important cautions in mind, here is the method recommended by Iowa Testing Programs for using achievement levels to monitor the performance of students in one grade. This method uses the percentages from two consecutive years to form a set of averages, referred to here as “biennium” values. The first table below shows annual data for a four-year period and the biennium values for pairs of consecutive years. The biennium values are then summarized in the second table to show which values are to be interpreted and how the values might be displayed. The two-year averages tend to be more stable indicators of performance than the single-year values because the averages help to smooth out fluctuations due to year-to-year changes in group composition and to the various kinds of errors that normally affect test scores. Even the statewide achievement level information in the Condition of Education report prepared by the Iowa Department of Education uses biennium values.

Consider the sample data from grade 4 shown below from one school system, based on the set of three achievement levels—Low Performance, Intermediate Performance, and High Performance. Assume for purposes of illustration that achievement level data are available for the past four years and that the school district has set a goal for the tenth biennium to have all fourth-grade students out of the Low level and at least 30 percent at the High level.

		<u>Low</u>	<u>Int.</u>	<u>High</u>
Year 1	1997-98	11.6%	70.1%	18.3%
Year 2	1998-99	10.3%	74.5%	15.2%
<i>Years 1-2</i>	<i>1997-99</i>	<i>11.0%</i>	<i>72.3%</i>	<i>16.8%</i>
Year 2	1998-99	10.3%	74.5%	15.2%
Year 3	1999-00	8.6%	77.6%	13.8%
<i>Years 2-3</i>	<i>1998-00</i>	<i>9.4%</i>	<i>76.0%</i>	<i>14.5%</i>
Year 3	1999-00	8.6%	77.6%	13.8%
Year 4	2000-01	8.2%	79.0%	12.8%
<i>Years 3-4</i>	<i>1999-01</i>	<i>8.4%</i>	<i>78.3%</i>	<i>13.3%</i>
.				
.				
Target				
Years 10 -11		0.0%	70.0%	30.0%
	97-99 Biennium	11.0%	72.3%	16.8%
	98-00 Biennium	9.4%	76.0%	14.5%
	99-01 Biennium	8.4%	78.3%	13.3%

By the end of the second biennium, how much had achievement changed from the first? On average, it appears that achievement changed only a small amount. That is, changes within each of the three performance groups were small, and the loss of some low scores seemed to be offset by the loss of some high scores. Are the changes of about the same magnitude for all three groups? The changes in percentages show: fewer students were in the Low Performance level, more were in the Intermediate Performance level, and fewer were in the High Performance level. But the movement toward the Intermediate level was slightly greater from the High level than from the Low level. One reasonable inference to investigate further is whether the new emphasis on moving students out of the Low level may have occurred at the expense of some of those who are in or near the High level. It could be that time and resources were diverted inadvertently from working with higher achievers so that improvements could be made among lower achievers. But with data from only two bienniums, a trend of that sort would be difficult to validate. Of course, when data from the third biennium became available, it was relatively easy to tell that the movements noted after the second continued through the third. Thus, there is further support for the conjecture that an unintended tradeoff in resources may have occurred.

And how is this school system progressing toward the goals that had been established for the 10-biennium period? In ten bienniums, the goal was to decrease the percentage of students in the Low level from 11.0 to 0.0, an average change of 1.2 percent per biennium. At the same time, the goal for the High level was to move from 16.8 percent to 30.0, an average change of about 1.5 percent each biennium. It appears that, after the third biennium, the goal for the Low level is on target to be met, but the movement of the High-level group is in the wrong direction and at a fairly rapid rate. Clearly some program adjustments seem to be in order, unless data from other assessments provide a contrary picture or unless fluctuation in class composition can be entertained as a plausible rival explanation.

Reporting with Performance Standards

Participation in Title I requires that schools (a) establish content standards for students in reading and mathematics, (b) identify various types of assessments for checking students' achievement with regard to those standards, (c) establish performance standards that indicate how well students must perform, and (d) report progress toward improvement goals to the local community and to the Iowa Department of Education. Similar requirements for science reporting are spelled out in Chapter 12 of Iowa code. How can the *Achievement Levels Report* help schools fulfill their reporting obligations with respect to performance standards?

First, it should be recognized that the *Achievement Levels Report* describes student progress in terms of the skills measured by the *ITBS* or *ITED*, depending on the grade level in question. That means, of course, that schools wishing to use this report will need to include scores from these tests among the assessments they identify for checking student progress on their content standards. Furthermore, schools would need to set performance standards on the *ITBS* and *ITED* that are consistent with the benchmark definitions used in creating the achievement levels for this reporting scheme. (See "Achievement Levels Were Defined" in the section above called "How Was This Reporting System Developed?") A step-by-step illustration based on grade 4 reading will show how to use performance standards for this kind of reporting.

- The first step is to develop content standards in reading for grade 4. This means identifying the skills, knowledge, and abilities in reading that the school district believes should be the focus of reading instruction and student learning at that grade level. Examples of some reading content standards that might be developed are:
 1. Students should demonstrate an understanding of what they have read.
 2. Students should read with a frequency and in a quantity that is consistent with grade 4 expectations.
 3. Students should read orally in a manner that makes their message comprehensible to their audience.
- The second step in this process is to identify assessment devices that could be used to determine the extent to which students are achieving the content standards. Here close attention needs to be given to whether various assessment instruments or methods are adequate measures of the content stated in the standards. Examples of assessment selections that might be made to check on the achievement of the content standards listed above are:
 1. Scores on the Reading Comprehension test of the *ITBS* or the *ITED* indicate how well students understand what they read.
 2. Reading logs maintained by students and summarized across fourth-grade classrooms in a building indicate frequency and amount of students' reading.
 3. Running records and checklists completed by the teacher and summarized across fourth-grade classrooms in a building indicate the quality of oral reading.
- Once the assessments to be used have been identified, the next step is to define the categories or achievement levels that will be used for reporting the performance of the fourth-grade group in each building and for the entire system. For Title I reporting, current federal guidelines use the labels "Less-than-Proficient", "Proficient", and "Advanced" for the three achievement levels in that reporting system. (However, these are not defined by the guidelines.) For this Achievement Levels Report, Iowa Testing Programs has adopted the labels "Low Performance", "Intermediate Performance", and "High Performance." (Note that the six-level system, which is also shown on the report, is not intended to be used for fulfilling this particular reporting requirement. However, a district could combine the six

levels in a different manner than is shown here to arrive at a three-level reporting system.) To complete this step of the process, the school system needs to decide what is meant by “Proficient” reading ability at the fourth-grade level. Then definitions for the other two categories can be written to reflect lower and higher performance, respectively. In this case, the definitions associated with the first content standard (on reading comprehension) might turn out to be:

Less-than-Proficient means the student has trouble remembering information read, usually cannot make inferences about what was read or make connections to previous experiences, and usually cannot summarize or generalize what was read.

Proficient means the student can remember much of what was read, often can make inferences beyond the text or make connections with ideas from previous reading experiences, and can sometimes convey the main idea and analyze the author’s viewpoint.

Advanced means the student remembers information that has been read, can make inferences beyond the reading material and connect with ideas previously learned, and can summarize the main point(s) read and analyze the author’s viewpoint and purpose.

Note that these definitions are offered here for illustrative purposes only; these have not been adopted by any particular Iowa school district and they have not been recommended by the Department of Education or Title I guidelines. The definitions adopted by the local school district can be compared to the descriptions for Low Performance, Intermediate Performance, and High Performance, which are displayed on the grade 4 *Achievement Levels Report*, to determine their comparability. If the two sets of descriptions agree fairly well, the benchmark data on the *Achievement Levels Report* can be used to describe local performance. However, if the two sets of descriptions do not agree very well, then the district would proceed to steps four and five below.

- The fourth step in this illustration of the process of using performance standards in reporting involves deciding which score range on the assessment score scale corresponds to each achievement-level definition. For example, what are the cutoff scores on the ITBS Reading score scale that form the boundaries of the Less-than-Proficient, Proficient, Advanced performance regions? How many questions does a student need to answer correctly in order for us to be willing to call the student Proficient? Advanced? The outcome of this step is a set of performance standards for the reading comprehension of fourth-grade students in the local district. (Note that the state of Iowa allows each school system to adopt its own performance standards, even when many schools might use the same assessment instruments for monitoring reading achievement.) Generally, performance standards are established as the result of a standard-setting study, a research study conducted locally using any of several approaches for determining the cutoff scores needed for decision making. (Details of these procedures are beyond the scope of this Interpretive Guide. Schools that might need information about standard setting could contact their AEA or Iowa Testing Programs staff.)
- The final step is to report student achievement data with respect to the district’s performance standards. The percentages of students scoring in the three categories defined by the cutoff scores derived in step #4 above can be obtained from the Frequency Distribution report. When corresponding percentages are available from the previous years, change also can be described, as noted above in the subsection entitled “Monitoring Changes Each Year.” And finally, if improvement goals have been set for grade 4 reading, that same subsection shows how progress toward such goals might be determined and reported.

Reporting to Others

All Iowa schools are required to report student achievement progress in certain subject areas on a systematic basis to the Iowa Department of Education, their AEA, and their community. The *Achievement Levels Report* is designed to facilitate such reporting in cases where the *ITBS* and/or *ITED* have been designated by the school system as one of the assessments to be used in reading or mathematics for such purposes.

It has been customary for schools to use average standard scores—whether converted to grade equivalents or percentile ranks—as the indicator of achievement for grade groups when reporting test results to the school board or to the general public through a news release. One of the useful features of the *Achievement Levels Report*, however, is that it allows the user to see how students in the grade group are distributed throughout the score scale rather than simply showing how the average student in the group performed. For example, if the average grade equivalent score in reading for the fourth-grade group in the district is 4.1 from fall testing, that simply tells us that the average student in that grade group obtained a score that is just about at the state average for fall testing (4.2). We don't know how low the lowest achieving students scored or whether there is a large concentration of nonreaders in that group. And, of course, we also don't know about the high achievers either. In a relatively high achieving district, there are bound to be a number of low achievers as well, and for a relatively low achieving district there are bound to be some high achievers. The use of a service like the *Achievement Levels Report* helps to convey such variability within student groups, however the use of only average scores precludes such observations.

The *Interpretive Guide for School Administrators*, both for the *ITBS* and the *ITED*, gives considerable detail about reporting to external groups. In addition, the *Test Coordinator Guide for the Iowa Tests* gives suggestions for reporting and developing news releases. The recommendations offered in those publications are just as relevant to reporting with the *Achievement Levels Report* as they are for any other mechanism.

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Appendix

Reading Achievement Level Descriptors for Forms A/B

Grade 4

Low (1-40): Seldom understands factual information or new words in context. Sometimes is able to make inferences and interpret either nonliteral language or information in new contexts. Rarely can determine a selection's main ideas or analyze its style and structure.

Intermediate (41-89): Usually understands factual information and new words in context. Usually is able to make inferences and interpret either nonliteral language or information in new contexts. Often can determine a selection's main ideas and analyze its style and structure.

High (90-99): Understands factual information and new words in context, is able to make inferences, can interpret either nonliteral language or information in new contexts, and can determine a selection's main ideas and analyze its style and structure.

Weak (1-9): Seldom understands factual information or new words in context. Rarely is able to make inferences or to interpret either nonliteral language or information in new contexts. Seldom can determine a selection's main ideas or analyze aspects of its style and structure.

Marginal (10-40): Seldom understands factual information or new words in context. Sometimes is able to make inferences and interpret either nonliteral language or information in new contexts. Sometimes can determine a selection's main ideas and analyze its style and structure.

Moderate (41-75): Usually understands factual information and new words in context. Sometimes is able to make inferences and interpret either nonliteral language or information in new contexts. Usually can determine a selection's main ideas and analyze its style and structure.

Skilled (76-89): Usually understands factual information and new words in context. Often can make inferences and interpret either nonliteral language or information in new contexts. Can determine a selection's main ideas and analyze its style and structure.

Accomplished (90-94): Understands factual information and new words in context. Usually can make inferences and interpret either nonliteral language or information in new contexts. Can determine a selection's main ideas and analyze its style and structure.

Distinguished (95-99): Understands factual information and new words in context. Can make inferences and interpret either nonliteral language or information in new contexts. Can determine a selection's main ideas and analyze its style and structure.

Reading Achievement Level Descriptors for Forms A/B

Grade 8

Low (1-40): Seldom understands factual information or new words in context. Rarely is able to make inferences or interpret information in new contexts. Seldom can determine a selection's main ideas, identify its author's purpose or viewpoint, or analyze its style and structure.

Intermediate (41-89): Usually understands factual information and new words in context. Often is able to make inferences and interpret information in new contexts. Sometimes can determine a selection's main ideas, identify its author's purpose or viewpoint, and analyze its style and structure.

High (90-99): Understands factual information and new words in context, is able to make inferences, and can interpret information in new contexts. Can determine a selection's main ideas, identify its author's purpose or viewpoint, and analyze its style and structure.

Weak (1-9): Seldom understands factual information or new words in context. Rarely is able to make inferences and interpret information in new contexts. Seldom can determine a selection's main ideas or analyze its style and structure. Rarely can identify author purpose or viewpoint.

Marginal (10-40): Seldom understands factual information or new words in context. Sometimes is able to make inferences and interpret information in new contexts. Sometimes can determine a selection's main ideas and analyze its style and structure. Sometimes is able to identify author purpose or viewpoint.

Moderate (41-75): Usually understands factual information and new words in context. Often is able to make inferences and interpret information in new contexts. Sometimes can determine a selection's main ideas and analyze its style and structure. Sometimes can identify author purpose or viewpoint.

Skilled (76-89): Usually understands factual information and new words in context. Can make inferences and interpret information in new contexts. Usually can determine a selection's main ideas and analyze its style and structure. Usually is able to identify author purpose or viewpoint.

Accomplished (90-94): Understands factual information and new words in context, can make inferences and interpret information in new contexts, and is able to determine a selection's main ideas and analyze its style and structure. Can identify author purpose or viewpoint.

Distinguished (95-99): Understands factual information and new words in context, and can make inferences and interpret information in new contexts. Is able to determine a selection's main ideas and analyze its style and structure. Can identify author purpose or viewpoint.

Reading Achievement Level Descriptors for Forms A/B

Grade 11

Low (1–40): Seldom understands stated information and ideas; rarely infers implied meaning, draws conclusions, or interprets nonliteral language; and rarely makes generalizations from or about a text, identifies its author’s purpose or viewpoint, or evaluates aspects of its style or structure.

Intermediate (41–89): Sometimes understands stated information and ideas; sometimes infers implied meaning, draws conclusions, and interprets nonliteral language; and sometimes makes generalizations from or about a text, identifies its author’s purpose or viewpoint, and evaluates aspects of its style or structure.

High (90–99): Understands stated information and ideas; infers implied meaning, draws conclusions, and interprets nonliteral language; and makes generalizations from or about a text, identifies its author’s purpose or viewpoint, and evaluates aspects of its style or structure.

Weak (1–9): Rarely understands stated information and ideas; rarely makes inferences about implied meaning or interprets nonliteral language; and does not make generalizations from or about a text, identify its author’s purpose or viewpoint, or evaluate aspects of its style or structure.

Marginal (10–40): Seldom understands stated information and ideas; rarely makes inferences about implied meaning or interprets nonliteral language; and rarely makes generalizations from or about a text, identifies its author’s purpose or viewpoint, or evaluates aspects of its style or structure.

Moderate (41–75): Sometimes understands stated information and ideas; sometimes makes simple inferences about implied meaning, draws conclusions, and interprets nonliteral language; and sometimes makes generalizations from or about a text, identifies its author’s purpose or viewpoint, and evaluates aspects of its style or structure.

Skilled (76–89): Usually understands stated information and ideas; usually makes inferences about implied meanings, draws conclusions, and interprets nonliteral language; and often makes generalizations from or about a text, identifies its author’s purpose or viewpoint, and evaluates aspects of its style or structure.

Accomplished (90–94): Understands stated information and ideas; makes inferences about implied meanings, draws conclusions, and interprets nonliteral language; and usually makes generalizations from or about a text, identifies its author’s purpose or viewpoint, and evaluates aspects of its style or structure.

Distinguished (95–99): Understands stated information and ideas; makes inferences about implied meanings, draws conclusions, and interprets nonliteral language; and makes generalizations from or about a text, identifies its author’s purpose or viewpoint, and evaluates aspects of its style or structure.

Math Achievement Level Descriptors for Forms A/B

Grade 4

Low (1-40): Sometimes can understand math concepts, but seldom is able to solve word problems. Rarely is able to use estimation methods or interpret data from graphs and tables.

Intermediate (41-89): Usually can understand math concepts and solve word problems. Sometimes is able to use estimation methods and usually can interpret data from graphs and tables.

High (90-99): Understands math concepts, solves word problems, and often is able to use estimation methods. Can interpret data from graphs and tables.

Weak (1-9): Seldom can understand math concepts or solve word problems. Rarely can use estimation methods or interpret data from graphs and tables.

Marginal (10-40): Sometimes can understand math concepts but seldom is able to solve word problems or use estimation methods. Sometimes can interpret data from graphs and tables.

Moderate (41-75): Sometimes can understand math concepts and solve word problems. Sometimes is able to use estimation methods and interpret data from graphs and tables.

Skilled (76-89): Sometimes can understand math concepts and usually is able to solve word problems. Often can use estimation methods and interpret data from graphs and tables.

Accomplished (90-94): Usually can understand math concepts and solve word problems. Often can use estimation methods and interpret data from graphs and tables.

Distinguished (95-99): Understands math concepts and is able to solve word problems. Can use estimation methods and interpret data from graphs and tables.

Math Achievement Level Descriptors for Forms A/B

Grade 8

Low (1-40): Seldom can understand math concepts or solve word problems. Rarely can use estimation methods or interpret data from graphs and tables.

Intermediate (41-89): Usually can understand math concepts and sometimes is able to solve word problems. Sometimes can use estimation methods and usually is able to interpret data from graphs and tables.

High (90-99): Understands math concepts and is able to solve word problems. Usually can use estimation methods. Is able to interpret data from graphs and tables.

Weak (1-9): Seldom can understand math concepts or solve word problems. Rarely can use estimation methods or interpret data from graphs and tables.

Marginal (10-40): Sometimes can understand math concepts but seldom is able to solve word problems. Sometimes can use estimation methods and interpret data from graphs and tables.

Moderate (41-75): Usually can understand math concepts and sometimes is able to solve word problems. Sometimes can use estimation methods and interpret data from graphs and tables.

Skilled (76-89): Understands math concepts and usually is able to solve word problems. Often can use estimation methods and interpret data from graphs and tables.

Accomplished (90-94): Understands math concepts and is able to solve word problems. Usually can use estimation methods. Is able to interpret data from graphs and tables.

Distinguished (95-99): Understands math concepts and is able to solve word problems. Usually can use estimation methods. Is able to interpret data from graphs and tables.

Math Achievement Level Descriptors for Forms A/B

Grade 11

Low (1-40): Seldom applies math concepts and procedures, makes inferences with quantitative information, or solves quantitative reasoning problems.

Intermediate (41-89): Sometimes applies math concepts and procedures, makes inferences with quantitative information, and solves a variety of quantitative reasoning problems.

High (90-99): Makes inferences with quantitative information and solves a variety of quantitative reasoning problems; usually applies math concepts and procedures.

Weak (1-9): Rarely applies math concepts and procedures, makes inferences with quantitative information, or solves quantitative reasoning problems.

Marginal (10-40): Seldom applies math concepts and procedures, makes inferences with quantitative information, or solves quantitative reasoning problems.

Moderate (41-75): Sometimes applies math concepts and procedures, makes inferences about quantitative information, and solves a variety of quantitative reasoning problems.

Skilled (76-89): Sometimes applies math concepts and procedures, often makes inferences with quantitative information and solves a variety of quantitative reasoning problems.

Accomplished (90-94): Usually applies math concepts and procedures, makes inferences with quantitative information, and solves a variety of quantitative reasoning problems.

Distinguished (95-99): Applies math concepts and procedures, makes inferences with quantitative information, and solves a variety of quantitative reasoning problems.

Science Achievement Level Descriptors for Forms A/B

Grade 8

Low (1-40): Sometimes understands ideas related to Earth and the universe but seldom understands ideas about the life sciences or the physical sciences. Rarely demonstrates the skills of scientific inquiry.

Intermediate (41-89): Sometimes understands ideas related to Earth and the universe, the life sciences, and the physical sciences. Often can demonstrate the skills of scientific inquiry.

High (90-99): Usually understands ideas related to Earth and the universe and to the life sciences. Understands ideas related to the physical sciences and is able to demonstrate the skills of scientific inquiry.

Weak (1-9): Seldom understands ideas related to Earth and the universe, the life sciences, or the physical sciences. Rarely demonstrates the skills of scientific inquiry.

Marginal (10-40): Sometimes understands ideas related to Earth and the universe but seldom understands ideas about the life sciences and physical sciences. Rarely demonstrates the skills of scientific inquiry.

Moderate (41-75): Sometimes understands ideas related to Earth and the universe, the life sciences, and the physical sciences. Sometimes demonstrates the skills of scientific inquiry.

Skilled (76-89): Usually understands ideas related to Earth and the universe and sometimes understands ideas related to the life sciences. Usually understands ideas related to the physical sciences. Often can demonstrate the skills of scientific inquiry.

Accomplished (90-94): Usually understands ideas related to Earth and the universe and to the life sciences. Understands ideas related to the physical sciences and is able to demonstrate the skills of scientific inquiry.

Distinguished (95-99): Understands ideas related to Earth and the universe and usually understands ideas related to the life sciences. Understands ideas related to the physical sciences and is able to demonstrate the skills of scientific inquiry.

Science Achievement Level Descriptors for Forms A/B

Grade 11

Low (1-40): Rarely makes inferences or predictions from data, judges the relevance and adequacy of information, or recognizes the rationale for and limitations of scientific procedures.

Intermediate (41-89): Sometimes makes inferences or predictions from data, judges the relevance and adequacy of information, and recognizes the rationale for and limitations of scientific procedures.

High (90-99): Makes inferences and predictions from data, recognizes the rationale for and limitations of scientific procedures, and usually judges the relevance and adequacy of information.

Weak (1-9): Rarely makes inferences or predictions from data, judges the relevance and adequacy of information, or recognizes the rationale for and limitations of scientific procedures.

Marginal (10-40): Seldom makes inferences or predictions from data, judges the relevance and adequacy of information, or recognizes the rationale for and limitations of scientific procedures.

Moderate (41-75): Sometimes makes inferences or predictions from data, judges the relevance and adequacy of information, and recognizes the rationale for and limitations of scientific procedures.

Skilled (76-89): Often makes inferences or predictions from data, judges the relevance and adequacy of information, and recognizes the rationale for and limitations of scientific procedures.

Accomplished (90-94): Usually makes inferences or predictions from data, judges the relevance and adequacy of information, and recognizes the rationale for and limitations of scientific procedures.

Distinguished (95-99): Makes inferences and predictions from data, judges the relevance and adequacy of information, and recognizes the rationale for and limitations of scientific procedures.

LOW PERFORMANCE		INTERMEDIATE PERFORMANCE		HIGH PERFORMANCE	
Weak	Marginal	Moderate	Skilled	Accomplished	Distinguished

Mathematics

Mathematics Achievement Level Descriptions

Percent of Students: **17.1**
 These descriptions indicate how the typical grade 4 student at each achievement level performs with respect to the ITBS Mathematics test:

HIGH PERFORMANCE LEVELS:

Understands math concepts, solves word problems, and often is able to use estimation methods. Can interpret data from graphs and tables.

12.2% **Distinguished** - Understands math concepts and is able to solve word problems. Can use estimation methods and interpret data from graphs and tables.

4.9% **Accomplished** - Usually can understand math concepts and solve word problems. Often can use estimation methods and interpret data from graphs and tables.

INTERMEDIATE PERFORMANCE LEVELS:

Usually can understand math concepts and solve word problems. Sometimes is able to use estimation methods and usually can interpret data from graphs and tables.

14.6% **Skilled** - Sometimes can understand math concepts and usually is able to solve word problems. Often can use estimation methods and interpret data from graphs and tables.

46.3% **Moderate** - Sometimes can understand math concepts and solve word problems. Sometimes is able to use estimation methods and interpret data from graphs and tables.

LOW PERFORMANCE LEVELS:

Sometimes can understand math concepts, but seldom is able to solve word problems. Rarely is able to use estimation methods or interpret data from graphs and tables.

14.6% **Marginal** - Sometimes can understand math concepts but seldom is able to solve word problems or use estimation methods. Sometimes can interpret data from graphs and tables.

7.3% **Weak** - Seldom can understand math concepts or solve word problems. Rarely can use estimation methods or interpret data from graphs and tables.

(N = 41)

