Subgroup Achievement and Gap Trends — Maryland

K-12 enrollment — 843,861

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 labeled State Testing Data. In the list of results that appears, look for the most recent report on student achievement since 2002. Below the name of the report, click on the link for State Profiles and Worksheets. Scroll down the page until you reach the list of states. Click on the Worksheet link for proficiency data or scale score data for a particular state.

Subgroup Achievement Trends and Gap Trends — Key Findings

Summary. In grade 8 (the only grade in which subgroup trends were analyzed by achievement level), Maryland had data for racial/ethnic subgroups, low income students, and boys and girls at the proficient and advanced levels. The percentage of students reaching the proficient and advanced levels on state tests increased for all subgroups in both reading and math. Achievement gaps narrowed for all subgroups at grades 4 and 8. Comparable data were available from 2004 through 2009 for grade 4, 2003 through 2009 for grade 8, and 2008 to 2009 for grade 10 (not enough years of data to constitute a trend at the high school level).

- ***Notable gains.*** African American, Latino, and low income students had large gains at the proficient level in grade 8.
- ***Exception in math.*** The gap between boys and girls widened slightly in grade 8 math. The percentage of middle school girls proficient in math was higher than the percentage proficient for boys, and girls have made greater gains in math since 2003.

Data Limitations

Years of comparable percentage proficient data	2003 through 2009 for grades 3, 5, and 8 2004 through 2009 for grades 4, 6, and 7 2008 through 2009 for high school English 2 2008 through 2009 for high school Algebra High school assessments began a new trend line in 2008, when Maryland started reporting the highest scores of students who took high school tests multiple times, rather than scores from the first time students took the test.
Years of comparable mean scale score data	No mean scale scores
Disaggregated data for all subgroups and comparison groups	Subgroup proficiency data available 2004 through 2009 for grade 4 and 2003 through 2009 for grade 8; students with disabilities and English language learner subgroups 2006 through 2009. All subgroups available 2008 through 2009 for high school.

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	Maryland School Assessments (MSA) (grades 3–8 in reading and math) Maryland High School Assessments (HSA); HSA exams in English 2 and algebra/data analysis used for NCLB Alternate Maryland School Assessment (Alt-MSA) (alternate assessment for students with disabilities in all tested grades)
Grades tested for NCLB accountability	3–8 The HSAs are not grade-specific, but are end-of-course exams that students take as they complete the appropriate courses. Most students take the English 2 HSA in 10th grade.
State labels for achievement levels	MD uses three achievement levels: Basic, Proficient, and Advanced. For our analyses we treated Proficient as Proficient and Advanced as Advanced. No MD achievement level was treated as our Basic.
High school NCLB test also used as an exit exam?	Yes

First year test used	2003: MSA grades 3, 5, 8 2004: MSA grades 4, 6, 7 2005: English 2 HSA 2006: Algebra/data analysis HSA (The trend lines for the High School Assessment were broken in 2008, when Maryland began reporting the highest scores of students who took the test multiple times instead of scores from the first time students took the test.)
Time of test administration	MSA: Spring Alt-MSA: Administered throughout the year HSA: Four times per year - October (began 07/08), January, May, Summer
Major changes in testing system (2002–present)	2004 through 2006: Made several changes in policies for determining AYP 2005: English 2 HSA exam replaced reading 10 exam 2006: Algebra/data analysis HSA replaced geometry exam for AYP reporting Beginning with the 2006-2007 school year and continuing through the 2009-2010 school year, high school students may substitute appropriate scores on Maryland State Department of Education (MSDE) approved Advanced Placement or International Baccalaureate examinations for high school assessments under an agreement with USDE. 2008: In 2008, Maryland changed its policy for reporting scores from high school exams. Instead of reporting only those scores from the first time students took the test, the state began reporting the highest scores of students who took the high school exams multiple times. June 2008: Maryland implemented modified high school assessments for students with disabilities, which were administered for the first time in 2009. Beginning in 2007-2008, Maryland includes the proficient scores from the modified assessments in calculating AYP and cap the scores at 2% of the total tested population. The modified assessments are based on modified achievement standards aligned with the State's content standards. In June 2008, the modified assessment was given for the first time to high school students. Grades 6-8 took the modified assessment for the first time in 2009. Grades 3-5 will take the modified assessment for the first time in 2010.

Achievement by Subgroup — Trends at the Middle School 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 MD-7. Percentages of grade 8 students by racial or ethnic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in reading

	Reporting year								Average yearly percentage point gain[1]
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced		26%	21%	24%	24%	24%	34%	37%	1.9
Proficient-and-above		60%	64%	66%	67%	68%	73%	80%	3.4
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
White									
Advanced		37%	29%	35%	35%	35%	48%	48%	1.8
Proficient-and-above		74%	76%	81%	81%	82%	85%	89%	2.4
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
African American									
Advanced		10%	9%	9%	10%	10%	17%	24%	2.2
Proficient-and-above		40%	48%	49%	51%	52%	58%	70%	4.9
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Latino									
Advanced		12%	10%	11%	11%	11%	20%	23%	1.9
Proficient-and-above		45%	48%	52%	53%	55%	62%	72%	4.5
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Asian									
Advanced		40%	36%	40%	40%	42%	58%	58%	3.0
Proficient-and-above		74%	79%	81%	83%	84%	89%	92%	3.1
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Native American[2]									
Advanced		20%	18%	20%	18%	17%	33%	32%	2.0
Proficient-and-above		56%	58%	65%	67%	65%	78%	79%	3.9
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA

Table reads: The percentage of white 8th graders who scored at the advanced level on the state reading test increased from 37% in 2003 to 48% in 2009. During this period, the average yearly gain in the percentage advanced in reading for white 8th graders was 1.8 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 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table MD-8. Percentage of grade 8 students by demographic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in reading

	Reporting year								Average yearly percentage point gain[1]
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced		26%	21%	24%	24%	24%	34%	37%	1.9
Proficient-and-above		60%	64%	66%	67%	68%	73%	80%	3.4
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Low-income students									
Advanced		8%	7%	8%	8%	8%	14%	19%	2.0
Proficient-and-above		36%	43%	45%	46%	49%	54%	66%	5.1
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Students with disabilities[3]									
Advanced		4%	3%	4%	4%	4%	8%	9%	1.8
Proficient-and-above		20%	21%	28%	27%	29%	34%	48%	7.1
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
English language learners[3]									
Advanced		2%	1%	2%	2%	2%	4%	4%	0.9
Proficient-and-above		12%	18%	20%	24%	23%	27%	39%	5.2
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Female									
Advanced		29%	25%	28%	28%	27%	39%	44%	2.5
Proficient-and-above		65%	70%	72%	72%	73%	78%	85%	3.3
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Male									
Advanced		22%	17%	21%	21%	21%	30%	30%	1.4
Proficient-and-above		55%	58%	61%	62%	64%	68%	76%	3.5
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA

Table reads: The percentage of low-income 8th graders who scored at the advanced level on the state reading test increased from 8% in 2003 to 19% in 2009. During this period, the average yearly gain in the percentage advanced in reading for low-income 8th 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 2009 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 2006-2009 results.

Table MD-9. Percentages of grade 8 students by racial or ethnic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in mathematics

	Reporting year								Average yearly percentage point gain[1]
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced		13%	17%	19%	23%	25%	29%	29%	2.6
Proficient-and-above		40%	46%	52%	55%	57%	62%	66%	4.4
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
White									
Advanced		20%	25%	28%	34%	37%	42%	41%	3.5
Proficient-and-above		54%	60%	67%	72%	73%	78%	80%	4.4
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
African American									
Advanced		3%	4%	5%	7%	9%	11%	12%	1.5
Proficient-and-above		18%	24%	30%	32%	35%	41%	46%	4.8
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Latino									
Advanced		6%	7%	9%	12%	12%	17%	16%	1.7
Proficient-and-above		27%	32%	40%	44%	43%	51%	56%	4.9
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Asian									
Advanced		37%	43%	48%	53%	56%	63%	62%	4.2
Proficient-and-above		72%	77%	80%	83%	85%	89%	90%	3.1
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Native American[2]									
Advanced		7%	11%	15%	14%	20%	23%	23%	2.8
Proficient-and-above		30%	33%	47%	48%	53%	63%	61%	5.2
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA

Table reads: The percentage of white 8th graders who scored at the advanced level on the state math test increased from 20% in 2003 to 41% in 2009. During this period, the average yearly gain in the percentage advanced in math for white 8th graders was 3.5 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 2009 or the most recent year with available data, so changes for this subgroup should be interpreted with caution.

Table MD-10. Percentage of grade 8 students by demographic subgroup scoring at the advanced, proficient-and-above, and basic-and-above levels in mathematics

	Reporting year								Average yearly percentage point gain[1]
Subgroup	2002	2003	2004	2005	2006	2007	2008	2009	
All tested students									
Advanced		13%	17%	19%	23%	25%	29%	29%	2.6
Proficient-and-above		40%	46%	52%	55%	57%	62%	66%	4.4
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Low-income students									
Advanced		2%	4%	5%	6%	8%	11%	11%	1.5
Proficient-and-above		16%	23%	29%	32%	34%	40%	46%	5.1
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Students with disabilities[3]									
Advanced		2%	2%	3%	3%	5%	6%	7%	1.1
Proficient-and-above		8%	11%	17%	18%	21%	24%	32%	4.5
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
English language learners[3]									
Advanced		7%	8%	10%	11%	11%	10%	10%	-0.2
Proficient-and-above		20%	25%	32%	31%	28%	34%	37%	1.9
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Female									
Advanced		13%	17%	19%	22%	25%	30%	30%	2.8
Proficient-and-above		41%	49%	54%	57%	59%	64%	68%	4.5
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA
Male									
Advanced		14%	17%	19%	23%	25%	29%	28%	2.4
Proficient-and-above		39%	43%	49%	53%	55%	60%	64%	4.2
Basic-and-above		NA	NA	NA	NA	NA	NA	NA	NA

Table reads: The percentage of low-income 8th graders who scored at the advanced level on the state math test increased from 2% in 2003 to 11% in 2009. During this period, the average yearly gain in the percentage advanced in math for low-income 8th graders was 1.5 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 2009 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 2006-2009 results.

Achievement by Subgroup — Gap Trends (Percentages Proficient)

Table MD-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					EOC English 2				
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	04-09	75%	87%	2.3		03-09	60%	80%	3.4		08-09	83%	84%	NA	
White	04-09	86%	93%	1.5		03-09	74%	89%	2.4		08-09	91%	90%	NA	
African American	04-09	62%	79%	3.4	L	03-09	40%	70%	4.9	L	08-09	71%	73%	NA	NA
Latino	04-09	64%	81%	3.4	L	03-09	45%	72%	4.5	L	08-09	75%	78%	NA	NA
Asian	04-09	87%	95%	1.5	E	03-09	74%	92%	3.1	L	08-09	91%	91%	NA	NA
Native American	04-09	69%	90%	4.3[2]	L	03-09	56%	79%	3.9[2]	L	08-09	82%	85%	NA	NA
Not low-income	04-09	84%	92%	1.7		03-09	70%	88%	2.9		08-09	87%	87%	NA	
Low-income	04-09	60%	78%	3.6	L	03-09	36%	66%	5.1	L	08-09	67%	71%	NA	NA
Not disabled	06-09	85%	89%	1.3		06-09	72%	84%	3.9		08-09	86%	87%	NA	
Students with disabilities[3]	06-09	58%	68%	3.3	L	06-09	27%	48%	7.1	L	08-09	43%	42%	NA	NA
Not ELLs	06-09	83%	87%	1.6		06-09	68%	81%	4.5		08-09	83%	84%	NA	
English language learners[3]	06-09	55%	71%	5.3	L	06-09	24%	39%	5.2	L	08-09	45%	48%	NA	NA
Female	04-09	79%	89%	2.1		03-09	65%	85%	3.3		08-09	86%	88%	NA	
Male	04-09	72%	84%	2.5	L	03-09	55%	76%	3.5	L	08-09	79%	79%	NA	NA

Table reads: In 2004, 86% of white 4th graders and 62% of African American 4th graders scored at the proficient level on the state reading test. In 2009, 93% of white 4th graders and 79% of African American 4th graders scored at the proficient level in reading. Between 2004 and 2009, the percentage proficient improved at an average rate of 1.5 percentage points per year for white students and 3.4 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 2009 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 MD-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					EOC Algebra				
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	04-09	70%	89%	3.9		03-09	40%	66%	4.4		08-09	86%	85%	NA	
White	04-09	83%	95%	2.3		03-09	54%	80%	4.4		08-09	86%	94%	NA	
African American	04-09	52%	82%	6.1	L	03-09	18%	46%	4.8	L	08-09	72%	72%	NA	NA
Latino	04-09	59%	85%	5.2	L	03-09	27%	56%	4.9	L	08-09	80%	83%	NA	NA
Asian	04-09	89%	97%	1.7	S	03-09	72%	90%	3.1	S	08-09	96%	96%	NA	NA
Native American	04-09	66%	91%	5.0[2]	L	03-09	30%	61%	5.2[2]	L	08-09	86%	89%	NA	NA
Not low-income	04-09	80%	94%	2.7		03-09	50%	76%	4.4		08-09	90%	88%	NA	
Low-income	04-09	51%	82%	6.2	L	03-09	16%	46%	5.1	L	08-09	72%	74%	NA	NA
Not disabled	06-09	86%	92%	2.1		06-09	60%	70%	3.3		08-09	89%	89%	NA	
Students with disabilities[3]	06-09	54%	66%	4.0	L	06-09	18%	32%	4.5	L	08-09	51%	42%	NA	NA
Not ELLS	06-09	83%	90%	2.3		06-09	55%	66%	3.7		08-09	86%	85%	NA	
English language learners[3]	06-09	60%	79%	6.1	L	06-09	31%	37%	1.9	S	08-09	59%	62%	NA	NA
Female	04-09	71%	90%	3.9		03-09	41%	68%	4.5		08-09	86%	86%	NA	
Male	04-09	68%	88%	4.0	L	03-09	39%	64%	4.2	S	08-09	86%	85%	NA	NA

Table reads: In 2004, 83% of white 4th graders and 52% of African American 4th graders scored at the proficient level on the state math test. In 2009, 95% of white 4th graders and 82% of African American 4th graders scored at the proficient level in math. Between 2004 and 2009, the percentage proficient improved at an average rate of 2.3 percentage points per year for white students and 6.1 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 2009 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 MD-13. Numbers of test-takers

Subgroup	Subject	Grade 4					Grade 8					EOC English 2/Algebra				
		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	04-09	64,983	58,928	-9.3%	100.0%	03-09	68,705	63,022	-8.3%	100.0%	08-09	53,948	56,785	5.3%	100.0%
	Math	04-09	65,035	58,974	-9.3%	100.0%	03-09	68,647	62,933	-8.3%	100.0%	08-09	54,222	55,453	2.3%	100.0%
White	Reading	04-09	31,840	27,198	-14.6%	46.2%	03-09	36,194	29,884	-17.4%	47.4%	08-09	29,438	29,811	1.3%	52.5%
	Math	04-09	31,859	27,202	-14.6%	46.1%	03-09	36,174	29,861	-17.5%	47.4%	08-09	28,724	29,061	1.2%	52.4%
African American	Reading	04-09	25,421	22,520	-11.4%	38.2%	03-09	25,530	24,048	-5.8%	38.2%	08-09	18,216	20,097	10.3%	35.4%
	Math	04-09	25,417	22,527	-11.4%	38.2%	03-09	25,485	23,965	-6.0%	38.1%	08-09	17,931	19,853	10.7%	35.8%
Latino	Reading	04-09	4,319	5,503	27.4%	9.3%	03-09	3,640	5,353	47.1%	8.5%	08-09	3,032	3,461	14.1%	6.1%
	Math	04-09	4,344	5,516	27.0%	9.4%	03-09	3,638	5,354	47.2%	8.5%	08-09	3,274	3,359	2.6%	6.1%
Asian	Reading	04-09	3,148	3,480	10.5%	5.9%	03-09	3,106	3,494	12.5%	5.5%	08-09	3,095	3,230	4.4%	5.7%
	Math	04-09	3,156	3,499	10.9%	5.9%	03-09	3,107	3,507	12.9%	5.6%	08-09	3,018	3,008	-0.3%	5.4%
Native American	Reading	04-09	254	227	-10.6%	0.4%	03-09	231	243	5.2%	0.4%	08-09	167	175	4.8%	0.3%
	Math	04-09	254	228	-10.2%	0.4%	03-09	231	246	6.5%	0.4%	08-09	155	165	6.5%	0.3%
Low-income	Reading	04-09	24,021	23,305	-3.0%	39.5%	03-09	20,561	22,147	7.7%	35.1%	08-09	11,179	12,116	8.4%	21.3%
	Math	04-09	24,016	23,327	-2.9%	39.6%	03-09	20,555	22,068	7.4%	35.1%	08-09	11,365	12,014	5.7%	21.7%
Students w/ disabilities	Reading	06-09	7,552	6,867	-9.1%	11.7%	06-09	7,879	6,845	-13.1%	10.9%	08-09	4,047	4,432	9.5%	7.8%
	Math	06-09	7,540	6,860	-9.0%	11.6%	06-09	7,898	6,817	-13.7%	10.8%	08-09	3,983	4,601	15.5%	8.3%
English language learners	Reading	06-09	1,712	2,747	60.5%	4.7%	06-09	973	1,237	27.1%	2.0%	08-09	325	448	37.8%	0.8%
	Math	06-09	1,760	2,806	59.4%	4.8%	06-09	1,009	1,267	25.6%	2.0%	08-09	874	404	-53.8%	0.7%
Female	Reading	04-09	31,433	28,650	-8.9%	48.6%	03-09	33,458	30,663	-8.4%	48.7%	08-09	27,898	29,084	4.3%	51.2%
	Math	04-09	31,455	28,669	-8.9%	48.6%	03-09	33,440	30,615	-8.4%	48.6%	08-09	27,429	28,339	3.3%	51.1%
Male	Reading	04-09	33,548	30,278	-9.7%	51.4%	03-09	35,244	32,359	-8.2%	51.3%	08-09	26,050	27,693	6.3%	48.8%
	Math	04-09	33,574	30,303	-9.7%	51.4%	03-09	35,195	32,318	-8.2%	51.4%	08-09	25,673	27,109	5.6%	48.9%

Table reads: In 2004, 31,840 students in the white subgroup took the state 4th grade reading test. By 2009, the number of white test-takers had fallen to 27,198 students, a decrease of 14.6%. In 2009, the white subgroup made up 46.2% of the 58,928 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 2009 or the most recent year with available data.

Key Terms

Percentage proficient (and above) — The percentage of students in a group who score at or 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 or 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 point 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 end 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 in this profile 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.