
TCAP Achievement Levels: Standards Setting Process and Implementation

The Background:

Tennessee state law, Tenn. Code Ann. §49-1-302(a)(8), gives the State Board of Education the duty and authority to set policies governing all curricula and courses of study in K-12 public schools, including the adoption of standards.

Relevant excerpt of this law and not the entire statute §49-1-302.:

“Powers and duties of the board — Confidentiality of records — Standards, policies, recommendations and actions subject to appropriations — Guidelines and criteria for evaluation of certificated employees — “

The Tennessee Department of Education, Office of Assessment, Evaluation, and Research recently conducted Tennessee Comprehensive Assessment Program (TCAP) Achievement Level panel meetings for the following assessments: TCAP Achievement (ACH) for grades 3-8 in math, reading/language arts, and science; TCAP Modified Academic Achievement Standards (MAAS) for grades 3-8 math, reading/language arts, science and social studies; and TCAP End of Course (EOC) for Algebra I, Biology I, English I, and English II. Achievement level meetings, both nationally and historically in Tennessee, are conducted when the state develops a new assessment or the state’s curriculum standards change significantly. Both factors are in evidence and require new achievement levels be updated and adopted to reflect the efforts of the Tennessee Diploma Project (TDP) as related to college and career readiness. The achievement level meetings were held June 21 – 23, 2010, for MAAS, June 23 – 25, 2010, for ACH, and June 28 – July 30, 2010, for EOC.

During the testing year 2009-10, the current vendor, Pearson Education Measurement (PEM) with subcontractor Educational Testing Service (ETS) conducted achievement level panel meetings for the ACH, MAAS, and EOC assessments. Tennessee educators, who were knowledgeable in the content areas, familiar with Tennessee new high school graduation requirements, and drawn from various stakeholder groups statewide, served on the panels. The panels included four hundred and eight (408) educators from one hundred and five (105) school districts and state special schools. The panels’ work concluded with starting points for discussion/determination of achievement levels on all assessments. The vendor (PEM/ETS) was responsible for overseeing the standard-setting process and for training selected panelists in standard-setting procedures. The vendor was also required to use an empirical standard-setting process in which the panelists reviewed TN curriculum standards and established achievement level recommendations using items representing forms of the 2009 -10 assessments.

Immediately following the panel meetings on July 2, 2010, the Technical Advisory Committee (TAC) comprised of five (5) nationally recognized standard-setting

professionals and two (2) in-state representatives, reviewed and determined that the process used for each assessment was of the highest standards and was carried out well. The TAC received a report from one of two third party reviewers. The TAC suggested a strategic assessment plan to include three components- communication, curriculum match or link, and professional development.

Historically, Tennessee's strategic assessment plan has included these components beginning with a cohort class of students to be affected by these high stakes assessments. This plan would require a complete cycle of administrations not to occur in the middle of an Adequate Yearly Progress (AYP) year as established by the Elementary and Secondary Education Act (ESEA) updated as "No Child Left Behind" (NCLB). This timeline would require new achievement levels for the 2009-10 TCAP assessments. Additionally, new NCLB-required Annual Measureable Objectives (AMOs) and trajectories must be re-set to the United States Department of Education (USED) mandated formula based on the 20th percentile calculation for schools and student subgroups for the 2009-10 school year.

Immediately following the TAC review and recommendations, the Governor's Assessment Task Force (GATF) reviewed the efforts of the achievement level panels for TCAP assessments and the TAC's report and findings. The GATF made recommendations that were shared with the Department staff and Commissioner.

The efforts of the Tennessee Diploma Project (TDP) has provided for the establishment of rigorous K-12 college- and career-ready curriculum standards, an alignment of assessments to the college- and career-ready curriculum standards, and a new strategic assessment implementation plan to include new achievement levels, college- and career- ready definitions and descriptors, communications to the public, and professional development for practitioners. The Department initiated and received an external curriculum alignment study; established committees to revise curriculum standards; revised curriculum standards to college- and career-readiness specifications in math, reading/language arts, and science; recommended for review and approval the revised curriculum standards to the State Board of Education (SBE); negotiated with vendors appropriate timelines for alignment and development of new TCAP assessments; and implemented new assessments in the 2009-10 school year.

The Master Plan Connection:

This item supports the Board's *Master Plan* by assessing the level for which each student has learned the Curriculum, by providing appropriate data to prioritize instructional Resources, by enhancing educational Leadership with the use of these data to inform the educational decision-making process, and by providing student level achievement and growth data to support excellent Teaching and learning of the college- and career-ready standards.

First to the Top Connection:

Tennessee First to the Top Application, Section B(3): *Tennessee's goal for this reform plan criterion is to infuse our schools with world-class standards that are benchmarked internationally, rolled out locally through consistent professional development, and*

linked to an assessment system that accurately measures student performance against the standards.

The Recommendation:

The Department of Education recommends that new assessment achievement standards be approved to support the current K-12 reform efforts as implemented in the 2009-2010 curriculum standards and aligned assessments on final reading. The SBE staff concurs with this recommendation.

Memorandum

To: Tennessee Department of Education
From: Chris Domaleski, Technical Advisory Committee (TAC) Chair
Date: July 9, 2010
Re: Review of Standard Setting

As a participant in the American Diploma Project initiative, the Tennessee Department of Education (TDOE) adopted new content standards designed to support the state's vision and mission to prepare all Tennessee children for successful post-secondary work, education and citizenship. As part of the process, the department and its assessment contractors, Pearson and Educational Testing Service (ETS), have engaged in procedures to recommend new performance standards (i.e. cut scores) for the Tennessee Achievement (ACH), Modified Academic Achievement Standard (MAAS), and End of Course (EOC) assessments based on the judgments of diverse, qualified educators and administrators from across the state.

The standard setting process facilitated by the contractors was based on the widely-used Bookmark method. However, the method was enhanced to include some innovations to the conventional procedure, designed to promote the department's goal of identifying performance standards consistent with meaningful external indicators, such as the National Assessment of Educational Progress (NAEP).

On Friday, July 2, 2010, Tennessee's national Technical Advisory Committee (TAC) convened to review the standard setting activities (see Appendix for a roster of the TAC membership). This review included careful scrutiny of both the design and implementation of the standard setting procedures. The purpose of this memorandum is to document the key outcomes of this meeting. In brief, the evidence and information available to the TAC leads to the following conclusion:

The TDOE and its contractors developed an appropriate standard setting plan. Moreover, the information provided, including a report from an external evaluator; suggest that the process was faithfully implemented. The grounding of the plan in professionally-accepted practices and the fidelity of its implementation suggest that the TDOE can have confidence that the resulting cut scores provide a sound and defensible basis for assessing and evaluating student academic achievement and progress.

The TAC understands that the next step involves additional policy reviews of the recommended performance standards and further study of the relationship of these standards to external indicators. This is fitting given the central role that these performance indicators play in state and federal accountability programs and that it is the Tennessee State Board of Education that is ultimately charged with setting performance standards based on these recommendations.

The TAC will continue to work with the TDOE on standard setting and other technical issues to provide feedback, advice, and recommendations as needed.

Appendix

Tennessee National Technical Advisory Committee Members

John Barker, Ph.D.	Executive Director of Research, Assessment and Evaluation, Memphis City Schools
Paul Chagas, Ph.D.	Executive Director of Research, Assessment and Evaluation, Metropolitan Nashville Public Schools
Seung W. Choi, Ph.D.	Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine
Gregory J. Cizek, Ph.D.	Professor of Educational Measurement and Evaluation, University of North Carolina Chapel Hill
Chris Domaleski, Ph.D.	Senior Associate, National Center for the Improvement of Educational Assessment
Seock-Ho Kim, Ph.D.	Department of Educational Psychology and Instructional Technology, The University of Georgia
Barbara Plake, Ph.D.	Professor Emeritus, University of Nebraska-Lincoln



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To: Members and Executive Staff, Tennessee State Board of Education

From: Dan A. Long, Executive Director
Office of Assessment, Evaluation, and Research

Re: SBE Agenda Item IV. J. TCAP Achievement Levels: Standards Setting Process and Implementation

Date: July 30, 2010

The Tennessee Department of Education, Office of Assessment, Evaluation, and Research and its vendors Pearson and ETS recently conducted Tennessee Comprehensive Assessment Program (TCAP) Achievement Level panel meetings for the following assessments: TCAP Achievement (ACH) for grades 3-8 in math, reading/language arts, and science; TCAP Modified Academic Achievement Standards (MAAS) for grades 3-8 math, reading/language arts, science and social studies; and TCAP End of Course (EOC) for Algebra I, Biology I, English I, and English II. The performance (achievement level) standard setting process is used to determine the depth and breadth of the content standards a student must have to demonstrate competency at each achievement level (Below Basic, Basic, Proficient and Advanced).

The panels, comprised of Tennessee teachers and educational administrators, were chosen for their knowledge in the tested content, their familiarity with the students, and their diverse backgrounds, demographics, and experiences. The diverse group of panelists represented Tennessee's various regions including urban and rural settings.

An augmented Bookmark Method was used to set achievement levels for all tests. The Bookmark Method is a three-round standard (achievement level) setting process that requires panelists to independently examine test items and place bookmarks at the points at which they consider students to have demonstrated sufficient knowledge and skills at each achievement level. Additionally, reference data were provided showing TN student's performance on 4th and 8th grade NAEP and 8th grade Explore, 10th grade PLAN, and 11th grade ACT national assessments. For all TCAP tests, the panelists' work concluded with starting points for discussion/determination of performance at the achievement levels of Below Basic, Basic, Proficient and Advanced.

Immediately following the educator panel meetings, the Technical Advisory Committee (TAC) comprised of five (5) nationally recognized standard-setting professionals and two (2) in-state representatives met on July 2, 2010 and reviewed then determined that the process used for each assessment was of the highest standards and was carried out well. The TAC suggested a strategic assessment plan begin immediately to include three components-communication, curriculum match or link, and professional development.

Immediately following the TAC review and recommendations, the Governor's Assessment Task Force (GATF) reviewed the efforts of the achievement level panels for TCAP assessments and the TAC's report and findings and made comment.

The recommendations from these two meetings were provided to Department of Education staff including the Commissioner for final review and recommendation to the TN State Board of Education for the final phase of discussion and approval.

The tables below summarize the achievement levels as recommended for final discussion that would lead to SBE approved achievement levels for all 2009-10 assessments and until such time as a change in curriculum standards and assessments are required in future years.

Table 1. Performance Levels for TCAP Achievement Assessments (grades 3-8) Math, Reading/Language Arts, and Science

Total number of students assessed in 2009-10 = Average = **425,312**.

Table 1a

TCAP Achievement Assessment (ACH) Math (3-8) 69 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS*=900)
Grade 3 Scale Score Levels	600 - 702	703	755	791
Grade 3 Raw Score Levels	0 - 29	30	50	59
Grade 3 % and number of Students at Level	10% 7291	42.3% 31028	33.2% 24324	14.5% 10630
Grade 4 Scale Score Levels	600 - 721	722	767	799
Grade 4 Raw Score Levels	0 - 31	32	49	58
Grade 4 % and number of Students at Level	20.9% 15083	44.9% 32415	24.7% 17812	9.5% 6864
Grade 5 Scale Score Levels	600 - 727	728	764	795
Grade 5 Raw Score Levels	0 - 32	33	49	58
Grade 5 % and number of Students at Level	25.1% 18032	39.4% 28364	23.5% 16892	12% 8675
Grade 6 Scale Score Levels	600 - 732	733	770	795
Grade 6 Raw Score Levels	0 - 30	31	46	55
Grade 6 % and number of Students at Level	30.2% 21372	39.2% 27793	19.7% 13975	10.9% 7712
Grade 7 Scale Score Levels	600 - 739	740	772	798
Grade 7 Raw Score Levels	0 - 29	30	43	53
Grade 7 % and number of Students at Level	36.2% 25054	35.3% 24380	19.2% 13265	9.3% 6439
Grade 8 Scale Score Levels	600 - 742	743	775	798
Grade 8 Raw Score Levels	0 - 30	31	45	54
Grade 8 % and number of Students at Level	40.1% 27290	34.1% 23227	16.3% 11100	9.5% 6438

Note: * HOSS = Highest Obtainable Scale Score. Total students tested = 425,455

Table 1b

TCAP Achievement Assessment (ACH) Reading/Language Arts (3-5) 75 items (6-8) 83 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=900)
Grade 3 Scale Score Levels	600 - 708	709	760	797
Grade 3 Raw Score Levels	0 - 25	26	46	58
Grade 3 % and number of Students at Level	13.8% 10089	44.3% 32403	31.5% 23046	10.4% 7648
Grade 4 Scale Score Levels	600 - 708	709	760	799
Grade 4 Raw Score Levels	0 - 30	31	50	60
Grade 4 % and number of Students at Level	13.3% 9606	44.7% 32223	32.3% 23245	9.7% 7015
Grade 5 Scale Score Levels	600 - 705	706	755	803
Grade 5 Raw Score Levels	0 - 27	28	47	60
Grade 5 % and number of Students at Level	11.9% 8580	40.6% 29162	39.6% 28485	7.9% 5654
Grade 6 Scale Score Levels	600 - 707	708	752	803
Grade 6 Raw Score Levels	0 - 31	32	51	67
Grade 6 % and number of Students at Level	13% 9183	35.8% 25355	43.8% 30992	7.4% 5274
Grade 7 Scale Score Levels	600 - 717	718	760	798
Grade 7 Raw Score Levels	0 - 34	35	54	66
Grade 7 % and number of Students at Level	18.6% 12876	38.9% 26911	32.8% 22629	9.7% 6715
Grade 8 Scale Score Levels	600 - 706	707	760	799
Grade 8 Raw Score Levels	0 - 31	32	54	66
Grade 8 % and number of Students at Level	12.7% 8612	45% 30614	33.3% 22678	9% 6124

Total students tested = 425,119

Table 1c

TCAP Achievement Assessment (ACH) Science (3-8) 69 Items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=900)
Grade 3 Scale Score Levels	600 - 715	716	742	792
Grade 3 Raw Score Levels	0 - 35	36	45	57
Grade 3 % and number of Students at Level	16.6% 12149	22.1% 16183	47.5% 34812	13.8% 10089
Grade 4 Scale Score Levels	600 - 720	721	756	793
Grade 4 Raw Score Levels	0 - 30	31	43	54
Grade 4 % and number of Students at Level	20.6% 14860	34% 24501	33% 23774	12.4% 9012

Grade 5 Scale Score Levels	600 - 722	723	751	799
Grade 5 Raw Score Levels	0 - 32	33	44	57
Grade 5 % and number of Students at Level	22.5% 16158	26% 18691	41.4% 29788	10.1% 7317
Grade 6 Scale Score Levels	600 - 727	728	753	801
Grade 6 Raw Score Levels	0 - 30	31	40	54
Grade 6 % and number of Students at Level	26.9% 19007	23.9% 16950	40.4% 28603	8.8% 6259
Grade 7 Scale Score Levels	600 - 720	721	752	792
Grade 7 Raw Score Levels	0 - 29	30	43	56
Grade 7 % and number of Students at Level	21.6% 14926	28.7% 19830	35.9% 24851	13.8% 9559
Grade 8 Scale Score Levels	600 - 715	716	748	789
Grade 8 Raw Score Levels	0 - 31	32	44	56
Grade 8 % and number of Students at Level	16.9% 11468	28.2% 19217	39.4% 26834	15.5% 10525

Total students tested = 425,363

Table2. Performance Levels for TCAP End of Course Assessments (high school) Math (Algebra I), Reading/Language Arts (English I and II), and Science (Biology I)

Table 2a

TCAP End of Course Math (EOC Algebra I) 55 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=900)
Scale Score Levels	500 - 656	657	712	752
Raw Score Levels (Fall/Spring)	0 - 21/20	22/21	34/32	45/42
% and number of Students at Level	20.8% 18252	33.6% 29477	26.1% 22965	19.5% 17156

Total number of students tested in 2009-10 = 87,850.

Table 2b

TCAP End of Course Reading/Language Arts (EOC English I) 55 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=900)
Scale Score Levels	500 - 658	659	698	745
Raw Score Levels (Fall/Spring)	0 - 24	25/25	33/34	45/47
% and number of Students at Level	14.3% 10321	24.5% 17678	51.5% 37125	9.7% 7004

Total number of students tested in 2009-10 = 72,128.

Table 2c

TCAP End of Course Reading/Language Arts (EOC English II) 55 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=900)
Scale Score Levels	500 - 660	661	701	743
Raw Score Levels (Fall/Spring)	0 - 22	23/23	32/33	45/46
% and number of Students at Level	13.1% 9228	28.2% 19795	47.4% 33356	11.3% 7924

Total number of students tested in 2009-10 = 70,303.

Table 2d

TCAP End of Course Science (EOC Biology I) 55 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=900)
Scale Score Levels	500 - 673	674	705	742
Raw Score Levels (Fall/Spring)	0 - 23/20	24/21	32/28	44/42
% and number of Students at Level	22.7% 17286	24.1% 18292	39.8% 30285	13.4% 10149

Total number of students tested in 2009-10 = 76,012.

Table 3. Performance Levels for TCAP Modified Academic Achievement Standards (MAAS) (grades 3-8) Math, Reading/Language Arts, Science, and Social Studies

Total number of students assessed in 2009-10 = 11,020.

Table 3a

TCAP Modified Academic Achievement Standards Assessment (MAAS) Math (3-8) 61 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=500)
Grade 3 Scale Score Levels	200 - 265	266	317	357
Grade 3 Raw Score Levels	0 - 21	22	33	41
Grade 3 % and number of Students at Level	16.1% 255	47.7% 754	26.8% 425	9.4% 149
Grade 4 Scale Score Levels	200 - 275	276	326	352
Grade 4 Raw Score Levels	0 - 20	21	32	38
Grade 4 % and number of Students at Level	17% 354	58.4% 1216	17.5% 365	7.1% 148
Grade 5 Scale Score Levels	200 - 305	306	340	369
Grade 5 Raw Score Levels	0 - 23	24	31	37
Grade 5 % and number of Students at Level	50.4% 1019	34.4% 696	11.1% 224	4.1% 82
Grade 6 Scale Score Levels	200 - 305	306	337	381
Grade 6 Raw Score Levels	0 - 22	23	29	38
Grade 6 % and number of Students at Level	49.8% 760	32.2% 493	16.9% 259	1.1% 17

Grade 7 Scale Score Levels	200 - 327	328	368	409
Grade 7 Raw Score Levels	0 - 22	23	32	40
Grade 7 % and number of Students at Level	74% 1353	22.9% 419	2.9% 52	0.2% 4
Grade 8 Scale Score Levels	200 - 331	332	366	395
Grade 8 Raw Score Levels	0 - 26	27	35	41
Grade 8 % and number of Students at Level	81.2% 1411	16% 279	2.6% 46	0.2% 3

Total students tested = 10,783

Table 3b

TCAP Modified Academic Achievement Standards Assessment (MAAS) R/LA (3-5) 66 items (6-8) 73 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=500)
Grade 3 Scale Score Levels	200 - 299	300	319	347
Grade 3 Raw Score Levels	0 - 28	29	34	41
Grade 3 % and number of Students at Level	44.4% 703	21.5% 341	23.6% 375	10.5% 167
Grade 4 Scale Score Levels	200 - 300	301	319	338
Grade 4 Raw Score Levels	0 - 30	31	36	41
Grade 4 % and number of Students at Level	45.7% 946	20.7% 429	19.8% 411	13.8% 286
Grade 5 Scale Score Levels	200 - 281	282	307	340
Grade 5 Raw Score Levels	0 - 28	29	35	43
Grade 5 % and number of Students at Level	23.3% 467	25.4% 510	38.4% 771	12.9% 260
Grade 6 Scale Score Levels	200 - 308	309	322	341
Grade 6 Raw Score Levels	0 - 32	33	37	43
Grade 6 % and number of Students at Level	53.9% 814	15.7% 237	19.3% 291	11.1% 167
Grade 7 Scale Score Levels	200 - 309	310	330	351
Grade 7 Raw Score Levels	0 - 32	33	39	45
Grade 7 % and number of Students at Level	54.4% 980	26.6% 479	13.7% 247	5.3% 95
Grade 8 Scale Score Levels	200 - 314	315	330	343
Grade 8 Raw Score Levels	0 - 34	35	40	44
Grade 8 % and number of Students at Level	63.4% 1090	19.4% 334	10% 171	7.2% 123

Total students tested = 10,694

Table 3c

TCAP Modified Academic Achievement Standards Assessment (MAAS) Science (3-8) 61 items				
Achievement Levels	Below Basic	Basic	Proficient	Advanced (HOSS=500)
Grade 3 Scale Score Levels	200 - 276	277	315	369
Grade 3 Raw Score Levels	0 - 26	27	35	43
Grade 3 % and number of Students at Level	25.2% 406	35.9% 578	33.7% 543	5.2% 84
Grade 4 Scale Score Levels	200 - 309	310	339	368
Grade 4 Raw Score Levels	0 - 27	28	35	41
Grade 4 % and number of Students at Level	59.4% 1252	27.8% 586	10.6% 224	2.2% 46
Grade 5 Scale Score Levels	200 - 296	297	319	351
Grade 5 Raw Score Levels	0 - 26	27	32	39
Grade 5 % and number of Students at Level	38.7% 796	29.6% 610	24.6% 507	7.1% 147
Grade 6 Scale Score Levels	200 - 324	325	344	372
Grade 6 Raw Score Levels	0 - 26	27	32	39
Grade 6 % and number of Students at Level	73.4% 1155	16% 251	8.1% 128	2.5% 39
Grade 7 Scale Score Levels	200 - 307	308	332	355
Grade 7 Raw Score Levels	0 - 24	25	31	37
Grade 7 % and number of Students at Level	54.5% 1019	26.9% 503	14.3% 268	4.3% 80
Grade 8 Scale Score Levels	200 - 306	307	331	352
Grade 8 Raw Score Levels	0 - 25	26	32	37
Grade 8 % and number of Students at Level	51.9% 934	29.4% 529	12.5% 224	6.2% 111

Total students tested = 11,020

Table 3d

TCAP Modified Academic Achievement Standards Assessment (MAAS) Social Studies (3-8) 61 items				
Achievement Levels	Below Basic	Below Proficient	Proficient	Advanced (HOSS=500)
Grade 3 Scale Score Levels	N/A	200 - 318	319	374
Grade 3 Raw Score Levels	N/A	0 - 31	32	43
Grade 3 % and number of Students at Level	N/A	62.3% 1001	32.5% 523	5.2% 83
Grade 4 Scale Score Levels	N/A	200 - 317	318	349
Grade 4 Raw Score Levels	N/A	0 - 29	30	37
Grade 4 % and number of Students at Level	N/A	65.1% 1372	27% 570	7.9% 167

Grade 5 Scale Score Levels	N/A	200 - 316	317	351
Grade 5 Raw Score Levels	N/A	0 - 29	30	38
Grade 5 % and number of Students at Level	N/A	65.1% 1342	26.8% 552	8.1% 166
Grade 6 Scale Score Levels	N/A	200 - 343	344	363
Grade 6 Raw Score Levels	N/A	0 - 31	32	37
Grade 6 % and number of Students at Level	N/A	90% 1410	7.4% 115	2.6% 41
Grade 7 Scale Score Levels	N/A	200 - 314	315	356
Grade 7 Raw Score Levels	N/A	0 - 27	28	38
Grade 7 % and number of Students at Level	N/A	63.1% 1175	31.1% 578	5.8% 107
Grade 8 Scale Score Levels	N/A	200 - 316	317	349
Grade 8 Raw Score Levels	N/A	0 - 29	30	38
Grade 8 % and number of Students at Level	N/A	65.8% 1178	26.6% 476	7.6% 137

Total students tested = 10,993

Annual Measureable Objectives (AMOs) for determination of Adequate Yearly Progress (AYP) must be established pursuant to the Elementary and Secondary Education Act (ESEA) titled “No Child Left Behind” (NCLB) in its 2001 reauthorization. Additionally, new NCLB-required Annual Measureable Objectives (AMOs) and trajectories must be re-set to the United States Department of Education (USED) mandated formula based on the 20th percentile calculation for schools and student subgroups for the 2009-10 school year.

The tables below summarize possible options for re-setting the AMO beginning with the 2009-10 school year. In each table, the 2008-09 school year ends the previously set AMO trajectories. The 2009-10 school year begins the new AMO trajectory to 2013-14 as mandated by USED. Elementary/Middle calculated AMOs are for R/LA at 32% and math at 20%. High school calculated AMOs are for R/LA at 49% and math at 25%

Table 4a.1

New Elementary/Middle School Level Benchmarks Reset 2009-10 (AMOs) Model 1			
School Year	R/LA Target	Math Target	Attendance Rate
2002-2003 through 2003-2004	77%	72%	93%
2004-2005 through 2006-2007	83%	79%	93%
2007-2008 through 2008-2009	89%	86%	93%
2009-2010 through 2010-2011	32%	20%	93%
2011-2012 through 2012-2013	66%	60%	93%
2013-2014	100%	100%	93%

Table 4a.2

New High School Level Benchmarks Reset 2009-10 (AMOs) Model 1			
School Year	R/LA Target	Math Target	Graduation Rate
2002-2003 through 2003-2004	86%	65%	90%
2004-2005 through 2006-2007	90%	75%	90%
2007-2008 through 2008-2009	93%	83%	90%
2009-2010 through 2010-2011	49%	25%	90%
2011-2012 through 2012-2013	74%	63%	90%
2013-2014	100%	100%	90%

Table 4b.1

New Elementary/Middle School Level Benchmarks Reset 2009-10 (AMOs) Model 2			
School Year	R/LA Target	Math Target	Attendance Rate
2002-2003 through 2003-2004	77%	72%	93%
2004-2005 through 2006-2007	83%	79%	93%
2007-2008 through 2008-2009	89%	86%	93%
2009-2010 through 2010-2011	32%	20%	93%
2011-2012	49%	40%	93%
2012-2013	66%	60%	93%
2013-2014	100%	100%	93%

Table 4b.2

New High School Level Benchmarks Reset 2009-10 (AMOs) Model 2			
School Year	R/LA Target	Math Target	Graduation Rate
2002-2003 through 2003-2004	86%	65%	90%
2004-2005 through 2006-2007	90%	75%	90%
2007-2008 through 2008-2009	93%	83%	90%
2009-2010 through 2010-2011	49%	25%	90%
2011-2012	61%	44%	90%
2012-2013	74%	63%	90%
2013-2014	100%	100%	90%

Table 4c.1

New Elementary/Middle School Level Benchmarks Reset 2009-10 (AMOs) Model 3			
School Year	R/LA Target	Math Target	Attendance Rate
2002-2003 through 2003-2004	77%	72%	93%
2004-2005 through 2006-2007	83%	79%	93%
2007-2008 through 2008-2009	89%	86%	93%
2009-2010	32%	20%	93%
2010-2011	49%	40%	93%
2011-2012	66%	60%	93%
2012-2013	83%	80%	93%
2013-2014	100%	100%	93%

Table 4c.2

New High School Level Benchmarks Reset 2009-10 (AMOs) Model 3			
School Year	R/LA Target	Math Target	Graduation Rate
2002-2003 through 2003-2004	86%	65%	90%
2004-2005 through 2006-2007	90%	75%	90%
2007-2008 through 2008-2009	93%	83%	90%
2009-2010	49%	25%	90%
2010-2011	61%	44%	90%
2011-2012	74%	63%	90%
2012-2013	87%	81%	90%
2013-2014	100%	100%	90%