

## 5 CORROBORATING STATE ASSESSMENT MEASURES OF ACHIEVEMENT CHANGE WITH NAEP

In this section, we compare the change from 2005 to 2007 in the percentage of students meeting the state's standard and the change from 2005 to 2007 in the percentage of students meeting the NAEP scale equivalent of the same state's standard. For the year for which the NAEP scale equivalent is computed, the percentage meeting the state's standard and the percentage meeting the NAEP scale equivalent are, by definition, the same. Therefore, to compare NAEP and state changes in achievement from 2005 to 2007, the percentage of students reported to be meeting the state standard in 2007 is compared with the percentage of the NAEP students in 2007 that are above the NAEP scale equivalent of the state standard in 2005.

Described in Section 2, the statistic  $D$  is defined as the discrepancy between the change from 2005 to 2007 in the percentage meeting the state standard on the state test and the change in the same percentage when measured by NAEP.<sup>27</sup> If the statistical test indicates that  $D$  is different from zero, students gained more between 2005 and 2007 on either the NAEP skill domain or on the state-specific skill domain, depending on whether  $D$  is positive or negative. When  $D$  is greater than zero, the change from 2005 to 2007 on the state assessment is more positive (or less negative) than the change from 2005 to 2007 on NAEP. This could happen in two ways. If the percentage of students meeting the standard on the state test increased, the comparison with NAEP would show a smaller increase in NAEP's percentage (or even a decrease). If a smaller percentage of students met the standard on the state test, the comparison with NAEP would show a larger loss on NAEP.

When  $D$  is less than zero, the change on the state assessment is less positive (or more negative) than the change on NAEP. This could also happen in two ways. If more students met the standard on the state test over these 2 years, the comparison with NAEP would show that even more students gained on NAEP than on the state test. If fewer students met the standard on the state test over this period, the comparison with NAEP would show either a smaller loss or a gain in student achievement. A focus on state-specific content during instruction might lead to a positive value for  $D$ , whereas a focus on NAEP content might lead to a negative value for  $D$ .

---

<sup>27</sup> In Section 2, equation 5 defined  $D$ . Rearranging the terms in the equation,  $D$  can be rewritten as  $(D_S - D_N)$ , where  $D_S$  is the change from 2005 to 2007 in achievement measured by the state test, and  $D_N$  is the change from 2005 to 2007 in achievement measured by the mapping. When  $D > 0$ , i.e.,  $D_S > D_N$ , the change from 2005 to 2007 on the state assessment is more positive (or less negative) than the change from 2005 to 2007 on NAEP. For  $D < 0$ , that is  $D_S < D_N$ , the change on the state assessment is less positive (or more negative) than the change on NAEP.

To use Wisconsin reading grade 4 as an example from table 19,

$$\begin{aligned} D_S &= 79.5 - 82.8 = -3.3 \\ D_N &= 83.3 - 82.8 = .5 \\ D &= D_S - D_N = -3.8 \end{aligned}$$

For Wisconsin reading grade 8,

$$\begin{aligned} D_S &= 82.7 - 85.8 = -3.1 \\ D_N &= 84.8 - 85.8 = -1.0 \\ D &= D_S - D_N = -2.1 \end{aligned}$$

In both situations, the changes on the state assessment are less positive (or more negative) than the changes on NAEP.

If either NAEP or a state test has substantively changed between the two years, then comparisons of achievement changes identified by the two tests are not warranted. In the years from 2005 to 2007, many states changed their state assessments as shown in the tables in appendix B, and finding values of *D* significantly different from zero in those cases is to be expected.

Tables 19 through 22 display comparisons limited to the states that reported no significant changes in their own assessments between 2005 and 2007 that are large enough to affect the direct comparability of the 2005 and the 2007 reported results.<sup>28</sup>

Table 19 shows that of the 22 states with comparable test results in grade 4 reading, 11 showed no statistically significant difference between NAEP and state assessment changes in achievement between 2005 and 2007 (Alaska, California, Colorado, Indiana, Iowa, Maryland, Massachusetts, Mississippi, New Mexico, North Carolina, and Ohio), 5 showed changes that are more positive than the changes measured by NAEP (Arkansas, Louisiana, North Dakota, South Carolina, and Texas), and 6 states showed changes that are less positive than those measured by NAEP (Alabama, Florida, New Jersey, Tennessee, Washington, and Wisconsin).

Table 19. NAEP and state assessment percentages meeting the state grade 4 reading proficient standard in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
Alabama	82.4	88.8	85.3	-3.5 *	0.86
Alaska	79.2	81.0	80.4	-0.6	0.77
Arkansas	53.5	53.2	57.9	4.6 *	1.05
California	47.8	51.0	50.7	-0.3	0.73
Colorado	86.0	86.0	85.7	-0.3	0.78
Florida	70.8	76.2	69.5	-6.7 *	0.75
Indiana	72.3	76.6	76.1	-0.4	0.97
Iowa	77.3	82.9	81.5	-1.3	1.29
Louisiana	65.4	62.7	67.1	4.4 *	1.63
Maryland	82.0	86.4	86.9	0.5	1.00
Massachusetts	48.3	53.4	56.3	2.8	1.46
Mississippi	88.1	91.2	90.1	-1.2	0.65
New Jersey	81.0	88.2	81.7	-6.5 *	0.92
New Mexico	50.3	57.6	55.7	-1.9	1.31
North Carolina	82.4	84.5	85.0	0.5	0.74
North Dakota	76.5	79.6	81.8	2.2 *	1.12
Ohio	76.6	81.4	81.6	0.2	1.13
South Carolina	34.7	36.2	42.4	6.2 *	1.21
Tennessee	87.9	89.8	87.6	-2.2 *	0.79
Texas	80.6	81.6	83.5	1.9 *	0.81
Washington	79.6	79.4	75.1	-4.3 *	1.11
Wisconsin	82.8	83.3	79.5	-3.8 *	0.95

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED Facts SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

<sup>28</sup> Appendix C presents the results for all states with available data.

Table 20. NAEP and state assessment percentages meeting the state grade 8 reading proficient standard in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
Alabama	69.3	69.1	71.4	2.3 *	1.07
Alaska	81.8	81.3	79.3	-2.0 *	0.93
Arizona	63.2	63.6	62.8	-0.9	1.06
Arkansas	57.6	58.0	63.8	5.8 *	1.22
California	39.2	41.1	41.9	0.8	0.82
Colorado	85.9	87.9	87.0	-0.9	0.87
Florida	43.5	46.9	50.7	3.7 *	0.78
Illinois	72.5	73.0	80.8	7.8 *	1.22
Indiana	66.3	70.0	68.5	-1.5	0.96
Iowa	72.3	74.1	72.8	-1.3	1.17
Louisiana	54.0	55.0	60.5	5.5 *	1.40
Maryland	67.7	74.4	69.3	-5.1 *	1.17
Mississippi	57.3	56.2	50.5	-5.7 *	1.14
Nevada	52.7	52.1	57.6	5.5 *	0.98
New Jersey	73.8	75.7	74.0	-1.7	1.13
New Mexico	51.9	53.6	56.0	2.4 *	1.17
North Carolina	87.6	88.1	87.9	-0.2	0.76
North Dakota	72.2	71.4	76.5	5.2 *	1.46
Ohio	80.1	81.4	82.2	0.8	0.89
Pennsylvania	64.3	65.5	77.2	11.7 *	1.31
South Carolina	30.3	30.0	24.7	-5.3 *	1.19
Tennessee	87.4	88.0	92.5	4.4 *	0.81
Texas	83.4	86.5	87.8	1.3	0.68
Wisconsin	85.8	84.8	82.7	-2.1 *	0.90

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED*Facts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

For grade 8 reading, table 20 shows that 9 of the 24 states with comparable assessments did not show statistically significant differences between NAEP and state assessment changes in achievement between 2005 and 2007 (Arizona, California, Colorado, Indiana, Iowa, New Jersey, North Carolina, Ohio, and Texas), 10 states showed changes that are more positive than the changes measured by NAEP (Alabama, Arkansas, Florida, Illinois, Louisiana, Nevada, New Mexico, North Dakota, Pennsylvania, and Tennessee), and 5 showed changes that are less positive than those measured by NAEP (Alaska, Maryland, Mississippi, South Carolina, and Wisconsin).

Table 21. NAEP and state assessment percentages meeting the state grade 4 mathematics proficient standard in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
Alabama	74.0	77.3	78.7	1.4	1.29
Alaska	70.7	71.3	76.7	5.3 *	1.20
Arkansas	52.9	55.3	64.8	9.5 *	1.09
California	51.4	51.2	57.3	6.1 *	0.76
Colorado	89.7	90.1	90.1	0.0	0.67
Florida	63.1	68.9	69.7	0.8	1.09
Georgia	74.5	77.4	78.9	1.5	0.95
Indiana	72.3	79.9	77.0	-2.9 *	1.13
Iowa	79.5	82.6	82.2	-0.4	1.04
Louisiana	62.6	61.7	61.3	-0.4	1.48
Maryland	78.1	79.5	86.3	6.9 *	1.28
Massachusetts	38.5	47.0	48.6	1.5	1.78
Mississippi	78.8	79.3	81.0	1.8	1.06
New Jersey	80.7	84.5	85.3	0.8	0.98
New Mexico	38.6	46.7	46.1	-0.5	1.07
North Dakota	80.1	82.3	80.4	-1.9 *	0.85
South Carolina	38.9	39.8	41.7	1.9	1.07
Tennessee	86.8	88.3	89.2	0.9	0.82
Texas	81.7	82.5	84.9	2.3 *	0.88
Washington	60.5	62.9	56.9	-5.9 *	1.14
Wisconsin	74.1	75.6	76.1	0.5	1.33

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table 21 shows that of the 21 states with comparable test results in grade 4 mathematics, 13 showed no statistically significant difference between NAEP and state assessment changes in achievement between 2005 and 2007 (Alabama, Colorado, Florida, Georgia, Iowa, Louisiana, Massachusetts, Mississippi, New Jersey, New Mexico, South Carolina, Tennessee, and Wisconsin), 5 states showed changes that are more positive than the changes measured by NAEP (Alaska, Arkansas, California, Maryland, and Texas), and 3 showed changes that are less positive than those measured by NAEP (Indiana, North Dakota, and Washington).

Table 22. NAEP and state assessment percentages meeting the state grade 8 mathematics proficient standard in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
Alaska	65.1	67.2	70.0	2.9 *	1.12
Arizona	60.5	63.1	60.2	-2.9 *	1.12
Arkansas	33.7	36.3	48.4	12.1 *	1.34
Colorado	74.1	78.7	77.6	-1.0	0.94
Florida	58.2	60.8	64.1	3.4 *	0.92
Georgia	68.7	71.9	82.5	10.6 *	1.35
Indiana	70.2	72.2	71.5	-0.7	1.23
Iowa	75.6	77.6	75.6	-2.0	1.09
Louisiana	56.3	62.3	58.7	-3.6 *	1.37
Maryland	53.0	60.4	58.4	-2.0	1.22
Mississippi	52.5	54.4	53.6	-0.8	1.13
Nevada	51.1	49.6	53.8	4.1 *	0.89
New Jersey	63.9	67.8	68.5	0.7	1.10
New Mexico	23.6	28.5	29.7	1.2	0.92
North Dakota	65.5	70.6	68.0	-2.6 *	1.28
Ohio	62.7	65.0	74.0	9.0 *	1.22
Pennsylvania	62.4	68.9	69.7	0.8	1.16
South Carolina	23.8	25.7	19.9	-5.7 *	1.18
Tennessee	87.8	90.8	88.5	-2.3 *	0.91
Texas	60.9	67.4	71.9	4.5 *	0.99
Wisconsin	74.9	75.4	74.4	-1.0	1.16

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

For grade 8 mathematics, table 22 shows that 9 out of 21 states with comparable assessments showed no statistically significant difference between NAEP and state assessment measures of changes in achievement between 2005 and 2007 (Colorado, Indiana, Iowa, Maryland, Mississippi, New Jersey, New Mexico, Pennsylvania, and Wisconsin), 7 states with changes that are more positive than the changes measured by NAEP (Alaska, Arkansas, Florida, Georgia, Nevada, Ohio, Texas), and 5 states with changes that are less positive than those measured by NAEP (Arizona, Louisiana, North Dakota, South Carolina, and Tennessee).

Tables 23 through 25 summarize the results by listing where NAEP and state assessment do and do not agree. Table 23 lists the states that show changes in achievement in their own test that are corroborated by NAEP results, in the sense that state assessment and NAEP measures of changes in percentages of students meeting the state standards are not statistically significantly different from each other. Table 24 lists the states showing more positive changes in student achievement from 2005 to 2007 than NAEP, and table 25 lists the states with less positive changes than NAEP from 2005 to 2007.

It is important to understand the reasons for the discrepancies. Because of the complexity of testing, in most cases, the source of the discrepancy (or drift) is likely to be some change in testing, such as in accommodation, exclusions, time of testing, or scaling methods. Even when these sources are ruled out, differences in the domains covered by the two tests can lead to discrepancies in achievement changes. While it is beyond the scope of this report to undertake such analyses, it may be valuable for the states where such differences exist to do so.

Table 23. States showing changes in student achievement from 2005 to 2007 in their own tests that are corroborated by NAEP results in the same period, by subject and grade

Reading		Mathematics	
Grade 4	Grade 8	Grade 4	Grade 8
Alaska	Arizona	Alabama	Colorado
California	California	Colorado	Indiana
Colorado	Colorado	Florida	Iowa
Indiana	Indiana	Georgia	Maryland
Iowa	Iowa	Iowa	Mississippi
Maryland	New Jersey	Louisiana	New Jersey
Massachusetts	North Carolina	Massachusetts	New Mexico
Mississippi	Ohio	Mississippi	Pennsylvania
New Mexico	Texas	New Jersey	Wisconsin
North Carolina		New Mexico	
Ohio		South Carolina	
		Tennessee	
		Wisconsin	

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading and Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table 24. States showing changes in student achievement from 2005 to 2007 in their own tests that are statistically significantly more positive than NAEP's, by subject and grade

Reading		Mathematics	
Grade 4	Grade 8	Grade 4	Grade 8
Arkansas	Alabama	Alaska	Alaska
Louisiana	Arkansas	Arkansas	Arkansas
North Dakota	Florida	California	Florida
South Carolina	Illinois	Maryland	Georgia
Texas	Louisiana	Texas	Nevada
	Nevada		Ohio
	New Mexico		Texas
	North Dakota		
	Pennsylvania		
	Tennessee		

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading and Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table 25. States showing changes in student achievement from 2005 to 2007 in their own tests that are statistically significantly less positive than NAEP's, by subject and grade

Reading		Mathematics	
Grade 4	Grade 8	Grade 4	Grade 8
Alabama	Alaska	Indiana	Arizona
Florida	Maryland	North Dakota	Louisiana
New Jersey	Mississippi	Washington	North Dakota
Tennessee	South Carolina		South Carolina
Washington	Wisconsin		Tennessee
Wisconsin			

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading and Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

## 6 CONCLUSIONS

The mapping results described in this study have made it possible to compare state reading and mathematics proficiency standards across states, using grade 4 and 8 NAEP reading and mathematics scales as common yardsticks. The findings have also made it possible to evaluate consistency in the state standards over time and use NAEP to corroborate progress (or lack thereof) in the achievement assessed by states. Identifying a NAEP scale equivalent score for the state's standard was an essential step for the analyses conducted in this study. These analyses were based on school-level percentages of students meeting a state's standard on a state's own tests, which are systematically available for almost every state and could be compared with student performance on NAEP in the same schools.

The purpose of state-to-NAEP comparisons is to aid in the interpretation of state assessment results by providing a benchmark. Despite the limitations of state-to-NAEP comparisons, there is a need for reliable information that compares state standards to one another. What does it mean to say that a student is proficient in reading in grade 4 in Massachusetts? Would a fourth-grader who is proficient in reading in Wyoming also be proficient in Massachusetts? The analyses presented in this study provide a basis for answering such questions.

Mapping state standards for proficient performance on the NAEP scales showed wide variation among states in the rigor of their standards. The implication is that students of similar academic skills, but residing in different states, are being evaluated against different standards for proficiency in reading and mathematics. All NAEP scale equivalents of states' reading standards were below NAEP's *Proficient* range; and in mathematics, only two states' NAEP scale equivalent were in the NAEP *Proficient* range (Massachusetts in grades 4 and 8, and South Carolina in grade 8). In many cases, the NAEP scale equivalent for a state's standard, especially in grade 4 reading, mapped below the NAEP achievement level for *Basic* performance. There may well be valid reasons for state standards to fall below NAEP's *Proficient* range. The comparisons simply provide a context for describing the rigor of performance standards that states across the country have adopted.

Almost one-half of the states changed aspects of their assessment policies or the assessment itself between 2005 and 2007 in ways that prevented their reading or mathematics test results from being comparable across these two years. Either explicitly or implicitly, such states have adopted new performance standards. By mapping the state standards in both years to the same NAEP scale, the changes in rigor of the standards can be measured. For states with both years of data, the mapping results showed that the NAEP equivalents representing state standards for proficiency were lower in 2007 in one-third to one-half of the states that made such changes (depending on subject and grade). A decrease in the stringency of the NAEP equivalent of state standards was more likely to occur for grade 8 than for grade 4.

In the remaining states in which no changes were made or the changes in assessment policies were minor enough that their test results remained comparable, it was possible to check the extent to which NAEP corroborates the changes in achievement measured in the states' assessments. In two-fifths to three-fifths of the states (depending on subject and grade), NAEP's measurements of student progress agreed with the progress measured by state assessments. In cases in which NAEP and the state disagreed on their measurement of student progress, the

findings could both be accurate, as the underlying domains of the two tests may not involve the same skills or the same skills in equal weights. Similarly, there may have been a methodological change between 2005 and 2007 in the state tests, in such areas as exclusions, time of administrations, or scaling.

In all three sets of analyses, assessing the relative rigor of state standards, describing changes in relative rigor of standards when states establish new policies or testing systems, and corroborating state progress in student performance, the results of this study show that NAEP, as a common yardstick, is an essential benchmark for states in evaluating their standards.



## REFERENCES

- Braun, H.I., and Qian, J. (2007). *Mapping State Performance Standards Onto the NAEP Scale*. Princeton, NJ: Educational Testing Service.
- Feuer, M.J., Holland, P.W., Green, B.F., Bertenthal, M.W., and Hemphill, F.C. (Eds.). (1999). *Uncommon Measures: Equivalency and Linkage of Educational Tests* (Committee on Equivalency and Linkage of Educational Tests, National Research Council). Washington, DC: The National Academies Press.
- Ho, A., and Haertel, E. (2007). *Apples to Apples: The Underlying Assumptions of State-NAEP Comparisons* (Research brief). Retrieved July 14, 2007, from [http://www.ccsso.org/content/PDFs/Ho Haertel CCSSO Brief2 Final.pdf](http://www.ccsso.org/content/PDFs/Ho_Haertel_CCSSO_Brief2_Final.pdf).
- Koretz, D.M., Bertenthal, M.W., and Green, B.F. (Eds.). (1999). *Embedding Questions: The Pursuit of a Common Measure in Uncommon Tests*, (Committee on Embedding Common Test Items in State and District Assessments, National Research Council). Washington, DC: The National Academies Press.
- McLaughlin, D.H. (2008). *Measurement Error in Comparing NAEP and State Test Gains*. Palo Alto, CA: American Institutes for Research.
- McLaughlin, D., and Bandeira de Mello, V. (2002). *Comparison of State Elementary School Mathematics Achievement Standards, Using NAEP 2000*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.
- McLaughlin, D., and Bandeira de Mello, V. (2003). *Comparing State Reading and Math Performance Standards Using NAEP*. Paper presented at the annual National Conference on Large-Scale Assessment, San Antonio.
- McLaughlin, D., and Bandeira de Mello, V. (2006). *How to Compare NAEP and State Assessment Results*. Paper presented at the annual National Conference on Large-Scale Assessment. Retrieved December 2007, from [http://www.naepreports.org/task 1.1/LSAC\\_20050618.ppt](http://www.naepreports.org/task 1.1/LSAC_20050618.ppt).
- McLaughlin, D.H., Bandeira de Mello, V., Blankenship, C., Chaney, K., Esra, P., Hikawa, H., Rojas, D., William, P., and Wolman, M. (2008a). *Comparison Between NAEP and State Reading Assessment Results: 2003* (NCES 2008-474). National Center for Education Statistics, Institute of Education Sciences, U.S Department of Education. Washington, DC.
- McLaughlin, D.H., Bandeira de Mello, V., Blankenship, C., Chaney, K., Esra, P., Hikawa, H., Rojas, D., William, P., and Wolman, M. (2008b). *Comparison Between NAEP and State Mathematics Assessment Results: 2003* (NCES 2008-475). National Center for Education Statistics, Institute of Education Sciences, U.S Department of Education. Washington, DC.
- U.S. Department of Education, National Center for Education Statistics (2007). *Mapping 2005 State Proficiency Standards Onto the NAEP Scales* (NCES 2007-482). Washington, DC: Author. Retrieved July 14, 2007, from <http://nces.ed.gov/nationsreportcard/pdf/studies/2007482.pdf>.



## **APPENDIX A**

### **NUMBER OF SCHOOLS IN THE NAEP SAMPLE AND THE PERCENTAGE OF SCHOOLS USED IN THE 2007 MAPPING**

Sample sizes and percentages of the 2007 NAEP samples used in comparisons are shown in tables A-1 and A-2 for reading and mathematics, respectively. For each grade, the tables display the number of public schools selected for NAEP in each state, the percentage of these schools included in the analyses in this report, and the percentage of the student population represented by the comparison schools. The percentage of the population represented by NAEP can be less than 100 percent either because of failure to match schools in the two databases or because scores for the school are suppressed on the data source. In general, because the schools missing state assessment scores are generally small schools, the percentages of student populations represented by the school used in the comparisons are generally higher than the percentages of schools.

Table A-1. Number of NAEP schools, percentage of NAEP schools available for comparing state assessment results with NAEP results in grades 4 and 8 reading, and the percentage of the student population in these comparison schools, by state: 2007

State/jurisdiction	Grade 4			Grade 8		
	NAEP schools <sup>1</sup>	Percent of NAEP schools matched	Percent of population represented	NAEP schools <sup>1</sup>	Percent of NAEP schools matched	Percent of population represented
Alabama	110	99.1	99.1	120	100.0	100.0
Alaska	180	99.4	99.9	110	98.2	99.3
Arizona	120	100.0	100.0	130	97.7	99.2
Arkansas	120	96.6	97.6	120	91.1	94.5
California	320	97.8	99.0	310	97.1	99.0
Colorado	120	95.8	99.0	120	93.1	98.5
Connecticut	110	100.0	100.0	100	100.0	100.0
Delaware	100	100.0	100.0	50	97.8	100.0
District of Columbia	†	—	†	†	—	†
Florida	160	97.6	97.2	160	98.7	98.6
Georgia	160	98.7	96.4	120	97.5	95.6
Hawaii	120	99.1	99.1	70	100.0	100.0
Idaho	130	95.5	91.2	110	97.2	99.0
Illinois	180	98.9	99.6	200	98.0	99.3
Indiana	110	100.0	100.0	110	100.0	100.0
Iowa	140	97.8	96.7	130	97.0	96.8
Kansas	140	98.6	99.0	150	97.3	98.0
Kentucky	120	97.4	98.1	110	98.2	98.3
Louisiana	110	97.2	98.4	110	96.4	97.7
Maine	150	93.4	95.4	130	94.7	97.4
Maryland	110	98.2	98.4	110	99.1	97.3
Massachusetts	170	100.0	100.0	140	99.3	99.4
Michigan	120	99.2	98.7	120	96.7	98.3
Minnesota	130	100.0	100.0	140	97.9	98.4
Mississippi	120	97.4	97.1	110	97.4	97.9
Missouri	130	98.4	99.4	130	94.7	95.8
Montana	190	98.9	99.1	170	98.2	99.4
Nebraska	†	—	†	†	—	†
Nevada	110	94.5	94.0	70	93.2	93.3
New Hampshire	130	89.9	92.2	90	96.7	99.2
New Jersey	110	98.2	95.1	110	100.0	100.0
New Mexico	130	95.3	97.9	110	97.3	99.4
New York	150	99.3	99.8	160	98.1	98.5
North Carolina	170	97.6	96.5	150	99.3	99.8
North Dakota	210	80.5	93.3	190	70.3	90.0
Ohio	160	98.1	99.3	190	98.4	99.1
Oklahoma	140	98.5	98.8	150	96.6	96.8
Oregon	140	97.0	98.9	110	96.5	99.0
Pennsylvania	110	99.1	98.5	110	98.2	97.6
Rhode Island	110	100.0	100.0	60	100.0	100.0
South Carolina	110	97.2	98.7	110	97.2	98.5
South Dakota	190	98.4	98.0	140	99.3	99.7
Tennessee	120	100.0	100.0	120	99.2	99.1
Texas	300	98.6	97.9	220	96.4	97.4
Utah	†	—	†	†	—	†
Vermont	190	85.4	93.9	120	86.8	97.5
Virginia	110	97.4	97.1	110	99.1	98.9
Washington	130	99.2	100.0	130	100.0	100.0
West Virginia	150	92.5	89.7	120	91.5	91.1
Wisconsin	130	65.4	71.0	130	74.6	82.1
Wyoming	170	96.5	97.2	80	95.1	96.1

— State assessment data not available.

† Not applicable.

<sup>1</sup> Rounded to the nearest 10 for confidentiality.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED Facts SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table A-2. Number of NAEP schools, percentage of NAEP schools available for comparing state assessment results with NAEP results in grades 4 and 8 mathematics, and percentage of the student population in these comparison schools, by state: 2007

State/jurisdiction	Grade 4			Grade 8		
	NAEP schools <sup>1</sup>	Percent of NAEP schools matched	Percent of population represented	NAEP schools <sup>1</sup>	Percent of NAEP schools matched	Percent of population represented
Alabama	110	99.1	99.1	120	100.0	100.0
Alaska	180	100.0	100.0	110	98.2	99.3
Arizona	120	100.0	100.0	130	97.7	99.1
Arkansas	120	96.6	97.5	130	90.4	94.5
California	330	97.5	98.9	310	95.5	97.8
Colorado	120	95.8	99.1	120	93.1	98.6
Connecticut	110	100.0	100.0	100	100.0	100.0
Delaware	100	100.0	100.0	50	100.0	100.0
District of Columbia	†	—	†	†	—	†
Florida	160	97.6	97.2	160	98.7	98.6
Georgia	160	98.7	96.4	120	97.5	95.4
Hawaii	120	99.1	99.0	70	95.7	99.8
Idaho	130	95.5	91.8	100	98.1	99.1
Illinois	180	98.9	99.5	200	98.0	99.4
Indiana	110	100.0	100.0	110	100.0	100.0
Iowa	140	97.8	96.9	140	96.3	96.9
Kansas	140	98.6	99.0	150	97.3	98.0
Kentucky	120	97.4	98.2	110	98.2	98.7
Louisiana	110	97.2	98.4	110	96.4	97.7
Maine	150	93.4	95.6	130	94.7	97.6
Maryland	110	98.2	98.5	110	99.1	97.2
Massachusetts	170	100.0	100.0	130	99.3	99.2
Michigan	120	99.2	98.8	120	96.7	97.9
Minnesota	130	100.0	100.0	140	98.5	98.2
Mississippi	120	97.4	97.2	110	97.4	97.7
Missouri	130	98.4	99.6	130	94.7	96.2
Montana	190	98.9	99.3	170	98.2	99.4
Nebraska	†	—	†	†	—	†
Nevada	110	94.6	93.6	80	93.3	93.6
New Hampshire	130	89.9	92.1	90	97.8	99.2
New Jersey	110	98.2	95.0	110	100.0	100.0
New Mexico	130	93.8	97.5	110	97.3	99.6
New York	150	99.3	99.8	160	98.1	98.5
North Carolina	170	97.6	96.4	150	99.3	99.7
North Dakota	210	81.3	93.1	180	70.3	89.6
Ohio	160	98.1	99.4	190	98.9	98.8
Oklahoma	140	98.6	98.7	150	96.6	96.8
Oregon	140	97.0	98.9	110	96.5	99.2
Pennsylvania	110	99.1	98.6	110	98.2	97.5
Rhode Island	110	100.0	100.0	60	100.0	100.0
South Carolina	110	97.2	98.3	110	97.2	98.8
South Dakota	190	98.4	98.1	140	99.3	99.7
Tennessee	120	100.0	100.0	120	99.2	99.2
Texas	300	98.6	98.0	220	96.4	97.6
Utah	†	—	†	†	—	†
Vermont	190	85.0	93.7	120	86.8	97.0
Virginia	110	97.4	97.4	110	100.0	100.0
Washington	130	99.2	100.0	130	100.0	100.0
West Virginia	150	92.5	89.5	120	91.5	91.0
Wisconsin	130	65.4	70.7	130	74.6	82.6
Wyoming	170	97.6	97.2	80	96.3	97.1

— State assessment data not available.

† Not applicable.

<sup>1</sup> Rounded to the nearest 10 for confidentiality.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED Facts SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.



## APPENDIX B

### CHANGES IN STATES' ASSESSMENTS BETWEEN 2005 AND 2007

Tables B-1 and B-2 summarize selected changes in states' assessments between the two NAEP administrations of 2005 and 2007. Their source is the 2007 *Survey of State Assessment Program Characteristics*, a survey designed to provide contextual information to document general state assessment program information, mainly from the section covering changes that were made to state assessments between the 2004-05 and 2006-07 school years. States were instructed to indicate whether they had added grades, eliminated grades, changed cut scores, changed the time of year when the test was administered, changed the assessment items significantly, used an entirely new assessment, realigned the assessment to new content standards, changed the proficiency standards, changed the accommodation policy, changed the re-test policy, or changed test contractors. Additionally, states could indicate that there were *no significant changes* to the state assessment between 2004-05 and 2006-07 or, if applicable, to describe any changes in further detail.

States were also asked to indicate whether the following statement was true or false for grades 4 and 8 Reading/Language Arts and Mathematics:

*The reported 2006–07 state assessment results for 4th- and 8th-grade Reading and Mathematics are directly comparable with the 2004–05 reported results.*

Finally, states were asked to indicate whether there were any policy or legislative changes in the administration of the Reading/Language Arts and Mathematics assessments or in the reporting of outcomes between 2004-05 and 2006-07 that would have an impact on the interpretation of school- or state-level results when comparing across years. Table B-3 summarizes these responses.

State profiles tabulating the survey results are available at <http://nces.ed.gov/nationsreportcard/studies/statemapping.asp>.

Table B-1. Selected changes to state reading assessments between the 2004–05 and the 2006–07 administrations, by state

State/jurisdiction	Added grades	Eliminated grades	Changed cut scores	Changed the time of administration	Changed assessment items	Entirely different assessment
Alabama					√	
Alaska	√					
Arizona					√	
Arkansas					√	
California					√	
Colorado						
Connecticut	√		√	√		
Delaware	√		√			
District of Columbia	√		√			√
Florida						
Georgia			√		√	
Hawaii	√		√		√	√
Idaho			√		√	√
Illinois	√				√	√
Indiana						
Iowa	√					
Kansas	√		√		√	√
Kentucky	√		√		√	
Louisiana						√
Maine	√		√	√	√	√
Maryland						
Massachusetts	√			√	√	
Michigan	√		√	√	√	
Minnesota	√					√
Mississippi						
Missouri	√		√			√
Montana	√		√			
Nebraska	√		√		√	
Nevada	√					
New Hampshire	√		√	√	√	√
New Jersey	√					
New Mexico						
New York	√		√			
North Carolina						
North Dakota						
Ohio						
Oklahoma	√					
Oregon	√		√			
Pennsylvania	√		√		√	
Rhode Island						
South Carolina						
South Dakota			√		√	
Tennessee						
Texas						
Utah		√			√	
Vermont	√					
Virginia	√		√			
Washington	√					
West Virginia						√
Wisconsin	√					
Wyoming	√		√	√	√	√

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) 2007 Survey of State Assessment Program Characteristics.



Table B-1. Selected changes to state reading assessments between the 2004–05 and the 2006–07 administrations, by state—Continued

State/jurisdiction	Realigned to new content standards	Changed proficiency standards	Changed accommodation policy	Changed re-test policy	Changed test contractors	No significant changes
Alabama						√
Alaska						
Arizona						
Arkansas			√			
California						
Colorado						√
Connecticut	√				√	
Delaware		√				
District of Columbia	√				√	
Florida					√	
Georgia	√	√			√	
Hawaii	√	√	√		√	
Idaho	√	√			√	
Illinois					√	
Indiana						√
Iowa						
Kansas	√	√				
Kentucky	√	√			√	
Louisiana						
Maine	√	√	√		√	
Maryland						√
Massachusetts						
Michigan	√	√			√	
Minnesota	√	√			√	
Mississippi						√
Missouri		√	√			
Montana						
Nebraska						
Nevada						
New Hampshire	√	√	√			
New Jersey						
New Mexico						√
New York	√	√				
North Carolina						√
North Dakota						√
Ohio						√
Oklahoma						
Oregon		√				
Pennsylvania	√	√			√	
Rhode Island						√
South Carolina						√
South Dakota						
Tennessee						√
Texas						√
Utah	√		√			
Vermont						
Virginia	√	√			√	
Washington						
West Virginia						
Wisconsin						
Wyoming		√	√	√	√	

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) 2007 Survey of State Assessment Program Characteristics.

Table B-2. Selected changes to state mathematics assessments between the 2004–05 and the 2006–07 administrations, by state

State/jurisdiction	Added grades	Eliminated grades	Changed cut scores	Changed the time of administration	Changed assessment items	Entirely different assessment
Alabama					√	
Alaska	√					
Arizona					√	
Arkansas					√	
California					√	
Colorado						
Connecticut	√		√	√		
Delaware	√		√			
District of Columbia	√		√			√
Florida						
Georgia			√		√	
Hawaii	√		√		√	√
Idaho			√		√	√
Illinois	√		√		√	√
Indiana						
Iowa	√					
Kansas	√		√		√	√
Kentucky	√		√		√	
Louisiana						√
Maine	√		√	√	√	√
Maryland						
Massachusetts	√				√	
Michigan	√		√	√	√	
Minnesota	√				√	√
Mississippi						
Missouri	√		√			√
Montana	√		√			
Nebraska	√		√		√	
Nevada	√					
New Hampshire	√		√	√	√	√
New Jersey	√					
New Mexico						
New York	√		√			
North Carolina			√		√	√
North Dakota						
Ohio						√
Oklahoma	√					
Oregon	√		√			
Pennsylvania	√		√		√	
Rhode Island						
South Carolina						
South Dakota			√		√	
Tennessee						
Texas						
Utah		√			√	
Vermont	√					
Virginia	√		√			
Washington	√					
West Virginia						√
Wisconsin	√					
Wyoming	√		√	√	√	√

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) 2007 Survey of State Assessment Program Characteristics.

Table B-2. Selected changes to state mathematics assessments between the 2004–05 and the 2006–07 administrations, by state—Continued

State/jurisdiction	Realigned to new content standards	Changed proficiency standards	Changed accommodation policy	Changed re-test policy	Changed test contractors	No significant changes
Alabama						√
Alaska						
Arizona						
Arkansas			√			
California						
Colorado						√
Connecticut	√				√	
Delaware		√				
District of Columbia	√				√	
Florida					√	
Georgia	√	√			√	
Hawaii	√	√			√	
Idaho	√	√			√	
Illinois					√	
Indiana						√
Iowa						
Kansas	√	√				
Kentucky	√	√			√	
Louisiana						
Maine	√	√	√		√	
Maryland						√
Massachusetts						
Michigan	√	√			√	
Minnesota	√	√			√	
Mississippi						√
Missouri		√				
Montana						
Nebraska						
Nevada						
New Hampshire	√	√	√			
New Jersey						
New Mexico						√
New York	√	√				
North Carolina	√	√				
North Dakota						√
Ohio						
Oklahoma						
Oregon		√				
Pennsylvania	√	√			√	
Rhode Island						√
South Carolina						√
South Dakota	√					
Tennessee						√
Texas						√
Utah				√	√	
Vermont						
Virginia	√	√			√	
Washington						
West Virginia						
Wisconsin						
Wyoming		√	√	√	√	

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) 2007 Survey of State Assessment Program Characteristics.

Table B-3. Comparability of the 2007 state assessment results in reading and mathematics at grades 4 and 8 with the 2005 reported results, by state

State/jurisdiction	Reading		Mathematics	
	Grade 4	Grade 8	Grade 4	Grade 8
Alabama	Yes	Yes	Yes	Yes
Alaska	Yes	Yes	Yes	Yes
Arizona	Yes	Yes	Yes	Yes
Arkansas	Yes	Yes	Yes	Yes
California	Yes	Yes	Yes	Yes
Colorado	Yes	Yes	Yes	Yes
Connecticut	No	No	No	No
Delaware	No	No	No	No
District of Columbia	No	No	No	No
Florida	Yes	Yes	Yes	Yes
Georgia	No	No	Yes	Yes
Hawaii	No	No	No	No
Idaho	No	No	No	No
Illinois	No	Yes	No	No
Indiana	Yes	Yes	Yes	Yes
Iowa	Yes	Yes	Yes	Yes
Kansas	No	No	No	No
Kentucky	No	No	No	No
Louisiana	Yes	Yes	Yes	Yes
Maine	No	No	No	No
Maryland	Yes	Yes	Yes	Yes
Massachusetts	Yes	No	Yes	No
Michigan	No	No	No	No
Minnesota	No	No	No	No
Mississippi	Yes	Yes	Yes	Yes
Missouri	No	No	No	No
Montana	No	No	No	No
Nebraska	No	No	No	No
Nevada	No	Yes	No	Yes
New Hampshire	No	No	No	No
New Jersey	Yes	Yes	Yes	Yes
New Mexico	Yes	Yes	Yes	Yes
New York	No	No	No	No
North Carolina	Yes	Yes	No	No
North Dakota	Yes	Yes	Yes	Yes
Ohio	Yes	Yes	No	Yes
Oklahoma	No	No	No	No
Oregon	No	No	No	No
Pennsylvania	No	Yes	No	Yes
Rhode Island	Yes	Yes	Yes	Yes
South Carolina	Yes	Yes	Yes	Yes
South Dakota	Yes	Yes	Yes	Yes
Tennessee	Yes	Yes	Yes	Yes
Texas	Yes	Yes	Yes	Yes
Utah	Yes	No	Yes	Yes
Vermont	Yes	Yes	Yes	Yes
Virginia	No	No	No	No
Washington	Yes	No	Yes	No
West Virginia	No	No	No	No
Wisconsin	Yes	Yes	Yes	Yes
Wyoming	No	No	No	No

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) 2007 Survey of State Assessment Program Characteristics.

## **APPENDIX C**

### **SUPPLEMENTARY TABLES**

Tables C-1 through C-4 are equivalent to tables 19 through 22, respectively, but with the additional results for states with changes in their state assessments between 2005 and 2007.

Tables C-5 and C-6, for reading and mathematics, respectively, list the number of states according to the statistical significance of the difference  $D$  and by whether changes in the state's own assessments between 2005 and 2007 were deemed to affect the direct comparability of the 2005 and the 2007 reported results.

For the states with both years of data that are comparable according to state assessment staff, tables C-7 through C-10 list selected changes to state assessments between 2005 and 2007, by whether reports of achievement changes from 2005 to 2007 in the state test and NAEP agree.

Table C-1. NAEP and state assessment percentages meeting the state grade 4 reading proficient standards in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
<b>2005 and 2007 state assessment reported results are comparable</b>					
Alabama	82.4	88.8	85.3	-3.5 *	0.86
Alaska	79.2	81.0	80.4	-0.6	0.77
Arkansas	53.5	53.2	57.9	4.6 *	1.05
California	47.8	51.0	50.7	-0.3	0.73
Colorado	86.0	86.0	85.7	-0.3	0.78
Florida	70.8	76.2	69.5	-6.7 *	0.75
Indiana	72.3	76.6	76.1	-0.4	0.97
Iowa	77.3	82.9	81.5	-1.3	1.29
Louisiana	65.4	62.7	67.1	4.4 *	1.63
Maryland	82.0	86.4	86.9	0.5	1.00
Massachusetts	48.3	53.4	56.3	2.8	1.46
Mississippi	88.1	91.2	90.1	-1.2	0.65
New Jersey	81.0	88.2	81.7	-6.5 *	0.92
New Mexico	50.3	57.6	55.7	-1.9	1.31
North Carolina	82.4	84.5	85.0	0.5	0.74
North Dakota	76.5	79.6	81.8	2.2 *	1.12
Ohio	76.6	81.4	81.6	0.2	1.13
South Carolina	34.7	36.2	42.4	6.2 *	1.21
Tennessee	87.9	89.8	87.6	-2.2 *	0.79
Texas	80.6	81.6	83.5	1.9 *	0.81
Washington	79.6	79.4	75.1	-4.3 *	1.11
Wisconsin	82.8	83.3	79.5	-3.8 *	0.95
<b>2005 and 2007 state assessment reported results are not comparable</b>					
Connecticut	66.4	69.1	68.4	-0.6	1.06
Georgia	86.5	91.2	85.2	-6.0 *	0.68
Hawaii	56.4	62.3	54.6	-7.6 *	1.14
Idaho	86.9	88.0	80.4	-7.6 *	0.77
Kentucky	67.0	70.1	71.7	1.6	1.29
Maine	52.8	54.4	67.1	12.7 *	1.13
Michigan	83.4	85.3	87.4	2.0 *	0.98
Montana	80.6	83.9	79.9	-4.0 *	0.90
New York	70.5	70.8	68.4	-2.4 *	1.14
Oklahoma	82.2	86.3	90.9	4.6 *	0.97
West Virginia	80.4	80.8	83.2	2.4 *	0.97
Wyoming	46.9	49.7	76.9	27.1 *	0.91

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, EDFacts SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-2. NAEP and state assessment percentages meeting the state grade 8 reading proficient standards in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
<b>2005 and 2007 state assessment reported results are comparable</b>					
Alabama	69.3	69.1	71.4	2.3 *	1.07
Alaska	81.8	81.3	79.3	-2.0 *	0.93
Arizona	63.2	63.6	62.8	-0.9	1.06
Arkansas	57.6	58.0	63.8	5.8 *	1.22
California	39.2	41.1	41.9	0.8	0.82
Colorado	85.9	87.9	87.0	-0.9	0.87
Florida	43.5	46.9	50.7	3.7 *	0.78
Illinois	72.5	73.0	80.8	7.8 *	1.22
Indiana	66.3	70.0	68.5	-1.5	0.96
Iowa	72.3	74.1	72.8	-1.3	1.17
Louisiana	54.0	55.0	60.5	5.5 *	1.40
Maryland	67.7	74.4	69.3	-5.1 *	1.17
Mississippi	57.3	56.2	50.5	-5.7 *	1.14
Nevada	52.7	52.1	57.6	5.5 *	0.98
New Jersey	73.8	75.7	74.0	-1.7	1.13
New Mexico	51.9	53.6	56.0	2.4 *	1.17
North Carolina	87.6	88.1	87.9	-0.2	0.76
North Dakota	72.2	71.4	76.5	5.2 *	1.46
Ohio	80.1	81.4	82.2	0.8	0.89
Pennsylvania	64.3	65.5	77.2	11.7 *	1.31
South Carolina	30.3	30.0	24.7	-5.3 *	1.19
Tennessee	87.4	88.0	92.5	4.4 *	0.81
Texas	83.4	86.5	87.8	1.3	0.68
Wisconsin	85.8	84.8	82.7	-2.1 *	0.90
<b>2005 and 2007 state assessment reported results are not comparable</b>					
Connecticut	76.7	77.4	75.3	-2.1 *	0.99
Delaware	80.5	78.2	80.0	1.8 *	0.78
Georgia	82.6	85.5	89.8	4.3 *	0.94
Hawaii	37.3	41.0	60.4	19.4 *	1.09
Idaho	82.0	84.6	86.1	1.5 *	0.73
Kansas	78.0	81.2	82.1	0.9	0.93
Maine	44.1	44.7	64.4	19.7 *	1.73
Montana	72.2	76.7	79.2	2.6 *	1.01
New York	48.6	47.8	57.4	9.6 *	1.08
Oklahoma	71.2	71.3	81.4	10.1 *	1.09
Oregon	63.7	67.6	70.5	2.9 *	1.19
Virginia	78.2	78.4	82.0	3.6 *	1.22
West Virginia	79.8	80.4	80.4	0.0	1.28
Wyoming	39.0	37.7	72.8	35.1 *	1.11

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-3. NAEP and state assessment percentages meeting the state grade 4 mathematics proficient standards in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
<b>2005 and 2007 state assessment reported results are comparable</b>					
Alabama	74.0	77.3	78.7	1.4	1.29
Alaska	70.7	71.3	76.7	5.3 *	1.20
Arkansas	52.9	55.3	64.8	9.5 *	1.09
California	51.4	51.2	57.3	6.1 *	0.76
Colorado	89.7	90.1	90.1	0.0	0.67
Florida	63.1	68.9	69.7	0.8	1.09
Georgia	74.5	77.4	78.9	1.5	0.95
Indiana	72.3	79.9	77.0	-2.9 *	1.13
Iowa	79.5	82.6	82.2	-0.4	1.04
Louisiana	62.6	61.7	61.3	-0.4	1.48
Maryland	78.1	79.5	86.3	6.9 *	1.28
Massachusetts	38.5	47.0	48.6	1.5	1.78
Mississippi	78.8	79.3	81.0	1.8	1.06
New Jersey	80.7	84.5	85.3	0.8	0.98
New Mexico	38.6	46.7	46.1	-0.5	1.07
North Dakota	80.1	82.3	80.4	-1.9 *	0.85
South Carolina	38.9	39.8	41.7	1.9	1.07
Tennessee	86.8	88.3	89.2	0.9	0.82
Texas	81.7	82.5	84.9	2.3 *	0.88
Washington	60.5	62.9	56.9	-5.9 *	1.14
Wisconsin	74.1	75.6	76.1	0.5	1.33
<b>2005 and 2007 state assessment reported results are not comparable</b>					
Connecticut	78.2	78.5	79.2	0.6	0.89
Hawaii	29.6	36.2	48.9	12.7 *	0.92
Idaho	90.6	89.2	82.2	-7.0 *	0.76
Kansas	85.3	86.8	86.2	-0.6	1.08
Maine	39.8	42.3	61.2	19.0 *	1.18
Michigan	73.0	72.6	87.3	14.7 *	1.24
Missouri	40.9	48.2	44.3	-3.8 *	1.49
Montana	79.8	82.3	67.8	-14.5 *	1.07
New York	86.6	89.1	80.9	-8.2 *	0.72
North Carolina	91.5	92.0	66.5	-25.4 *	0.84
Ohio	65.2	69.2	78.2	9.1 *	1.44
Oklahoma	73.7	78.1	83.2	5.1 *	1.33
West Virginia	74.7	80.8	78.4	-2.4 *	1.14
Wyoming	39.2	41.0	87.0	46.0 *	0.92

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED*Facts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.



Table C-4. NAEP and state assessment percentages meeting the state grade 8 mathematics proficient standards in 2007 based on 2005 standards, by state

State/jurisdiction	State percent at the standard in 2005 <sup>1</sup>	NAEP percent at the 2005 standard in 2007	State percent at the standard in 2007	Difference D	Standard error of D
<b>2005 and 2007 state assessment reported results are comparable</b>					
Alaska	65.1	67.2	70.0	2.9 *	1.12
Arizona	60.5	63.1	60.2	-2.9 *	1.12
Arkansas	33.7	36.3	48.4	12.1 *	1.34
Colorado	74.1	78.7	77.6	-1.0	0.94
Florida	58.2	60.8	64.1	3.4 *	0.92
Georgia	68.7	71.9	82.5	10.6 *	1.35
Indiana	70.2	72.2	71.5	-0.7	1.23
Iowa	75.6	77.6	75.6	-2.0	1.09
Louisiana	56.3	62.3	58.7	-3.6 *	1.37
Maryland	53.0	60.4	58.4	-2.0	1.22
Mississippi	52.5	54.4	53.6	-0.8	1.13
Nevada	51.1	49.6	53.8	4.1 *	0.89
New Jersey	63.9	67.8	68.5	0.7	1.10
New Mexico	23.6	28.5	29.7	1.2	0.92
North Dakota	65.5	70.6	68.0	-2.6 *	1.28
Ohio	62.7	65.0	74.0	9.0 *	1.22
Pennsylvania	62.4	68.9	69.7	0.8	1.16
South Carolina	23.8	25.7	19.9	-5.7 *	1.18
Tennessee	87.8	90.8	88.5	-2.3 *	0.91
Texas	60.9	67.4	71.9	4.5 *	0.99
Wisconsin	74.9	75.4	74.4	-1.0	1.16
<b>2005 and 2007 state assessment reported results are not comparable</b>					
Connecticut	75.9	77.3	80.6	3.3 *	0.99
Delaware	56.3	58.8	62.9	4.1 *	1.29
Hawaii	20.4	23.8	25.7	1.9 *	0.79
Idaho	69.8	71.4	72.2	0.8	0.97
Illinois	54.2	56.1	80.4	24.3 *	1.10
Kentucky	37.1	42.6	49.9	7.3 *	1.21
Maine	29.0	33.6	50.6	17.0 *	0.98
Massachusetts	41.6	49.1	47.1	-2.0	1.18
Michigan	61.4	60.7	68.6	8.0 *	1.29
Missouri	15.3	18.8	43.0	24.3 *	1.27
Montana	71.3	71.6	59.7	-11.9 *	1.18
New York	56.2	56.9	59.4	2.5 *	1.27
North Carolina	83.9	85.3	65.9	-19.3 *	0.98
Oklahoma	67.5	71.0	79.8	8.8 *	1.29
Oregon	65.3	66.5	73.2	6.7 *	1.26
Virginia	82.8	84.3	79.7	-4.6 *	1.08
West Virginia	70.6	71.9	71.6	-0.3	1.04
Wyoming	36.8	44.5	62.1	17.6 *	1.59

\* Difference is statistically significant at  $p < .05$ .

<sup>1</sup> This matches the NAEP percentage meeting 2005 standard in 2005, by definition.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED*Facts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-5. Number of states according to the comparability of state-reported results between 2005 and 2007, by the statistical significance of the discrepancy between NAEP and state measures of gains in grades 4 and 8 reading

Difference D	Grade 4 2005 and 2007 state assessment reported results		Grade 8 2005 and 2007 state assessment reported results	
	Comparable	Not comparable	Comparable	Not comparable
Not statistically significant	11	2	9	2
Statistically significant	11	10	15	12
Total	22	12	24	14

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED Facts SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-6. Number of states according to the comparability of state-reported results between 2005 and 2007, by the statistical significance of the discrepancy between NAEP and state measures of gains in grades 4 and 8 mathematics

Difference D	Grade 4 2005 and 2007 state assessment reported results		Grade 8 2005 and 2007 state assessment reported results	
	Comparable	Not comparable	Comparable	Not comparable
Not statistically significant	13	2	9	3
Statistically significant	8	12	12	15
Total	21	14	21	18

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, ED Facts SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-7. Selected changes to state reading assessments between 2005 and 2007, by whether reports of grade 4 reading achievement changes from 2005 to 2007 in the state test and NAEP agree, by state

State/jurisdiction	Changed cut scores	Changed time of administration	Changed assessment items	Used different assessment	Changed content standards	Changed proficiency standards	Changed accommodation policy	Changed test contractors	No significant changes
Changes in student achievement on the state test are not statistically significantly different from changes on NAEP									
Alaska									
California			√						
Colorado									√
Indiana									√
Iowa									
Maryland									√
Massachusetts		√	√						
Mississippi									√
New Mexico									
North Carolina	√				√	√			
Ohio									√
Changes in student achievement on the state test are statistically significantly larger than changes on NAEP									
Arkansas			√				√		
Louisiana				√					
North Dakota									√
South Carolina	√		√		√	√		√	
Texas	√		√						
Changes in student achievement on the state test are statistically significantly smaller than changes on NAEP									
Alabama			√						√
Florida								√	
New Jersey	√	√	√	√	√	√	√		
Tennessee									√
Washington									
Wisconsin									

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, EDFacts SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-8. Selected changes to state reading assessments between 2005 and 2007, by whether reports of grade 8 reading achievement changes from 2005 to 2007 in the state test and NAEP agree, by state

State/jurisdiction	Changed cut scores	Changed time of administration	Changed assessment items	Used different assessment	Changed content standards	Changed proficiency standards	Changed accommodation policy	Changed test contractors	No significant changes
Changes in student achievement on the state test are not statistically significantly different from changes on NAEP									
Arizona			√						
California			√						
Colorado									√
Indiana									√
Iowa									
New Jersey									
North Carolina									√
Ohio									√
Texas									√
Changes in student achievement on the state test are statistically significantly larger than changes on NAEP									
Alabama			√						√
Arkansas			√				√		
Florida								√	
Illinois			√	√				√	
Louisiana				√					
Nevada									
New Mexico									√
North Dakota									√
Pennsylvania	√		√		√	√		√	
Tennessee									√
Changes in student achievement on the state test are statistically significantly smaller than changes on NAEP									
Alaska									
Maryland									√
Mississippi									√
South Carolina									√
Wisconsin									

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Reading Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-9. Selected changes to state mathematics assessments between 2005 and 2007, by whether reports of grade 4 mathematics achievement changes from 2005 to 2007 in the state test and NAEP agree, by state

State/jurisdiction	Changed cut scores	Changed time of administration	Changed assessment items	Used different assessment	Changed content standards	Changed proficiency standards	Changed accommodation policy	Changed test contractors	No significant changes
Changes in student achievement on the state test are not statistically significantly different from changes on NAEP									
Alabama			√						√
Colorado									√
Florida								√	
Georgia	√		√		√	√		√	
Iowa									
Louisiana				√					
Massachusetts			√						
Mississippi									√
New Jersey									
New Mexico									√
South Carolina									√
Tennessee									√
Wisconsin									
Changes in student achievement on the state test are statistically significantly larger than changes on NAEP									
Alaska									
Arkansas			√				√		
California			√						
Maryland									√
Texas									√
Changes in student achievement on the state test are statistically significantly smaller than changes on NAEP									
Indiana									√
North Dakota									√
Washington									

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.

Table C-10. Selected changes to state mathematics assessments between 2005 and 2007, by whether reports of grade 8 mathematics achievement changes from 2005 to 2007 in the state test and NAEP agree, by state

State/jurisdiction	Changed cut scores	Changed time of administration	Changed assessment items	Used different assessment	Changed content standards	Changed proficiency standards	Changed accommodation policy	Changed test contractors	No significant changes
Changes in student achievement on the state test are not statistically significantly different from changes on NAEP									
Colorado									√
Indiana									√
Iowa									
Maryland									√
Mississippi									√
New Jersey									
New Mexico									√
Pennsylvania	√		√		√	√		√	
Wisconsin									
Changes in student achievement on the state test are statistically significantly larger than changes on NAEP									
Alaska									
Arkansas			√				√		
Florida								√	
Georgia	√		√		√	√		√	
Nevada									
Ohio				√					
Texas									√
Changes in student achievement on the state test are statistically significantly smaller than changes on NAEP									
Arizona			√						
Louisiana				√					
North Dakota									√
South Carolina									√
Tennessee									√

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 and 2007 Mathematics Assessments. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, *EDFacts* SY 2006-07, Washington, DC, 2008. The National Longitudinal School-Level State Assessment Score Database (NLSLSASD) 2008.



[www.ed.gov](http://www.ed.gov)



[ies.ed.gov](http://ies.ed.gov)