

## **Changing the MHSA Score Scale from the Traditional 200-800 College Board Scale to the 1100 -1180 Maine Comprehensive Assessment Scale**

Beginning with the spring 2007 administration of the Maine High School Assessment (MHSA), all reports will be issued using a new scale which ranges from 1100 -1180. The following narrative provides an explanation and rationale for the implementation of that new scale.

During Maine's first administration of the SAT Initiative in the spring of 2006, both student and school results were reported using the College Board's traditional 200 – 800 scale scoring system for the Critical Reading, Writing and Mathematics portions of the test. Because no additional questions were added to the SAT Reasoning Test™ during that initial year of testing and to prevent confusion, the traditional SAT scores were reported and categorized after the achievement level standard setting was completed during May of that year (see Table 1).

In the fall of 2006, Dr. Norman Webb of the University of Wisconsin conducted an alignment study that indicated the mathematics portion of the SAT would benefit from additional test items in order to more fully measure the range of Maine's *Learning Results*. To address this finding, an item development committee was formed and, using Dr. Webb's design, the committee created 18 extra mathematics items to augment the traditional 54 mathematics items on the SAT.. These additional items, known collectively as the Math-A (for Augment) were administered during the last week of April 2007 and the results were combined with the traditional SAT mathematics results.

Because the Maine High School Assessment (MHSA) mathematics test now consisted of 72 (54 + 18) common items, it was no longer possible to assign a traditional College Board score to the results from this new test. Additionally, because the 2008 MHSA testing program will resume testing in science (a test developed in partnership with Measured Progress), it was necessary to incorporate a new scale to which high school student achievement could be ascribed uniformly across all disciplines. The State's assessment committee looked to the other parts of Maine's Comprehensive Assessment System (MeCAS), to inform the design a coherent reporting program.

To convey student results in grades 3-8, two years ago the Maine Educational Assessment (MEA) adopted an 80-point scale for each subject area with the digit of the reported grade preceding the 80-point continuum; e.g., grade 3 scores range from 300-380, grade 4 scores from 400-480, etc. This system of scale scores translates each of Maine's four achievement levels across approximate 20-point\* intervals. For example in grade 3, "meets the standards" covers the spread from 341-360 and "exceeds the standards" spreads from 361-380. At grade 4 the numbers are 441–460 and 461–480.

To maintain consistency within the State assessment system, it was decided to extend and continue the same scale used in the elementary and middle grades into the high school assessment program using the range of 1100–1180 (11 representing grade 11) with the same 20-point intervals as described above. This new scale was applied to the results of the spring administration of the 2007 MHSA. For the SAT subject areas of Critical Reading and Writing, where no augmentation was necessary, the traditional SAT scores were mapped directly to the

new MHSA range using the same cut scores established during the achievement level standard setting in the spring of 2006 to define each achievement level. For the newly created MHSA mathematics test, a new achievement level standard-setting committee was convened and new raw score cut points established measuring all 72 math items. The resulting cut scores were then translated to the same previously described 1100 -1180 scale (see Table 3).

The new MHSA scale will allow schools and districts to analyze all tested subject areas for trends over time and to utilize data to improve instructional practices. For schools wanting to compare 2006 traditional SAT scores to 2007 MHSA scores in Critical Reading and Writing, conversion tables has been included to help facilitate this process (see Table 4).

\* The scaled cut score between “does not meet the standards” and “partially meets the standards” does not always fall exactly at the 20-point range but rather varies slightly in response to statistical parameters defined by the “meets the standards” and “exceeds the standards” achievement levels at each grade and subject area (see Table 2).

**Table 1**  
**2006 SAT Initiative High School Assessment Cut Scores**

**Mathematics**

<b>Achievement Level</b>	<b>Scaled Score Range</b>	<b>Percent In Level</b>
Does Not Meet	200-370	28
Partially Meets	380-450	25
Meets	460-640	42
Exceeds	650-800	5

**Reading**

<b>Achievement Level</b>	<b>Scaled Score Range</b>	<b>Percent In Level</b>
DNM	200-360	24
PM	370-450	32
MS	460-610	38
ES	620-800	7

**Writing**

<b>Achievement Level</b>	<b>Scaled Score Range</b>	<b>Percent In Level</b>
DNM	200-340	21
PM	350-440	32
MS	450-610	40
ES	620-800	6

**Table 2**  
**MEA 2006–07 Scaled Score Achievement Level Ranges for Grades 3-8**

<b>Reading</b>	<b>Exceeds</b>	<b>Meets</b>	<b>Partially Meets</b>	<b>Does Not Meet</b>
Grade 3	361–380	341–360	331–340	300–330
Grade 4	461–480	441–460	431–440	400–430
Grade 5	561–580	541–560	531–540	500–530
Grade 6	661–680	641–660	629–640	600–628
Grade 7	761–780	741–760	729–740	700–728
Grade 8	861–880	841–860	829–840	800–828

<b>Mathematics</b>	<b>Exceeds</b>	<b>Meets</b>	<b>Partially Meets</b>	<b>Does Not Meet</b>
Grade 3	361–380	341–360	325–340	300–324
Grade 4	461–480	441–460	429–440	400–428
Grade 5	561–580	541–560	529–540	500–528
Grade 6	661–680	641–660	627–640	600–626
Grade 7	761–780	741–760	727–740	700–726
Grade 8	861–880	841–860	829–840	800–828

<b>Science &amp; Technology</b>	<b>Exceeds</b>	<b>Meets</b>	<b>Partially Meets</b>	<b>Does Not Meet</b>
Grade 4	461–480	441–460	429–440	400–428
Grade 8	861–880	841–860	831–840	800–830
<b>Writing</b>	<b>Exceeds</b>	<b>Meets</b>	<b>Partially Meets</b>	<b>Does Not Meet</b>
Grade 5	561–580	541–560	521–540	500–520
Grade 8	861–880	841–860	817–840	800–816

**Table 3**  
**MHSA 2006-07 SCALED SCORE RANGES**

MHSA	Exceeds	Meets	Partially Meets	Does Not Meet
Critical Reading	1161–1180	1141–1160	1129–1140	1100–1128
Mathematics	1161–1180	1141–1160	1133–1140	1100–1132
Writing	1161–1180	1141–1160	1129–1140	1100–1128

**Table 4**  
**SAT - MHSA Conversion Chart**

READING			WRITING		
2006 SAT	2007 MHSA	Achievement Level	2006 SAT	2007 MHSA	Achievement Level
200	1110	does not meet	200	1112	does not meet
210	1110	does not meet	210	1114	does not meet
220	1112	does not meet	220	1114	does not meet
230	1114	does not meet	230	1116	does not meet
240	1114	does not meet	240	1118	does not meet
250	1116	does not meet	250	1118	does not meet
260	1118	does not meet	260	1120	does not meet
270	1118	does not meet	270	1120	does not meet
280	1120	does not meet	280	1122	does not meet
290	1120	does not meet	290	1124	does not meet
300	1122	does not meet	300	1124	does not meet
310	1124	does not meet	310	1126	does not meet
320	1124	does not meet	320	1128	does not meet
330	1126	does not meet	330	1128	does not meet
340	1128	does not meet	340	1128	does not meet
350	1128	does not meet	350	1130	partially meets
360	1128	does not meet	360	1132	partially meets
370	1130	partially meets	370	1132	partially meets
380	1132	partially meets	380	1134	partially meets
390	1134	partially meets	390	1134	partially meets
400	1134	partially meets	400	1136	partially meets
410	1136	partially meets	410	1138	partially meets
420	1138	partially meets	420	1138	partially meets
430	1138	partially meets	430	1140	partially meets
440	1140	partially meets	440	1140	partially meets
450	1140	partially meets	450	1142	meets
460	1142	meets	460	1144	meets

470	1144	meets
480	1144	meets
490	1146	meets
500	1148	meets
510	1148	meets
520	1150	meets
530	1150	meets
540	1152	meets
550	1154	meets
560	1154	meets
570	1156	meets
580	1158	meets
590	1158	meets
600	1160	meets
610	1160	meets
620	1162	exceeds
630	1164	exceeds
640	1164	exceeds
650	1166	exceeds
660	1168	exceeds
670	1168	exceeds
680	1170	exceeds
690	1170	exceeds
700	1172	exceeds
710	1174	exceeds
720	1174	exceeds
730	1176	exceeds
740	1178	exceeds
750	1178	exceeds
760	1180	exceeds
770	1180	exceeds
780	1180	exceeds
790	1180	exceeds
800	1180	exceeds

470	1144	meets
480	1146	meets
490	1146	meets
500	1148	meets
510	1150	meets
520	1150	meets
530	1152	meets
540	1152	meets
550	1154	meets
560	1154	meets
570	1156	meets
580	1158	meets
590	1158	meets
600	1160	meets
610	1160	meets
620	1162	exceeds
630	1164	exceeds
640	1164	exceeds
650	1166	exceeds
660	1166	exceeds
670	1168	exceeds
680	1170	exceeds
690	1170	exceeds
700	1172	exceeds
710	1172	exceeds
720	1174	exceeds
730	1174	exceeds
740	1176	exceeds
750	1178	exceeds
760	1178	exceeds
770	1180	exceeds
780	1180	exceeds
790	1180	exceeds
800	1180	exceeds