Subgroup Achievement and Gap Trends — Arizona

K-12 enrollment — 1,078,697

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), Arizona students showed mostly gains in reading at the basic, proficient, and advanced levels for racial/ethnic subgroups, low income students, and boys and girls. In math, there were gains at all three achievement levels in grade 8 for these subgroups. Achievement gaps between racial/ethnic subgroups and between low income and non-low income students improved almost across the board. Comparable data were available from 2005 through 2009.

- ***Some exceptions.*** At the basic achievement level for grade 8, there were slight declines shown in reading for the white, African American, and Asian subgroups.

- ***A few gaps widened in reading.*** The achievement gap between African American and white students widened in reading at the high school level, as did the gap between boys and girls in reading at grade 8.

Data Limitations

Years of comparable percentage proficient data	2005 through 2009
Years of comparable mean scale score data	2005 through 2009
Disaggregated data for all subgroups and comparison groups	Data are not available for 2009 for comparison groups of students who are *not* low-income, disabled, or English language learners (ELLs), so the subgroups of low-income, students with disabilities, and ELLs are compared with all tested students in the state Scale score data are not available for gender or low-income subgroups for all grades in 2009 and are not available for these subgroups for HS for any year

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	Arizona's Instrument to Measure Standards Dual Purpose Assessment (AIMS DPA), grades 3–8 Arizona's Instrument to Measure Standards High School (AIMS HS) Arizona's Instrument to Measure Standards -Alternate (AIMS–A)
Grades tested for NCLB accountability	Grades 3-8 and 10-12 (first administration of high school exam in grade 10, plus retake opportunities in grades 11 and 12)
State labels for achievement levels	AZ uses four achievement levels: Falls Far Below the Standard, Approaches the Standard, Meets the Standard, and Exceeds the Standard. For our analyses we treated Approaches the Standard as Basic, Meets the Standard as Proficient, and Exceeds the Standard as Advanced.
High school NCLB test also used as an exit exam?	Yes
First year test used	2005
Time of test administration	Spring (fall window also available for AIMS HS)
Major changes in testing system (2002–present)	2005-06: Grades 4, 6, and 7 included in achievement profiles 2005: Cut points reset 2005: Change in test contractors

Comments

High school data reported reflect cohort results rather than specific grade-level results. First administration is in grade 10, but scores may be improved through retake opportunities in grades 11 and 12.

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 AZ-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				6%	5%	7%	7%	9%	0.8
Proficient-and-above				64%	63%	63%	67%	69%	1.3
Basic-and-above				89%	89%	89%	89%	90%	0.3
White									
Advanced				10%	8%	11%	11%	14%	1.0
Proficient-and-above				79%	79%	78%	81%	81%	0.5
Basic-and-above				96%	96%	95%	95%	94%	-0.5
African American									
Advanced				3%	3%	3%	3%	4%	0.3
Proficient-and-above				57%	55%	55%	59%	62%	1.3
Basic-and-above				87%	86%	86%	85%	86%	-0.3
Latino									
Advanced				2%	2%	2%	3%	4%	0.5
Proficient-and-above				48%	48%	48%	55%	58%	2.5
Basic-and-above				83%	84%	83%	85%	85%	0.5
Asian									
Advanced				15%	10%	15%	14%	19%	1.0
Proficient-and-above				81%	79%	81%	81%	83%	0.5
Basic-and-above				95%	96%	95%	94%	94%	-0.3
Native American									
Advanced				1%	1%	1%	2%	3%	0.5
Proficient-and-above				44%	44%	41%	48%	50%	1.5
Basic-and-above				82%	84%	82%	82%	84%	0.5

Table reads: The percentage of white 8th graders who scored at the advanced level on the state reading test increased from 10% in 2005 to 14% in 2009. During this period, the average yearly gain in the percentage advanced in reading for white 8th graders was 1.0 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.

Table AZ-8. Percentage of grade 8 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	2009	
All tested students									
Advanced				6%	5%	7%	7%	9%	0.8
Proficient-and-above				64%	63%	63%	67%	69%	1.3
Basic-and-above				89%	89%	89%	89%	90%	0.3
Low-income students									
Advanced				2%	1%	2%	2%	4%	0.5
Proficient-and-above				48%	47%	47%	53%	58%	2.5
Basic-and-above				83%	83%	82%	83%	86%	0.8
Students with disabilities[3]									
Advanced				1%	1%	1%	1%	2%	0.3
Proficient-and-above				23%	23%	24%	23%	26%	1.0
Basic-and-above				61%	61%	61%	59%	59%	-0.7
English language learners[3]									
Advanced				0%	0%	0%	0%	0%	0.0
Proficient-and-above				22%	13%	11%	14%	14%	0.3
Basic-and-above				67%	61%	56%	57%	54%	-2.3
Female									
Advanced				7%	5%	8%	8%	10%	0.8
Proficient-and-above				68%	67%	67%	71%	74%	1.5
Basic-and-above				92%	92%	92%	92%	93%	0.3
Male									
Advanced				6%	4%	6%	6%	8%	0.5
Proficient-and-above				60%	59%	60%	63%	65%	1.3
Basic-and-above				86%	87%	87%	86%	87%	0.3

Table reads: The percentage of low-income 8th graders who scored at the advanced level on the state reading test increased from 2% in 2005 to 4% in 2009. During this period, the average yearly gain in the percentage advanced in reading for low-income 8th graders was 0.5 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.

Table AZ-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%	13%	14%	13%	15%	0.5
Proficient-and-above				61%	61%	61%	62%	63%	0.5
Basic-and-above				79%	80%	79%	80%	82%	0.8
White									
Advanced				19%	19%	21%	19%	23%	1.0
Proficient-and-above				75%	75%	75%	74%	76%	0.3
Basic-and-above				89%	89%	88%	88%	90%	0.3
African American									
Advanced				5%	5%	7%	5%	8%	0.8
Proficient-and-above				47%	46%	47%	48%	50%	0.8
Basic-and-above				70%	70%	70%	70%	74%	1.0
Latino									
Advanced				6%	6%	6%	6%	8%	0.5
Proficient-and-above				46%	46%	48%	49%	52%	1.5
Basic-and-above				69%	70%	71%	72%	76%	1.8
Asian									
Advanced				32%	32%	32%	31%	36%	1.0
Proficient-and-above				82%	81%	82%	81%	83%	0.3
Basic-and-above				92%	92%	92%	91%	93%	0.3
Native American									
Advanced				4%	4%	4%	3%	5%	0.3
Proficient-and-above				41%	42%	41%	42%	42%	0.3
Basic-and-above				66%	66%	66%	67%	70%	1.0

Table reads: The percentage of white 8th graders who scored at the advanced level on the state math test increased from 19% in 2005 to 23% in 2009. During this period, the average yearly gain in the percentage advanced in math for white 8th graders was 1.0 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.

Table AZ-10. Percentage of grade 8 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	2009	
All tested students									
Advanced				13%	13%	14%	13%	15%	0.5
Proficient-and-above				61%	61%	61%	62%	63%	0.5
Basic-and-above				79%	80%	79%	80%	82%	0.8
Low-income students									
Advanced				5%	5%	6%	5%	8%	0.8
Proficient-and-above				45%	45%	47%	47%	51%	1.5
Basic-and-above				68%	69%	70%	70%	75%	1.8
Students with disabilities[3]									
Advanced				2%	2%	2%	1%	5%	1.0
Proficient-and-above				20%	22%	22%	19%	26%	1.3
Basic-and-above				39%	40%	40%	40%	47%	2.3
English language learners[3]									
Advanced				2%	1%	1%	1%	1%	0.0
Proficient-and-above				27%	20%	18%	18%	17%	-1.0
Basic-and-above				51%	45%	41%	42%	42%	-1.0
Female									
Advanced				12%	12%	13%	12%	15%	0.8
Proficient-and-above				62%	61%	62%	62%	64%	0.5
Basic-and-above				81%	81%	81%	81%	84%	0.8
Male									
Advanced				14%	13%	15%	13%	16%	0.5
Proficient-and-above				61%	60%	61%	60%	63%	0.5
Basic-and-above				79%	78%	78%	77%	81%	0.5

Table reads: The percentage of low-income 8th graders who scored at the advanced level on the state math test increased from 5% in 2005 to 8% in 2009. During this period, the average yearly gain in the percentage advanced in math for low-income 8th graders was 0.8 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.

[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 AZ-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					High School				
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	05-09	65%	72%	1.8		05-09	64%	69%	1.3		05-09	73%	75%	0.5	
White	05-09	81%	84%	0.8		05-09	79%	81%	0.5		05-09	86%	87%	0.3	
African American	05-09	54%	63%	2.3	L	05-09	57%	62%	1.3	L	05-09	66%	66%	0.0	S
Latino	05-09	48%	62%	3.5	L	05-09	48%	58%	2.5	L	05-09	56%	63%	1.8	L
Asian	05-09	80%	85%	1.3	L	05-09	81%	83%	0.5	E	05-09	84%	84%	0.0	S
Native American	05-09	44%	54%	2.5	L	05-09	44%	50%	1.5	L	05-09	52%	53%	0.3	E
All tested students	05-09	65%	72%	1.8		05-09	64%	69%	1.3		05-09	73%	75%	0.5	
Low-income	05-09	49%	61%	3.0	L	05-09	48%	58%	2.5	L	05-09	55%	61%	1.5	L
All tested students	06-09	65%	72%	2.3		06-09	63%	69%	2.0		06-09	72%	75%	1.0	
Students with disabilities[3]	06-09	34%	37%	1.0	S	06-09	23%	26%	1.0	S	06-09	30%	32%	0.7	S
All tested students	06-09	65%	72%	2.3		06-09	63%	69%	2.0		06-09	72%	75%	1.0	
English language learners[3]	06-09	21%	31%	3.3	L	06-09	13%	14%	0.3	S	06-09	12%	16%	1.3	L
Female	05-09	68%	76%	2.0		05-09	68%	74%	1.5		05-09	76%	77%	0.3	
Male	05-09	60%	68%	2.0	E	05-09	60%	65%	1.3	S	05-09	70%	72%	0.5	L

Table reads: In 2005, 81% of white 4th graders and 54% of African American 4th graders scored at the proficient level on the state reading test. In 2009, 84% of white 4th graders and 63% of African American 4th graders scored at the proficient level in reading. Between 2005 and 2009, the percentage proficient improved at an average rate of 0.8 percentage points per year for white students and 2.3 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 AZ-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					High School				
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	05-09	71%	74%	0.8		05-09	61%	63%	0.5		05-09	68%	70%	0.5	
White	05-09	84%	85%	0.3		05-09	75%	76%	0.3		05-09	81%	81%	0.0	
African American	05-09	58%	64%	1.5	L	05-09	47%	50%	0.8	L	05-09	55%	57%	0.5	L
Latino	05-09	58%	67%	2.3	L	05-09	46%	52%	1.5	L	05-09	52%	59%	1.8	L
Asian	05-09	87%	87%	0.0	S	05-09	82%	83%	0.3	E	05-09	85%	86%	0.3	L
Native American	05-09	52%	55%	0.8	L	05-09	41%	42%	0.3	E	05-09	47%	49%	0.5	L
All tested students	05-09	71%	74%	0.8		05-09	61%	63%	0.5		05-09	68%	70%	0.5	
Low-income	05-09	58%	65%	1.8	L	05-09	45%	51%	1.5	L	05-09	50%	57%	1.8	L
All tested students	06-09	73%	74%	0.3		06-09	61%	63%	0.7		06-09	66%	70%	1.3	
Students with disabilities[3]	06-09	41%	44%	1.0	L	06-09	22%	26%	1.3	L	06-09	22%	28%	2.0	L
All tested students	06-09	73%	74%	0.3		06-09	61%	63%	0.7		06-09	66%	70%	1.3	
English language learners[3]	06-09	40%	41%	0.3	E	06-09	20%	17%	-1.0	S	06-09	21%	21%	0.0	S
Female	05-09	72%	75%	0.8		05-09	62%	64%	0.5		05-09	70%	71%	0.3	
Male	05-09	70%	73%	0.8	E	05-09	61%	63%	0.5	E	05-09	67%	68%	0.3	E

Table reads: In 2005, 84% of white 4th graders and 58% of African American 4th graders scored at the proficient level on the state math test. In 2009, 85% of white 4th graders and 64% of African American 4th graders scored at the proficient level in math. Between 2005 and 2009, the percentage proficient improved at an average rate of 0.3 percentage points per year for white students and 1.5 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 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.

Achievement by Subgroup — Gap Trends (Mean Scale Scores)

Table AZ-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. MSS = mean scale score. SD = standard deviation.
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					High School				
Subgroup	Statistic	Year span	Start year	End year	Avg. gain MSS[1]	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS[1]	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS[1]	Gain larger or smaller than comp. group
All tested students	MSS	05-09	469	477.5	2.1		05-09	517	527.4	2.6		05-09	699.8	706.5	1.7	
	SD	05-09	53	51.2			05-09	52	57.2			05-09	50.4	50.5		
White	MSS	05-09	491	496.0	1.3		05-09	535	546.2	2.8		05-09	719.0	725.0	1.5	
	SD	05-09	51	49.2			05-09	50	56.2			05-09	46.2	48.0		
African American	MSS	05-09	456	464.2	2.1	L	05-09	505	513.2	2.1	S	05-09	687.3	691.2	1.0	S
	SD	05-09	49	49.4			05-09	48	53.2			05-09	45.4	46.8		
Latino	MSS	05-09	448	462.2	3.6	L	05-09	496	509.5	3.4	L	05-09	677.4	688.9	2.9	L
	SD	05-09	47	47.1			05-09	47	51.4			05-09	45.6	45.1		
Asian	MSS	05-09	492	498.3	1.6	L	05-09	543	554.6	2.9	L	05-09	719.1	730.0	2.7	L
	SD	05-09	51	52.0			05-09	54	62.4			05-09	50.2	54.5		
Native American	MSS	05-09	444	452.9	2.2	L	05-09	492	500.6	2.2	S	05-09	669.4	677.2	2.0	L
	SD	05-09	43	43.7			05-09	44	48.1			05-09	41.1	42.8		
All tested students	MSS	05-09	469	477.5	2.1		05-09	517	527.4	2.6		05-09	699.8	706.5	1.7	
	SD	05-09	53	51.2			05-09	52	57.2			05-09	50.4	50.5		
Low-income	MSS	05-09	449	NA	NA	NA	05-09	496	NA	NA	NA	05-09	NA	NA	NA	NA
	SD	05-09	47	NA			05-09	47	NA			05-09	NA	NA		
All tested students	MSS	06-09	466	477.5	3.8		06-09	514	527.4	4.5		06-09	703.2	706.5	1.1	
	SD	06-09	63	51.2			06-09	71	57.2			06-09	48.1	50.5		
Students with disabilities[3]	MSS	06-09	406	434.3	9.4	L	06-09	429	468.4	13.1	L	06-09	654.0	651.5	-0.8	S
	SD	06-09	112	51.9			06-09	134	44.8			06-09	37.3	39.9		
All tested students	MSS	06-09	466	477.5	3.8		06-09	514	527.4	4.5		06-09	703.2	706.5	1.1	
	SD	06-09	63	51.2			06-09	71	57.2			06-09	48.1	50.5		
English language learners[3]	MSS	06-09	418	431.9	4.6	L	06-09	456	462.3	2.1	S	06-09	641.6	643.4	0.6	S
	SD	06-09	50	36.4			06-09	59	35.7			06-09	28.5	32.0		
Female	MSS	05-09	475	NA	NA		05-09	521	NA	NA		05-09	NA	NA	NA	
	SD	05-09	53	NA			05-09	51	NA			05-09	NA	NA		
Male	MSS	05-09	464	NA	NA	NA	05-09	512	NA	NA	NA	05-09	NA	NA	NA	NA
	SD	05-09	53	NA			05-09	54	NA			05-09	NA	NA		

Table reads: In 2005, the mean scale score on the state 4th grade reading test was 491 for white students and 456 for African American students. In 2009, the mean scale score in 4th grade reading was 496.0 for white students and 464.2 for African American students. Between 2005 and 2009, the mean scale score improved at an average yearly rate of 1.3 points for white students and 2.1 points for African American students, indicating a narrowing of the achievement gap for African Americans.

Note: Arizona's Instrument to Measure Standards Dual Purpose Assessment for grades 3-8 is scored on a scale of 200-800. The AIMS High School assessment is scored on a scale of 500-900.

[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 AZ-14. Achievement gap 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. MSS = mean scale score. SD = standard deviation.
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					High School				
Subgroup	Statistic	Year span	Start year	End year	Avg. gain MSS[1]	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS[1]	Gain larger or smaller than comp. group	Year span	Start year	End year	Avg. gain MSS[1]	Gain larger or smaller than comp. group
All tested students	MSS	05-09	477	487.6	2.6		05-09	553	560.5	1.9		05-09	704.7	707.4	0.7	
	SD	05-09	53	57.4			05-09	58	60.4			05-09	46.1	45.7		
White	MSS	05-09	496	506.2	2.5		05-09	573	579.3	1.6		05-09	720.2	722.1	0.5	
	SD	05-09	50	55.8			05-09	56	59.6			05-09	45.4	45.7		
African American	MSS	05-09	459	468.2	2.3	S	05-09	532	539.1	1.8	L	05-09	689.0	691.2	0.5	E
	SD	05-09	51	54.7			05-09	52	55.5			05-09	39.2	40.6		
Latino	MSS	05-09	459	472.8	3.5	L	05-09	532	542.7	2.7	L	05-09	686.6	693.0	1.6	L
	SD	05-09	48	52.9			05-09	52	53.6			05-09	38.6	39.1		
Asian	MSS	05-09	507	520.0	3.3	L	05-09	592	601.2	2.3	L	05-09	734.3	738.8	1.1	L
	SD	05-09	55	60.5			05-09	63	70.5			05-09	53.5	53.4		
Native American	MSS	05-09	451	458.9	2.0	S	05-09	526	532.9	1.7	L	05-09	679.8	682.7	0.7	L
	SD	05-09	45	50.4			05-09	49	50.0			05-09	35.5	36.1		
All tested students	MSS	05-09	477	487.6	2.6		05-09	553	560.5	1.9		05-09	704.7	707.4	0.7	
	SD	05-09	53	57.4			05-09	58	60.4			05-09	46.1	45.7		
Low-income	MSS	05-09	459	NA	NA	NA	05-09	532	NA	NA	NA	05-09	NA	NA	NA	NA
	SD	05-09	48	NA			05-09	52	NA			05-09	NA	NA		
All tested students	MSS	06-09	479	487.6	2.9		06-09	550	560.5	3.5		06-09	701.6	707.4	1.9	
	SD	06-09	67	57.4			06-09	78	60.4			06-09	42.4	45.7		
Students with disabilities[3]	MSS	06-09	418	444.0	8.7	L	06-09	454	500.1	15.4	L	06-09	658.0	658.9	0.3	S
	SD	06-09	114	55.4			06-09	148	47.3			06-09	29.2	30.1		
All tested students	MSS	06-09	479	487.6	2.9		06-09	550	560.5	3.5		06-09	701.6	707.4	1.9	
	SD	06-09	67	57.4			06-09	78	60.4			06-09	42.4	45.7		
English language learners[3]	MSS	06-09	437	443.6	2.2	S	06-09	496	501.2	1.7	S	06-09	661.9	662.0	0.0	S
	SD	06-09	55	43.4			06-09	66	41.1			06-09	26.9	27.5		
Female	MSS	05-09	478	NA	NA		05-09	553	NA	NA		05-09	NA	NA	NA	
	SD	05-09	52	NA			05-09	56	NA			05-09	NA	NA		
Male	MSS	05-09	477	NA	NA	NA	05-09	554	NA	NA	NA	05-09	NA	NA	NA	NA
	SD	05-09	54	NA			05-09	60	NA			05-09	NA	NA		

Table reads: In 2005, the mean scale score on the state 4th grade math test was 496 for white students and 459 for African American students. In 2009, the mean scale score in 4th grade math was 506.2 for white students and 468.2 for African American students. Between 2005 and 2009, the mean scale score improved at

an average yearly rate of 2.5 points for white students and 2.3 points for African American students, indicating a widening of the achievement gap for African Americans.

Note: Arizona's Instrument to Measure Standards Dual Purpose Assessment for grades 3-8 is scored on a scale of 200-800. The AIMS High School assessment is scored on a scale of 500-900.

[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 AZ-15. Numbers of test-takers

		Grade 4					Grade 8					High School				
Subgroup	Subject	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	05-09	72,982	82,366	12.9%	100.0%	05-09	72,402	79,667	10.0%	100.0%	05-09	68,788	75,524	9.8%	100.0%
	Math	05-09	73,575	82,333	11.9%	100.0%	05-09	71,838	79,642	10.9%	100.0%	05-09	66,788	75,078	12.4%	100.0%
White	Reading	05-09	33,888	35,433	4.6%	43.0%	05-09	35,758	36,361	1.7%	45.6%	05-09	35,391	35,373	-0.1%	46.8%
	Math	05-09	34,063	35,415	4.0%	43.0%	05-09	35,421	36,345	2.6%	45.6%	05-09	34,360	35,217	2.5%	46.9%
African American	Reading	05-09	3,657	4,803	31.3%	5.8%	05-09	3,693	4,715	27.7%	5.9%	05-09	3,347	4,555	36.1%	6.0%
	Math	05-09	3,689	4,802	30.2%	5.8%	05-09	3,616	4,717	30.4%	5.9%	05-09	3,263	4,557	39.7%	6.1%
Latino	Reading	05-09	29,906	35,096	17.4%	42.6%	05-09	26,882	31,916	18.7%	40.1%	05-09	22,883	28,783	25.8%	38.1%
	Math	05-09	30,257	35,084	16.0%	42.6%	05-09	26,765	31,898	19.2%	40.1%	05-09	22,303	28,520	27.9%	38.0%
Asian	Reading	05-09	1,914	2,519	31.6%	3.1%	05-09	1,718	2,482	44.5%	3.1%	05-09	1,689	2,319	37.3%	3.1%
	Math	05-09	1,914	2,520	31.7%	3.1%	05-09	1,712	2,483	45.0%	3.1%	05-09	1,761	2,329	32.3%	3.1%
Native American	Reading	05-09	3,617	4,416	22.1%	5.4%	05-09	4,352	4,105	-5.7%	5.2%	05-09	5,122	4,409	-13.9%	5.8%
	Math	05-09	3,652	4,413	20.8%	5.4%	05-09	4,325	4,111	-4.9%	5.2%	05-09	4,762	4,400	-7.6%	5.9%
Low-income	Reading	05-09	36,115	NA	NA	NA	05-09	31,306	NA	NA	NA	05-09	NA	NA	NA	NA
	Math	05-09	36,530	NA	NA	NA	05-09	31,089	NA	NA	NA	05-09	NA	NA	NA	NA
Students w/ disabilities	Reading	06-09	9,586	9,520	-0.7%	11.6%	06-09	8,141	8,595	5.6%	10.8%	06-09	6,153	6,803	10.6%	9.0%
	Math	06-09	10,070	9,508	-5.6%	11.5%	06-09	7,453	8,600	15.4%	10.8%	06-09	4,891	6,775	38.5%	9.0%
English language learners	Reading	06-09	12,715	10,481	-17.6%	12.7%	06-09	9,123	5,461	-40.1%	6.9%	06-09	3,891	3,519	-9.6%	4.7%
	Math	06-09	12,844	10,480	-18.4%	12.7%	06-09	9,066	5,457	-39.8%	6.9%	06-09	3,843	3,646	-5.1%	4.9%
Female	Reading	05-09	36,202	NA	NA	NA	05-09	35,721	NA	NA	NA	05-09	NA	NA	NA	NA
	Math	05-09	36,349	NA	NA	NA	05-09	35,490	NA	NA	NA	05-09	NA	NA	NA	NA
Male	Reading	05-09	36,780	NA	NA	NA	05-09	36,681	NA	NA	NA	05-09	NA	NA	NA	NA
	Math	05-09	37,226	NA	NA	NA	05-09	36,348	NA	NA	NA	05-09	NA	NA	NA	NA

Table reads: In 2005, 33,888 students in the white subgroup took the state 4th grade reading test. By 2009, the number of white test-takers had risen to 35,433 students, an increase of 4.6%. In 2009, the white subgroup made up 43.0% of the 82,366 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.