Subgroup Achievement and Gap Trends — California

K-12 enrollment — 6,275,469

The raw data used to develop these state profiles, including data for additional grade levels and years before 2002, can be found on the CEP Web site at www.cep-dc.org. Click on the link on the left for State Testing Data. Below the name of the report, click on the link for View State Profiles and Worksheets. Scroll down the page, and click on the Worksheet links for any state.

Subgroup Achievement Trends and Gap Trends — Key Findings

Summary

This year the Center on Education Policy analyzed data on the achievement of different groups of students in two distinct ways. First, we looked at grade 4 test results to determine whether the performance of various groups improved at three achievement levels—basic and above, proficient and above, and advanced. Second, we looked at gaps between these groups at the proficient level across three grades (grade 4, grade 8 in most cases, and a high school grade). These two types of analyses show whether elementary school achievement has generally gone up for different groups of students and whether achievement gaps at different grade levels have narrowed, widened, or stayed the same.

Overall, there were clear upward trends in test scores in California. Achievement gaps are narrowing according to the percentage proficient measure; the picture is mixed on gaps using the mean scale score measure.

Subgroup trends by achievement level at grade 4

- Main trend: Almost all subgroups made gains in reading and math at all three achievement levels—basic-and-above, proficient-and-above, and advanced. Depending on the subgroup, gains were usually largest at the proficient or advanced levels.

Gap trends at three grade levels

- Contradicting trends using two different measures: In most instances, gaps in the percentages of students scoring at the proficient level narrowed between African American, Latino, or Native American students and white students, and between low-income and non-low-income students, at grades 4 and 8 and at the high school grade tested. Specifically, 9 of the 12 trend lines analyzed in reading showed evidence of gaps narrowing, as did 10 of 12 trend lines in math. But according to mean scale scores (the second achievement measure used for this study), gaps widened more often than they narrowed--only 5 of 12 trend lines in reading showed average test score gaps narrowing. In math, the mean score findings were similar to the percentage proficient findings.

Data notes

- Subgroups analyzed: Trends were analyzed for white, African American, Latino, Asian American, Native American, and low-income students. Trends for students with disabilities, English language learners, and male and female students have not been summarized because they will be discussed in separate reports.

- Grades analyzed: Analyses of subgroup trends by three achievement levels are limited to one elementary grade because of the massive amounts of data involved and because this is the pilot year of a process that CEP hopes to extend to the middle and high school levels in future years. Analyses of achievement gap trends cover three grade levels: grade 4, grade 8, and the high school grade tested for NCLB.

Data Limitations

Years of comparable percentage proficient data	2004 through 2008
Years of comparable mean scale score data	2004 through 2008
Disaggregated data for all subgroups and comparison groups	Mean scale score data not available at some grade levels for comparison groups of students who are *not* low-income, *not* disabled, or *not* English language learners (ELLs), so these subgroups are compared with all tested students in the state Percentage proficient data not available for students who are *not* low-income until 2006 Percentage proficient data for students who are *not* English language learners (ELLs) not available until 2008, so the subgroup of ELLs is compared with all tested students in the state
Numbers of test-takers by subgroup	Numbers of test-takers for students who are disabled are not available for math until 2007

Test Characteristics

The characteristics highlighted below are for the state reading and mathematics tests used for accountability under the No Child Left Behind Act (NCLB).

Test(s) used for NCLB accountability	California Standards Tests (CSTs): California English-Language Arts Standard Test, grades 2-8, including writing assessment at grades 4 and 7 California Mathematics Standard Test, grades 2-7 Grade 8 course-specific tests: General Mathematics, Algebra I, Geometry, Algebra II, and Integrated Mathematics 1, 2, or 3

	California Alternate Performance Assessment (CAPA) California High School Exit Examination (CAHSEE)
Grades tested for NCLB accountability	CST grades 2-8, CAHSEE grade 10
State labels for achievement levels	CA uses five achievement levels: Far Below Basic, Below Basic, Basic, Proficient, and Advanced. For our analyses we treated Below Basic + Basic as Basic, Proficient as Proficient, and Advanced as Advanced.
High school NCLB test also used as an exit exam?	Yes
First year test used	2004
Time of test administration	Spring
Major changes in testing system (2002–present)	2003: CST revised to target *only* CA content standards 2006: New science tests added for grades 8 and 10 2008: CSTs: ELA tested 2-11; Math tested 2-9; Science tested 5, 8, 10; History-Social Science tested 8 and 11
Comments	Although we use Algebra I end-of-course tests for eighth-grade math achievement (per the state recommendation), students may take various math tests at eighth grade. Approximately half of students are included in the Algebra I testing. CEP's 2008 report on achievement included trends for elementary and middle school beginning in 2003 and for high school beginning in 2004, however, the state has since indicated that 2004 is the most appropriate year for all tested grade levels. For that reason, all trends displayed below begin with 2004.

Achievement by Subgroup — Trends at the Elementary Level

Note: The tables in this profile of subgroup achievement and gap trends begin with table 7. Tables 1 through 6 can be found in the companion state profile of general achievement trends.

Table CA-7. Percentages of Grade 4 Students by Racial or Ethnic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Reading

Subgroup	Reporting Year							Average Yearly Percentage Point Gain[1]
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced			16%	20%	24%	25%	28%	3.0
Proficient and Above			39%	47%	49%	51%	55%	4.0
Basic and Above			91%	91%	90%	92%	95%	1.0
White								
Advanced			29%	35%	40%	42%	46%	4.3
Proficient and Above			59%	68%	69%	71%	74%	3.8
Basic and Above			95%	97%	95%	97%	98%	0.8
African American								
Advanced			8%	11%	14%	15%	17%	2.3
Proficient and Above			27%	35%	37%	39%	43%	4.0
Basic and Above			86%	87%	87%	90%	92%	1.5
Latino								
Advanced			7%	9%	12%	13%	15%	2.0
Proficient and Above			25%	32%	35%	37%	41%	4.0
Basic and Above			87%	88%	86%	90%	93%	1.5
Asian								
Advanced			35%	41%	48%	49%	53%	4.5
Proficient and Above			63%	70%	73%	73%	78%	3.8
Basic and Above			96%	96%	96%	96%	99%	0.8
Native American								
Advanced			12%	16%	18%	20%	21%	2.3
Proficient and Above			35%	43%	45%	47%	48%	3.3
Basic and Above			90%	92%	89%	91%	93%	0.8

Table reads: The percentage of white 4th graders who scored at the advanced level on the state reading test increased from 29% in 2004 to 46% in 2008. During this period, the average yearly gain in the percentage advanced in reading for white 4th graders was 4.3 percentage points per year.

[1]Averages are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table CA-8. Percentage of Grade 4 Students by Demographic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Reading

Subgroup	Reporting Year							Average Yearly Percentage Point Gain[1]
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced			16%	20%	24%	25%	28%	3.0
Proficient and Above			39%	47%	49%	51%	55%	4.0
Basic and Above			91%	91%	90%	92%	95%	1.0
Low-income students								
Advanced			7%	9%	12%	12%	15%	2.0
Proficient and Above			25%	32%	35%	36%	41%	4.0
Basic and Above			87%	87%	86%	89%	93%	1.5
Students with disabilities[3]								
Advanced			6%	7%	9%	9%	13%	2.0
Proficient and Above			16%	19%	20%	21%	30%	5.0
Basic and Above			66%	67%	62%	69%	81%	9.5
English language learners[3]								
Advanced			3%	3%	6%	5%	6%	0.0
Proficient and Above			15%	19%	24%	24%	26%	1.0
Basic and Above			84%	84%	83%	85%	89%	3.0
Female								
Advanced			19%	23%	27%	28%	31%	3.0
Proficient and Above			43%	51%	54%	55%	59%	4.0
Basic and Above			93%	93%	94%	95%	97%	1.0
Male								
Advanced			15%	18%	22%	23%	26%	2.8
Proficient and Above			36%	44%	46%	48%	52%	4.0
Basic and Above			89%	89%	89%	91%	94%	1.3

Table reads: The percentage of low-income 4th graders who scored at the advanced level on the state reading test increased from 7% in 2004 to 15% in 2008. During this period, the average yearly gain in the percentage advanced in reading for low-income 4th graders was 2.0 percentage points per year.

[1]Averages are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

[3]Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2008 results.

Table CA-9. Percentages of Grade 4 Students by Racial or Ethnic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Mathematics

Subgroup	Reporting Year							Average Yearly Percentage Point Gain[1]
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced			18%	26%	29%	30%	32%	3.5
Proficient and Above			45%	50%	54%	56%	61%	4.0
Basic and Above			97%	94%	96%	95%	98%	0.3
White								
Advanced			28%	38%	40%	41%	44%	4.0
Proficient and Above			61%	65%	68%	70%	74%	3.3
Basic and Above			99%	97%	97%	99%	99%	0.0
African American								
Advanced			8%	14%	16%	18%	19%	2.8
Proficient and Above			28%	34%	38%	41%	46%	4.5
Basic and Above			94%	91%	92%	93%	96%	0.5
Latino								
Advanced			10%	16%	18%	20%	23%	3.3
Proficient and Above			33%	38%	43%	46%	52%	4.8
Basic and Above			96%	93%	94%	95%	98%	0.5
Asian								
Advanced			44%	54%	59%	60%	63%	4.8
Proficient and Above			74%	78%	81%	83%	86%	3.0
Basic and Above			99%	98%	98%	99%	100%	0.3
Native American								
Advanced			12%	19%	20%	22%	22%	2.5
Proficient and Above			38%	43%	45%	48%	50%	3.0
Basic and Above			96%	93%	94%	96%	97%	0.3

Table reads: The percentage of white 4th graders who scored at the advanced level on the state math test increased from 28% in 2004 to 44% in 2008. During this period, the average yearly gain in the percentage advanced in math for white 4th graders was 4.0 percentage points per year.

[1]Averages are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table CA-10. Percentage of Grade 4 Students by Demographic Subgroup Scoring at the Advanced, Proficient and Above, and Basic and Above Levels in Mathematics

Subgroup	Reporting Year							Average Yearly Percentage Point Gain[1]
	2002	2003	2004	2005	2006	2007	2008	
All tested students								
Advanced			18%	26%	29%	30%	32%	3.5
Proficient and Above			45%	50%	54%	56%	61%	4.0
Basic and Above			97%	94%	96%	95%	98%	0.3
Low-income students								
Advanced			10%	16%	18%	20%	22%	3.0
Proficient and Above			32%	38%	42%	45%	51%	4.8
Basic and Above			95%	93%	94%	94%	97%	0.5
Students with disabilities[3]								
Advanced			7%	10%	11%	12%	16%	2.5
Proficient and Above			20%	22%	25%	27%	36%	5.5
Basic and Above			86%	76%	81%	84%	90%	4.5
English language learners[3]								
Advanced			7%	12%	14%	15%	16%	1.0
Proficient and Above			26%	32%	36%	39%	43%	3.5
Basic and Above			94%	93%	93%	94%	96%	1.5
Female								
Advanced			18%	26%	29%	30%	32%	3.5
Proficient and Above			45%	51%	55%	58%	62%	4.3
Basic and Above			97%	96%	97%	98%	99%	0.5
Male								
Advanced			19%	27%	29%	31%	33%	3.5
Proficient and Above			45%	50%	54%	56%	61%	4.0
Basic and Above			97%	94%	95%	95%	97%	0.0

Table reads: The percentage of low-income 4th graders who scored at the advanced level on the state math test increased from 10% in 2004 to 22% in 2008. During this period, the average yearly gain in the percentage advanced in math for low-income 4th graders was 3.0 percentage points per year.

[1]Averages are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

[3]Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups. Average yearly percentage point gains are based on 2006-2008 results.

Achievement by Subgroup — Gap Trends (Percentages Proficient)

Table CA-11. Subgroup Achievement Trends in Reading by Percentages Proficient

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.
If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

	Grade 4					Grade 8					Grade 10				
Subgroup	Year Span	Starting PP	Ending PP	Average Annual Gain[1]	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain[1]	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain[1]	Gain Larger or Smaller Than Comparison Group
All tested students	04-08	39%	55%	4.0		04-08	33%	45%	3.0		04-08	49%	52%	0.8	
White	04-08	59%	74%	3.8		04-08	51%	63%	3.0		04-08	68%	71%	0.8	
African American	04-08	27%	43%	4.0	L	04-08	19%	32%	3.3	L	04-08	32%	37%	1.3	L
Latino	04-08	25%	41%	4.0	L	04-08	18%	31%	3.3	L	04-08	31%	37%	1.6	L
Asian	04-08	63%	78%	3.8	E	04-08	53%	69%	4.0	L	04-08	64%	70%	1.5	L
Native American	04-08	35%	48%	3.3	S	04-08	27%	39%	3.0	E	04-08	44%	50%	1.5	L
Not low-income	06-08	70%	74%	2.0		06-08	58%	63%	2.5		04-08	62%	64%	0.5	
Low-income	06-08	35%	41%	3.0	L	06-08	25%	30%	2.5	E	04-08	29%	36%	1.8	L
Not disabled	06-08	53%	57%	2.0		06-08	45%	49%	2.0		06-08	54%	56%	0.9	
Students with disabilities[3]	06-08	20%	30%	5.0	L	06-08	9%	11%	1.0	S	06-08	11%	12%	0.5	S
All tested students	06-08	49%	55%	4.0		06-08	41%	45%	3.0		06-08	50%	52%	0.8	
English language learners[3]	06-08	24%	26%	1.0	S	06-08	6%	8%	1.0	S	06-08	9%	9%	0.1	S
Female	04-08	43%	59%	4.0		04-08	37%	50%	3.3		04-08	54%	57%	0.8	
Male	04-08	36%	52%	4.0	E	04-08	29%	41%	3.0	S	04-08	44%	48%	0.9	L

Table reads: In 2004, 59% of white 4th graders and 27% of African American 4th graders scored at the proficient level on the state reading test. In 2008, 74% of white 4th graders and 43% of African American 4th graders scored at the proficient level in reading. Between 2004 and 2008, the percentage proficient improved at

an average rate of 3.8 percentage point per year for white students and 4.0 percentage points per year for African American students, indicating a larger rate of gain and a narrowing of the achievement gap for African American 4th graders.

[1]Numbers in these columns are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

[3]Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table CA-12. Subgroup Achievement Trends in Mathematics by Percentages Proficient

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.
If the average annual gain for the subgroup of interest, such as African American students, is larger than the average annual gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

	Grade 4					Grade 8					Grade 10				
Subgroup	Year Span	Starting PP	Ending PP	Average Annual Gain[1]	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain[1]	Gain Larger or Smaller Than Comparison Group	Year Span	Starting PP	Ending PP	Average Annual Gain[1]	Gain Larger or Smaller Than Comparison Group
All tested students	04-08	45%	61%	4.0		04-08	35%	42%	1.8		04-08	45%	52%	1.7	
White	04-08	61%	74%	3.3		04-08	47%	54%	1.8		04-08	62%	68%	1.4	
African American	04-08	28%	46%	4.5	L	04-08	14%	24%	2.5	L	04-08	23%	31%	1.9	L
Latino	04-08	33%	52%	4.8	L	04-08	17%	29%	3.0	L	04-08	27%	37%	2.6	L
Asian	04-08	74%	86%	3.0	S	04-08	64%	72%	2.0	L	04-08	71%	82%	2.6	L
Native American	04-08	38%	50%	3.0	S	04-08	26%	30%	1.0	S	04-08	39%	46%	1.7	L
Not low-income	06-08	71%	76%	2.5		06-08	53%	54%	0.5		04-08	57%	62%	1.1	
Low-income	06-08	42%	51%	4.5	L	06-08	26%	30%	2.0	L	04-08	28%	38%	2.6	L
Not disabled	06-08	58%	64%	3.0		06-08	42%	43%	0.5		06-08	50%	55%	2.6	
Students with disabilities[3]	06-08	25%	36%	5.5	L	06-08	13%	16%	1.5	L	06-08	11%	13%	0.9	S
All tested students	06-08	54%	61%	4.0		06-08	40%	42%	1.8		06-08	47%	52%	1.7	
English language learners[3]	06-08	36%	43%	3.5	S	06-08	13%	15%	1.0	S	06-08	16%	19%	1.4	S
Female	04-08	45%	62%	4.3		04-08	34%	42%	2.0		04-08	44%	51%	1.7	
Male	04-08	45%	61%	4.0	S	04-08	35%	42%	1.8	S	04-08	46%	53%	1.7	S

Table reads: In 2004, 61% of white 4th graders and 28% of African American 4th graders scored at the proficient level on the state math test. In 2008, 74% of white 4th graders and 46% of African American 4th graders scored at the proficient level in math. Between 2004 and 2008, the percentage proficient improved at an average rate of 3.3 percentage point per year for white students and 4.5 percentage points per year for African American students, indicating a larger rate of gain and a narrowing of the achievement gap for African American 4th graders.

[1]Numbers in these columns are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

[3]Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Achievement by Subgroup — Gap Trends (Mean Scale Scores)

Table CA-13. Achievement Gap Trends in Reading by Mean Scale Scores

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.
If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

		Grade 4					Grade 8					Grade 10				
Subgroup	Statistic	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group
All tested students	Mean SS	04-08	338.5	357.7	4.8		04-08	328.1	341.2	3.3		04-08	376	379.7	0.9	
	SD	04-08	52	55.8			04-08	52	58.1			04-08	39	37.5		
White	Mean SS	04-08	362.3	382.5	5.0		04-08	349.5	364.7	3.8		04-08	393	395.6	0.7	
	SD	04-08	51	53.8			04-08	50	56.4			04-08	NA	34.2		
African American	Mean SS	04-08	323.6	340.9	4.3	S	04-08	308.8	321.4	3.2	S	04-08	361	366.3	1.3	L
	SD	04-08	47	51.3			04-08	46	53.4			04-08	NA	35.7		
Latino	Mean SS	04-08	320.2	339.7	4.9	S	04-08	309.3	322.9	3.4	S	04-08	360	367.0	1.8	L
	SD	04-08	45	48.9			04-08	44	51.2			04-08	NA	34.6		
Asian	Mean SS	04-08	369.1	391.3	5.6	L	04-08	354.8	376.1	5.3	L	04-08	392	396.2	1.1	L
	SD	04-08	55	57.9			04-08	55	60.1			04-08	NA	37.2		
Native American	Mean SS	04-08	333.3	347.6	3.6	S	04-08	322.2	333.4	2.8	S	04-08	372	376.8	1.2	L
	SD	04-08	48	53.2			04-08	48	54.7			04-08	NA	36.3		
All tested students	Mean SS	04-08	338.5	357.7	4.8		04-08	328.1	341.2	3.3		04-08	376	379.7	0.9	
	SD	04-08	52	55.8			04-08	52	58.1			04-08	39	37.5		
Low-income	Mean SS	04-08	320.1	338.5	4.6	S	04-08	308.5	322.0	3.4	L	04-08	359	365.9	1.7	L
	SD	04-08	45	48.6			04-08	45	51.6			04-08	NA	34.8		
All tested students	Mean SS	06-08	350.9	357.7	3.4		06-08	339.2	341.2	1.0		06-08	378	379.7	0.9	
	SD	06-08	59	55.8			06-08	56	58.1			06-08	39	37.5		
Students with disabilities [3]	Mean SS	06-08	309.4	322.5	6.6	L	06-08	287.5	285.3	-1.1	S	06-08	336	338.1	1.1	L
	SD	06-08	57	57.3			06-08	44	47.7			06-08	NA	34.0		
All tested students	Mean SS	06-08	350.9	357.7	3.4		06-08	339.2	341.2	1.0		06-08	378	379.7	0.9	
	SD	06-08	59	55.8			06-08	56	58.1			06-08	39	37.5		
English language learners [3]	Mean SS	06-08	316.4	323.1	3.3	S	06-08	290.6	290.4	-0.1	S	06-08	339	341.9	1.5	L
	SD	06-08	46	43.1			06-08	36	39.4			06-08	NA	29.0		
Female	Mean SS	04-08	343.5	362.9	4.9		04-08	335.3	349.0	3.4		04-08	382	384.8	0.7	
	SD	04-08	52	55.1			04-08	50	56.2			04-08	NA	36.3		

		Grade 4					Grade 8					Grade 10				
Subgroup	Statistic	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group
Male	Mean SS	04-08	333.8	352.7	4.7	S	04-08	321.3	333.8	3.1	S	04-08	371	374.9	1.0	L
	SD	04-08	52	56.0			04-08	52	58.9			04-08	NA	38.0		

Table reads: In 2004, the mean scale score on the state 4th grade reading test was 362.3 for white students and 323.6 for African American students. In 2008, the mean scale score in 4th grade reading was 382.5 for white students and 340.9 for African American students. Between 2004 and 2008, the mean scale score improved at an average yearly rate of 5.0 points for white students and 4.3 points for African American students, indicating a widening of the achievement gap for African Americans.

Note: The CST (grades 4 and 8) is scored on a scale of 150-600; the CAHSEE (grade 10) is scored on a scale of 275-450.

[1]Numbers in these columns are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

[3]Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table CA-14. Subgroup Achievement Trends in Mathematics by Mean Scale Scores

NOTE: L = Larger gain than comparison group. S = Smaller gain than comparison group. E = Equal gain to comparison group.
If the average gain for the subgroup of interest, such as African American students, is larger than the average gain for the comparison group, such as white students, this indicates that the achievement gap has narrowed. If the average gain for the subgroup of interest is smaller, this means the gap has widened.

		Grade 4					Grade 8					Grade 10				
Subgroup	Statistic	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group
All tested students	Mean SS	04-08	343.2	373.9	7.7		04-08	330.8	342.9	3.0		04-08	377	382.8	1.4	
	SD	04-08	64	74.9			04-08	65	73.7			04-08	38	39.1		
White	Mean SS	04-08	365.4	394.8	7.4		04-08	350.7	362.5	3.0		04-08	390	395.9	1.5	
	SD	04-08	64	73.8			04-08	NA	71.3			04-08	NA	35.8		
African American	Mean SS	04-08	316.9	346.1	7.3	S	04-08	297.6	309.9	3.1	L	04-08	356	362.8	1.7	L
	SD	04-08	56	67.8			04-08	NA	61.0			04-08	NA	35.6		
Latino	Mean SS	04-08	325.0	355.8	7.7	L	04-08	303.3	320.2	4.2	L	04-08	361	370.0	2.3	L
	SD	04-08	56	66.9			04-08	NA	62.2			04-08	NA	35.5		
Asian	Mean SS	04-08	391.7	430.3	9.7	L	04-08	381.9	403.0	5.3	L	04-08	405	413.6	2.2	L
	SD	04-08	70	80.5			04-08	NA	83.4			04-08	NA	35.5		
Native American	Mean SS	04-08	331.7	354.1	5.6	S	04-08	320.2	325.2	1.3	S	04-08	370	376.6	1.7	L
	SD	04-08	59	68.5			04-08	NA	64.8			04-08	NA	36.4		
All tested students	Mean SS	04-08	343.2	373.9	7.7		04-08	330.8	342.9	3.0		04-08	377	382.8	1.4	
	SD	04-08	64	74.9			04-08	65	73.7			04-08	38	39.1		
Low-income	Mean SS	04-08	324.4	354.5	7.5	S	04-08	306.0	321.8	4.0	L	04-08	362	370.7	2.2	L
	SD	04-08	57	67.8			04-08	NA	65.0			04-08	NA	36.7		
All tested students	Mean SS	06-08	361.4	373.9	6.3		06-08	338.5	342.9	2.2		06-08	378	382.8	2.4	
	SD	06-08	74	74.9			06-08	74	73.7			06-08	38	39.1		
Students with disabilities [3]	Mean SS	06-08	309.0	331.4	11.2	L	06-08	282.7	290.2	3.8	L	06-08	340	341.9	1.0	S
	SD	06-08	71	73.1			06-08	NA	60.6			06-08	NA	32.3		
All tested students	Mean SS	06-08	361.4	373.9	6.3		06-08	338.5	342.9	2.2		06-08	378	382.8	2.4	
	SD	06-08	74	74.9			06-08	74	73.7			06-08	38	39.1		
English language learners [3]	Mean SS	06-08	331.0	342.2	5.6	S	06-08	288.3	294.8	3.3	L	06-08	351	353.2	1.1	S
	SD	06-08	63	62.5			06-08	NA	57.9			06-08	NA	32.0		
Female	Mean SS	04-08	343.8	374.2	7.6		04-08	330.5	343.8	3.3		04-08	376	382.4	1.6	

		Grade 4					Grade 8					Grade 10				
Subgroup	Statistic	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group	Year Span	Starting Year	Ending Year	Average Gain (Mean Scale Score) [1]	Gain Larger or Smaller than Comparison Group
	SD	04-08	63	72.4			04-08	NA	71.8			04-08	NA	38.2		
Male	Mean SS	04-08	342.7	373.7	7.7	L	04-08	331.2	342.0	2.7	S	04-08	377	383.2	1.6	E
	SD	04-08	66	77.2			04-08	NA	75.7			04-08	NA	39.9		

Table reads: In 2004, the mean scale score on the state 4th grade math test was 365.4 for white students and 316.9 for African American students. In 2008, the mean scale score in 4th grade math was 394.8 for white students and 346.1 for African American students. Between 2004 and 2008, the mean scale score improved at an average yearly rate of 7.4 points for white students and 7.3 points for African American students, indicating a widening of the achievement gap for African Americans.

Note: The CST (grades 4 and Algebra I) is scored on a scale of 150-600; the CAHSEE (grade 10) is scored on a scale of 275-450.

[1]Numbers in these columns are subject to rounding error.

[2]The number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

[3]Gap trends for students with disabilities and English language learners should be interpreted with caution because state and federal policy changes may have affected the year-to-year comparability of test results for these subgroups.

Table CA-15. Numbers of Test-Takers

Subgroup	Subject	Grade 4					Grade 8 Reading/Pre-Algebra					Grade 10				
		Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year	Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year	Year Span	# of Test-Takers Start Year	# of Test-Takers End Year	Change in # of Test-Takers Over Time	% of Test-Takers in Subgroup in End Year
All tested students	Reading	04-08	490,486	445,328	-9.2%	100.0%	04-08	494,184	480,903	-2.7%	100.0%	04-08	448,005	461,890	3.1%	100.0%
	Math	04-08	490,189	447,872	-8.6%	100.0%	04-08	190,179	247,372	30.1%	100.0%	04-08	446,264	461,908	3.5%	100.0%
White	Reading	04-08	148,618	124,330	-16.3%	27.9%	04-08	170,133	142,216	-16.4%	29.6%	04-08	162,818	145,696	-10.5%	31.5%
	Math	04-08	148,519	125,012	-15.8%	27.9%	04-08	70,282	75,831	7.9%	30.7%	04-08	161,699	145,709	-9.9%	31.5%
African American	Reading	04-08	40,220	32,770	-18.5%	7.4%	04-08	41,693	38,142	-8.5%	7.9%	04-08	35,805	35,624	-0.5%	7.7%
	Math	04-08	40,137	32,955	-17.9%	7.4%	04-08	13,502	17,946	32.9%	7.3%	04-08	35,507	35,625	0.3%	7.7%
Latino	Reading	04-08	240,653	226,629	-5.8%	50.9%	04-08	217,467	234,377	7.8%	48.7%	04-08	183,260	211,250	15.3%	45.7%
	Math	04-08	240,545	228,099	-5.2%	50.9%	04-08	75,741	113,865	50.3%	46.0%	04-08	183,037	211,253	15.4%	45.7%
Asian	Reading	04-08	38,622	37,142	-3.8%	8.3%	04-08	40,284	41,503	3.0%	8.6%	04-08	42,302	43,364	2.5%	9.4%
	Math	04-08	38,637	37,265	-3.6%	8.3%	04-08	20,898	25,791	23.4%	10.4%	04-08	42,237	43,365	2.7%	9.4%
Native American	Reading	04-08	3,981	3,542	-11.0%	0.8%	04-08	4,389	3,965	-9.7%	0.8%	04-08	4,082	3,916	-4.1%	0.8%
	Math	04-08	3,972	3,575	-10.0%	0.8%	04-08	1,190	1,839	54.5%	0.7%	04-08	4,017	3,916	-2.5%	0.8%
Low-income	Reading	04-08	281,824	248,573	-11.8%	55.8%	04-08	225,569	241,598	7.1%	50.2%	04-08	180,642	191,318	5.9%	41.4%
	Math	04-08	281,627	250,282	-11.1%	55.9%	04-08	76,897	117,632	53.0%	47.6%	04-08	180,079	191,324	6.2%	41.4%
Students w/ disabilities	Reading	06-08	48,498	33,067	-31.8%	7.4%	06-08	43,847	42,998	-1.9%	8.9%	06-08	40,463	37,217	-8.0%	8.1%
	Math	07-08	45,756	35,639	-22.1%	8.0%	07-08	8,930	10,451	17.0%	4.2%	06-08	38,159	37,232	-2.4%	8.1%
English language learners	Reading	06-08	152,171	130,331	-14.4%	29.3%	06-08	93,006	89,470	-3.8%	18.6%	06-08	79,035	74,056	-6.3%	16.0%
	Math	06-08	152,114	131,434	-13.6%	29.3%	06-08	32,669	32,756	0.3%	13.2%	06-08	78,390	74,057	-5.5%	16.0%
Female	Reading	04-08	239,243	219,868	-8.1%	49.4%	04-08	241,329	235,012	-2.6%	48.9%	04-08	220,499	226,315	2.6%	49.0%
	Math	04-08	239,113	220,433	-7.8%	49.2%	04-08	99,297	126,422	27.3%	51.1%	04-08	220,162	226,316	2.8%	49.0%
Male	Reading	04-08	251,177	225,293	-10.3%	50.6%	04-08	252,766	245,716	-2.8%	51.1%	04-08	227,999	235,254	3.2%	50.9%
	Math	04-08	251,011	227,272	-9.5%	50.7%	04-08	90,859	120,895	33.1%	48.9%	04-08	226,569	235,271	3.8%	50.9%

Table reads: In 2004, 148,618 students in the white subgroup took the state 4th grade reading test. By 2008, the number of white test-takers had fallen to 124,330 students, a decrease of 16.3%. In 2008, the white subgroup made up 27.9% of the 445,328 4th graders taking the reading test that year.

Note: **Bold** type indicates that the number of students tested in this subgroup at this grade level was fewer than 500 in 2008 or the most recent year with available data.

Key Terms

Percentage proficient (and above) — The percentage of students in a group who score at and above the cut score for "proficient" performance on the state test used to determine progress under NCLB. The Act requires states to report student test performance in terms of at least three achievement levels: basic, proficient, and advanced. Adequate yearly progress determinations are based on the percentage of students scoring at the proficient level and above.

Percentage basic (and above) — The percentage of students in a group who score at and above the cut score for "basic" performance on the state test used to determine progress under NCLB.

Percentage advanced — The percentage of students in a group who reach or exceed the cut score for "advanced" performance on the state test used to determine progress under NCLB.

Moderate-to-large gain — For the percentage basic, proficient, or advanced, an average gain of 1 or more percentage points per year. For effect size, an average gain of 0.02 or greater per year.

Slight gain — For the percentage basic, proficient, or advanced, an average gain of less than 1 percentage point per year. For effect size, an average gain of less than 0.02 per year.

Moderate-to-large decline — For the percentage basic, proficient, or advanced, an average decline of 1 or more percentage points per year. For effect size, an average decline of 0.02 or greater per year.

Slight decline — For the percentage basic, proficient, or advanced, an average decline of less than 1 percentage points per year. For effect size, an average decline of less than 0.02 per year.

Effect size — A statistical tool that conveys the amount of difference between test results using a common unit of measurement which does not depend on the scoring scale for a particular test.

Accumulated annual effect size — The cumulative gain in effect size over a range of years.

Mean scale score — The arithmetical average of a group of test scores, expressed on a common scale for a particular state's test. The mean is calculated by adding the scores and dividing the sum by the number of scores.

Standard deviation — A measure of how much test scores tend to deviate from the mean—in other words, how spread out or bunched together test scores are. If students' scores are bunched together, with many scores close to the mean, then the standard deviation will be small. If scores are spread out, with many students scoring at the high or low ends of the scale, then the standard deviation will be large.

Cautions and Explanations

Different labels for achievement levels — For consistency, all of the state profiles developed for this report use a common set of labels (basic, proficient, and advanced) for the main achievement levels required by NCLB. In practice, however, some states may use different labels, such as "meets standard" instead of proficient, and some states have established additional achievement levels beyond those required by NCLB.

Different names for subgroups — For the sake of consistency and ease of data tabulation, all of the state profiles developed for this report use a common set of names for the major student subgroups. In practice, however, states use various names for subgroups that may differ from those used here (such as using "Hispanic" instead of "Latino," or "special education students" instead of "students with disabilities"). Moreover, a few states separately track the performance of subgroups not included in the analyses for this report.

Special caution for students with disabilities and English language learners — Trends for students with disabilities and English language learners should be interpreted with caution because changes in federal guidance and state accountability plans may have altered which students in these subgroups are tested for accountability purposes, how they are tested, and when their test scores are counted as proficient under NCLB. These factors could affect the year-to-year comparability of test results.

Inclusion of former English language learners — In many states, the subgroup of English language learners (also known as limited English proficient students) includes students who were formerly English language learners but who have achieved English language proficiency or fluency in the last two years. Federal NCLB regulations permit states to include these formerly ELL students (sometimes referred to as "redesignated fluent English proficient" students) in the ELL subgroup for up to two years for purposes of NCLB accountability.

Limitations of percentage proficient measure — The percentage proficient, the main gauge of student performance under NCLB, can be easily understood and gives a snapshot of how many students have met their state's performance expectations. But it also has several limitations as a measure of student achievement. Users of percentage proficient data should keep in mind these limitations, particularly the following:

* "Proficient" means different things across different states. States vary widely in curriculum, learning expectations, and tests, and state tests differ considerably in their difficulty and cut scores for proficient performance.
* Although this study has taken steps to avoid comparing test data where there have been "breaks" in comparability resulting from new tests, changes in content standards, revised cut scores, or other major changes in testing programs, the year-to-year comparability of test results in the same state may still be affected by less obvious policy and demographic changes.
* Changes in student performance may occur that are not reflected in percentage proficient data, such as an increase in the number of students reaching performance levels below and above proficient (such as the basic or advanced levels).
* The size of the achievement gaps between various subgroups depends in part on where a state sets its cut score for proficiency. For example, if a proficiency cut score is set so high that almost nobody reaches it or so low that almost everyone reaches it, there will be little apparent achievement gap. By contrast, if the cut score is closer to the mean test score, the gaps between subgroups will be more apparent.

Difficulty of attributing causes — Although the tables above show trends in test scores since the enactment of NCLB, one cannot assume that these trends have occurred *because* of NCLB. It is always difficult to determine a cause-and-effect relationship between test score trends and any specific education policy or program due to the many federal, state, and local reforms undertaken in recent years and due to the lack of an appropriate "control" group of students not affected by NCLB.