

# ISAT Vertical Scale and Cut Scores

The following summarizes some important changes and enhancements regarding the scale scores and cut scores of the Illinois Standards Achievement Test (ISAT) starting in 2005-2006.

Additional information can be found by following this

link:[http://www.isbe.net/assessment/powerpoint/Jan\\_4\\_STRC.pdf](http://www.isbe.net/assessment/powerpoint/Jan_4_STRC.pdf).

## Test Items

Starting with the 2005-2006 administration, the ISAT includes a combination of items produced by Harcourt, Inc., and items written by Illinois teachers. Items from these two sources are combined into new forms that are scored and analyzed as a single test.

The ISAT will now provide detailed student test results, including nationally-normed results coming from the Harcourt test items. These data include national percentile ranks, stanines, and the percent of students in performance quarters. However, students' ISAT scale scores, which designate one of four performance levels (Exceeds Standards, Meets Standards, Below Standards, Academic Warning) – are based on all items combined (i.e., Harcourt and Illinois). The resulting mix of items fully covers the Illinois Learning Standards. For additional information please consult the Illinois Assessment Framework documents ([www.isbe.net/assessment/IAFindex.htm](http://www.isbe.net/assessment/IAFindex.htm)).

## Format Changes

The test format of the ISAT has undergone some changes, such as the addition of color printing, to make the tests more student-friendly and motivating. Also, the nature of the items requiring a written response have changed somewhat. First, the mathematics test now has three short-response and two extended-response items. (One short-response item and one extended-response item are used for pilot). Together the three non-pilot items will count for 15% of the student's raw scores in mathematics. Second, the reading test includes two extended-response items. One of these is a pilot item and one counts as part of the reading score. The non-pilot extended-response item will count for 10% of the student's raw score in reading.

The extended-response item and short-response items in mathematics and the extended-response item in reading are combined with the multiple-choice questions in these areas to produce a single overall ISAT score. These scores are NOT based simply on a fixed number of correct answers. Rather, ISAT scoring also takes into account the yearly fluctuations questions' difficulty levels. Hence, the number of correct answers that is needed to Meet or Exceed the Illinois Learning Standards will vary across years.

## **Vertical Scale**

Analogous to the approach followed for the IMAGE test, all ISAT scores are now expressed on a “vertical” or continuous scale across grades 3 through 8 in reading and mathematics, and in grades 4 and 7 in science. This scoring system shows the performance of students in all grades on the same scale. Note that this is analogous to the way we use the same scale to measure temperatures in summer and winter: the average winter temperature is much lower than the average summer temperature. In the same way, scores for students in higher grades will be higher on average than scores for students in lower grades, indicating that they have learned more. When applied to Reading, Mathematics, and Science, vertical scaling allows schools to better monitor and quantify students’ progress across grades.

For those interested, we have conversion tables to translate scores on the new vertical scale to earlier ISAT scales. Click here to download these tables ([www.isbe.net/assessment/xls/vertical.xls](http://www.isbe.net/assessment/xls/vertical.xls)).

## **Cut Scores**

Because student scores will be reported on new scales, the numerical values of the cut scores representing proficiency levels need to change as well. Statistical “bridge studies” that were conducted in 2005 enabled ISBE to set the levels of proficiency represented by each performance category on the new scales. Again, the only thing that has changed is the numerical value of the cut score. Thus, meeting the Illinois Learning Standards according to the new vertical scale requires as much (and no more) knowledge than did the old ISAT scale.

The change in ISAT scores and cut scores due to vertical scaling amounts to using two different scales, analogous to the use of degrees Centigrade and Fahrenheit to measure temperature. However, whether we say that freezing occurs at 32 degrees Fahrenheit or at 0 degrees Centigrade, the freezing temperature itself is the same. In the same vein, the “new” cuts in grades 3, 5, and 8 for Reading and Mathematics and for grades 4 and 7 in Science are equivalent to the “old” cuts in these grades when it comes to students’ academic performance.

Because no previous cuts were available for grades 4, 6, and 7 in Reading and Mathematics, these were set based on splitting the differences between the known cuts. For instance, the “Meets or Exceeds” cut in Mathematics for grade 4 was computed as the value that averages the percent Meets or Exceeds for grades 3 and 5. The resulting cuts by grade and content area are shown in the following table. Note that the “bottom” of the Academic Warning and the “top” of the Exceeds categories cannot be determined until this year’s ISAT data have been processed.

## Scale Score Ranges That Define Student Performance Levels on the 2006 ISAT Scales

Grade	Academic Warning	Below Standards	Meets Standards	Exceeds Standards
<b>READING</b>				
3	lowest-155	156-190	191-226	227-highest
4	lowest-157	158-202	203-236	237-highest
5	lowest-160	161-214	215-246	247-highest
6	lowest-166	167-219	220-256	257-highest
7	lowest-173	174-225	226-266	267-highest
8	lowest-179	180-230	231-277	278-highest
<b>MATHEMATICS</b>				
3	lowest-162	163-183	184-223	224-highest
4	lowest-171	172-199	200-246	247-highest
5	lowest-179	180-213	214-270	271-highest
6	lowest-193	194-224	225-275	276-highest
7	lowest-206	207-234	235-280	281-highest
8	lowest-220	221-245	246-287	288-highest
<b>SCIENCE</b>				
4	lowest-157	158-186	187-236	237-highest
7	lowest-196	197-213	214-259	260-highest

### Grade 8 Mathematics

It had long been the perception of Illinois educators that the “meets standards” cut score for grade 8 Mathematics had originally been placed too high. This impression was confirmed by the bridge studies referred to above. To remedy this situation, on February 27, 2006, the Illinois State Board of Education changed the cut score for grade 8 Mathematics to be more in line with the other cut scores. Starting with the 2005-2006 ISAT, these new mathematics cut scores will be used exclusively.