Orange County Public Schools

Florida

Orange County Public Schools
FLORIDA

Background Information

Description of district: 2003–2006

	2003	2004	2005	2006
District characteristics				
Locale[1]	4	4	4	4
Number of schools	188	190	204	211
Percent of schools serving a large city	0	0	0	0
Student characteristics				
Enrollment	158,718	165,992	173,331	175,609
District size rank[2]	15	12	12	11
Percent low-income students[3]	43	41	50	46
Percent non-white students	58	59	61	63
Percent of students by race/ethnicity				
African American	28	28	28	28
Asian	4	4	4	4
Hispanic	25	27	28	30
White	42	40	38	37
Other	0	0	0	0
Not reported	0	0	0	0
Percent English language learners	12	14	16	18
Percent students with disabilities	16	16	16	15
District expenditures				
Total expenditures per pupil	$8,010	$7,914	$8,752	$10,043
Instructional expenditures per pupil	$3,601	$3,766	$3,910	$4,291
State expenditures				
Total expenditures per pupil	$6,439	$6,793	$7,215	$7,812
Instructional expenditures per pupil	$3,786	$4,019	$4,268	$4,618

SOURCE: Analysis of data from the U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD).
— Not available. † Data were suppressed due to unreliability. See methodology section.
[1] As defined by the Census Bureau, locale code 1 represents a large city; code 2 represents a mid-size city; code 3 represents the urban fringe of a large city; and code 4 represents the urban fringe of a mid-size city.
[2] District size rank is based on enrollment in local school districts in the 50 states and DC, and does not include other district types or territories.
[3] Low-income students are eligible for Free or Reduced-Price School Lunch (FRSL).
NOTES: CCD data for 2007 were not available at time of analysis and are not included in this table. Some data that were unavailable from CCD, or considered unreliable, were obtained from the state or district education agency.

State test information: 2004–2007

		Grades included in analysis			
Subject/level	Most recent test included in analysis	2004	2005	2006	2007
Reading					
Elementary	Florida Comprehensive Assessment Test (FCAT)	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5
Middle	Florida Comprehensive Assessment Test (FCAT)	6, 7, 8	6, 7, 8	6, 7, 8	6, 7, 8
High	Florida Comprehensive Assessment Test (FCAT)	9, 10	9, 10	9, 10	9, 10
Mathematics					
Elementary	Florida Comprehensive Assessment Test (FCAT)	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5
Middle	Florida Comprehensive Assessment Test (FCAT)	6, 7, 8	6, 7, 8	6, 7, 8	6, 7, 8
High	Florida Comprehensive Assessment Test (FCAT)	9, 10	9, 10	9, 10	9, 10

SOURCE: State education agency.
— Not available.
NOTES: **There were no test changes** during the period covered in this report.

Orange County Public Schools
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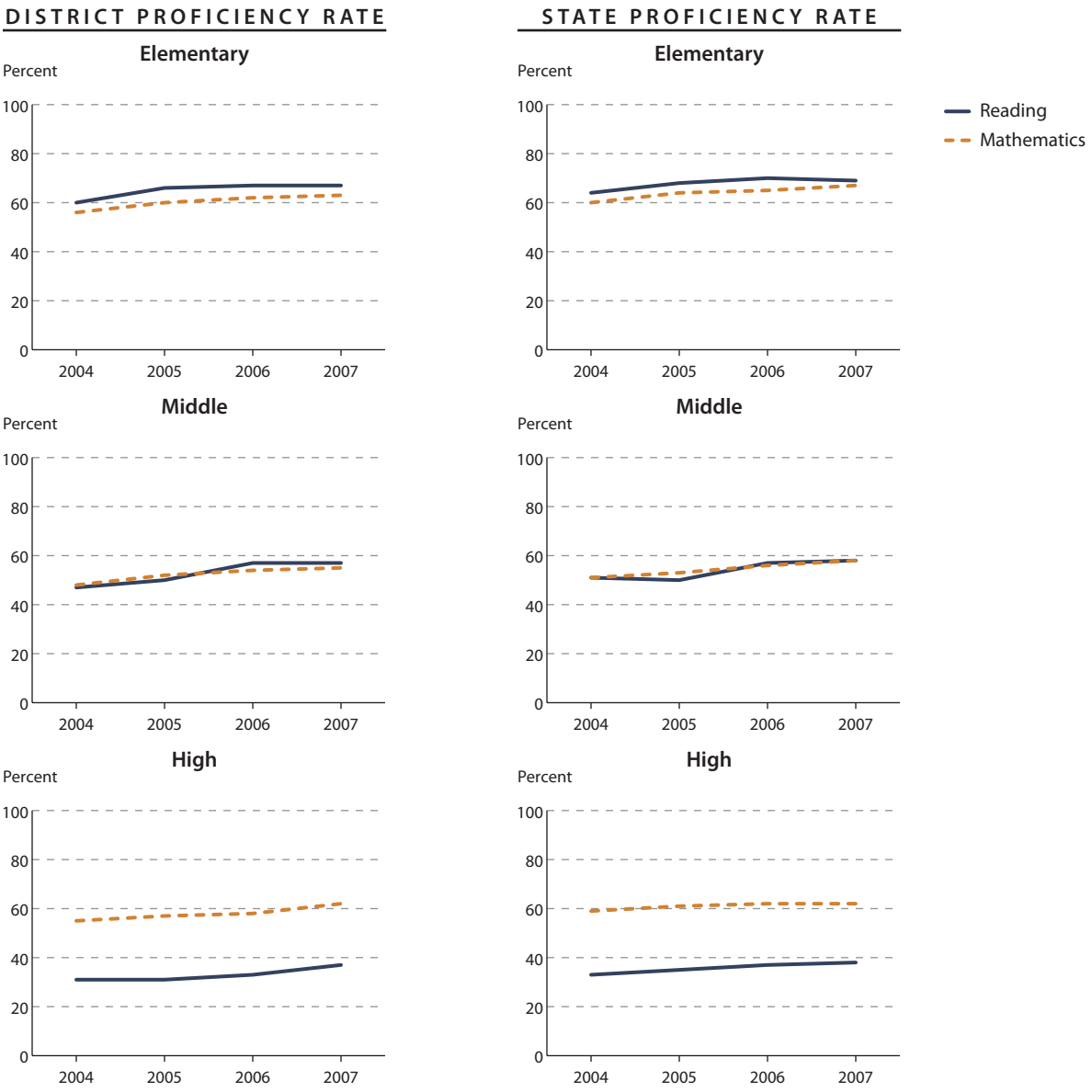
Trends in Overall Reading and Mathematics Proficiency

Percentage of all students in the district and the state scoring at or above proficient in reading and mathematics in elementary, middle, and high school: 2004–2007



SOURCE: Analysis of state test data.
NOTES: **See tables** on pages 8 and 10 for details.

Orange County Public Schools
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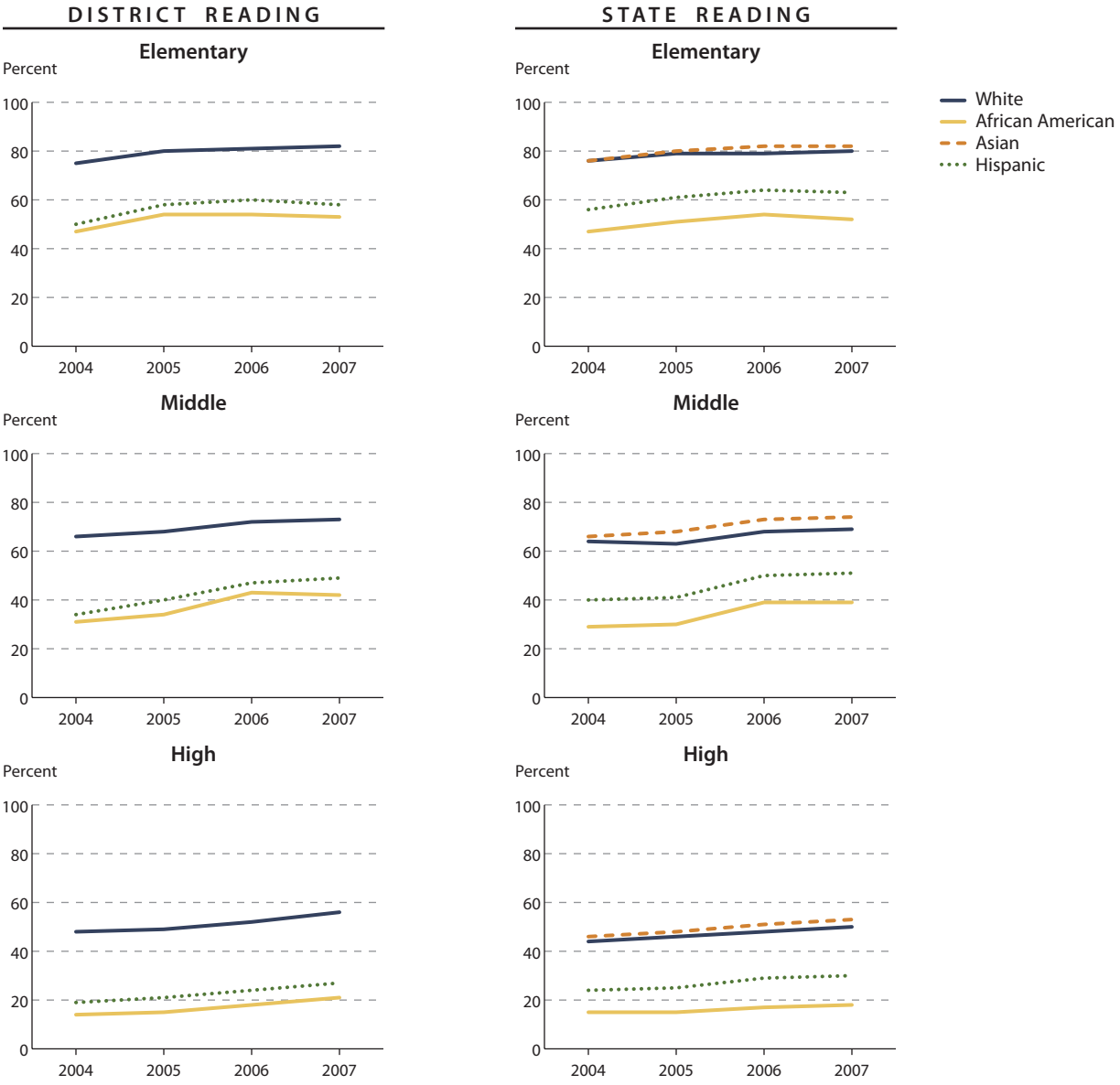
Race/Ethnicity Trends in Reading Proficiency

Percentage of students scoring at or above proficient in reading, by race/ethnicity, for the district and the state: 2004–2007



SOURCE: Analysis of state test data.
NOTES: **See table** on page 8 for details.

Orange County Public Schools
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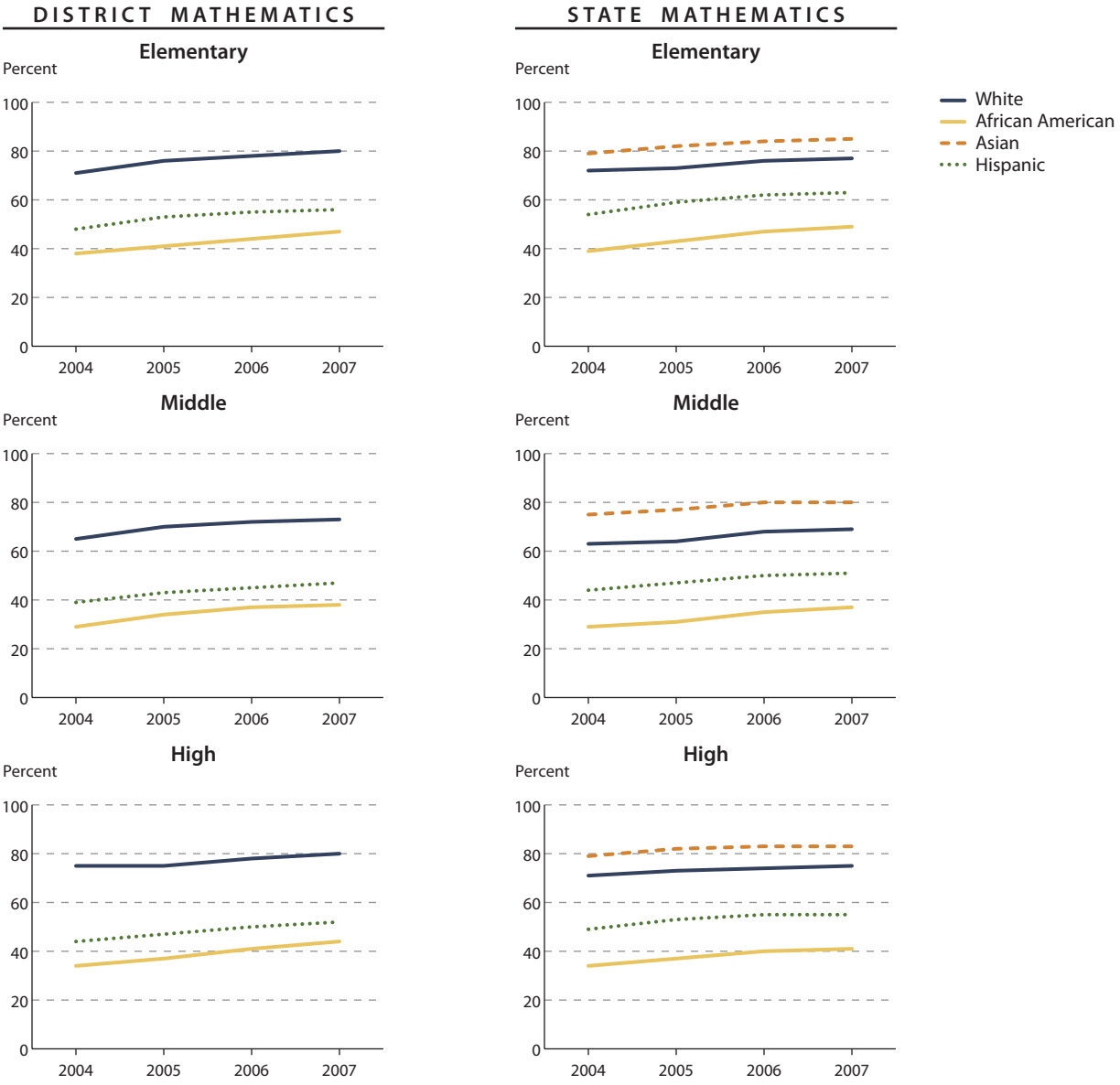
Race/Ethnicity Trends in Mathematics Proficiency

Percentage of students scoring at or above proficient in mathematics, by race/ethnicity, for the district and the state: 2004–2007



SOURCE: Analysis of state test data.
NOTES: **See table** on page 10 for details.

Orange County Public Schools
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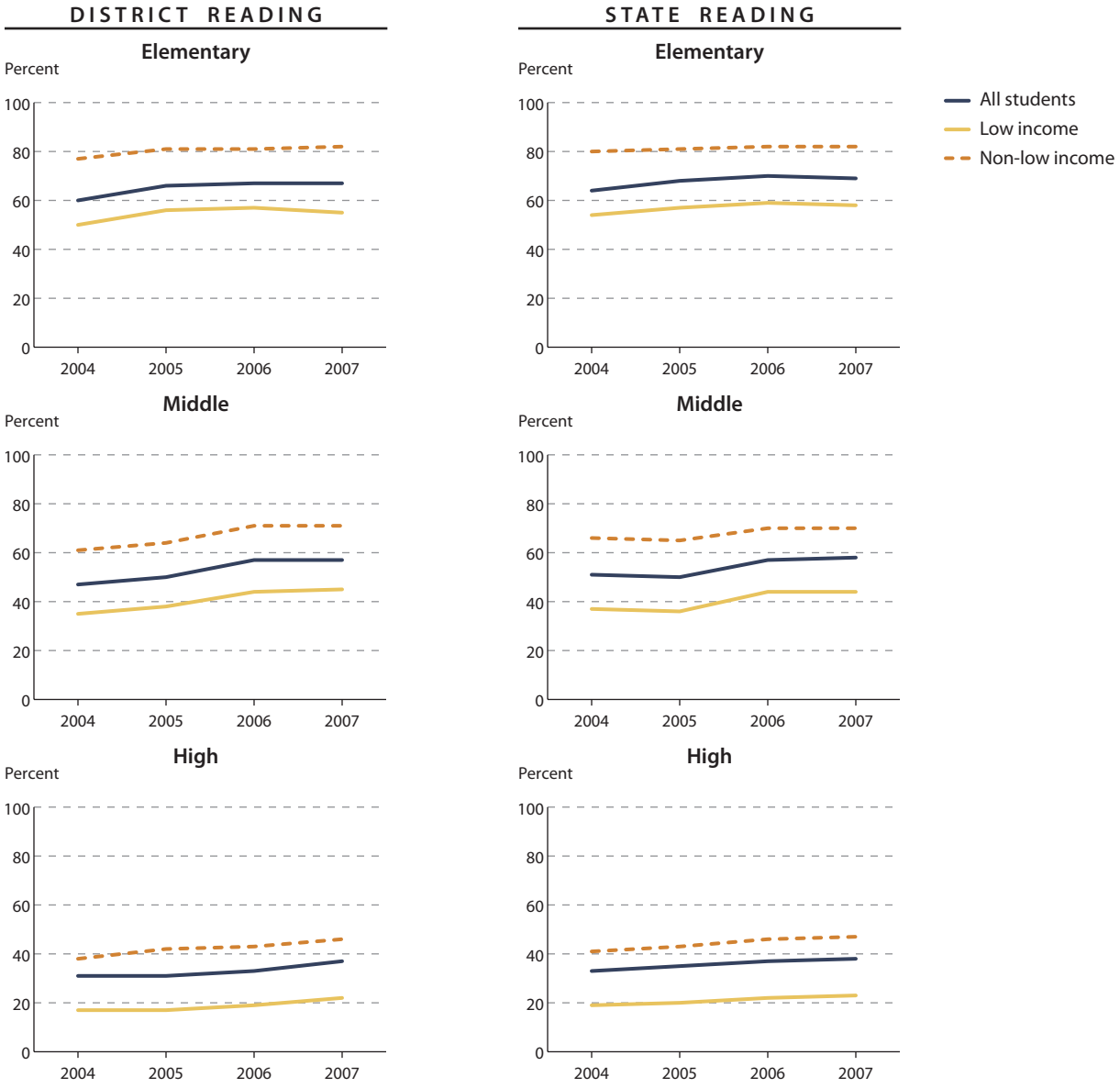
Income Status Trends in Reading Proficiency

Percentage of students scoring at or above proficient in reading, by income status, for the district and the state: 2004–2007

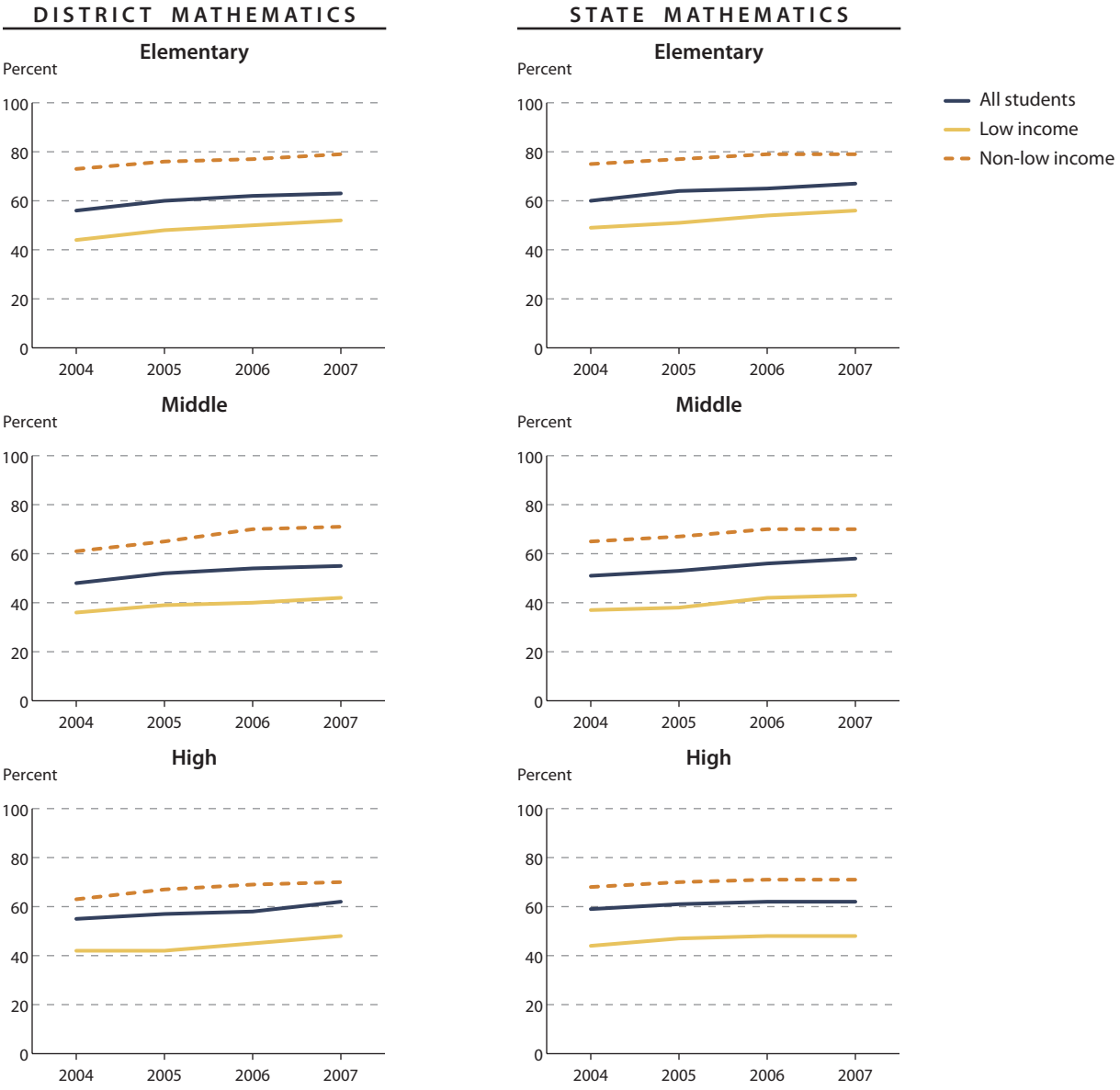


SOURCE: Analysis of state test data.
NOTES: **See table** on page 8 for details.

Orange County Public Schools
FLORIDA

Income Status Trends in Mathematics Proficiency

Percentage of students scoring at or above proficient in mathematics, by income status, for the district and the state: 2004–2007



SOURCE: Analysis of state test data.
NOTES: **See table** on page 10 for details.

Orange County Public Schools
FLORIDA

Reading Proficiency Data Summary

Percentage of students in the district and the state scoring at or above proficient in reading: 2004–2007

					Change			
	2004	2005	2006	2007	2004–2007	2005–2007	2006–2007	Overall improvement
Elementary								
District								
All	60	66	67	67	6	1	-1	4
African American	47	54	54	53	6	-1	-1	3
Asian	†	†	†	†	†	†	†	†
Hispanic	50	58	60	58	8	0	-1	5
White	75	80	81	82	6	2	1	4
Low income	50	56	57	55	5	0	-1	3
Non-low income	77	81	81	82	5	1	1	3
State								
All	64	68	70	69	5	1	-1	3
African American	47	51	54	52	5	1	-1	4
Asian	76	80	82	82	6	2	0	4
Hispanic	56	61	64	63	6	2	-1	5
White	76	79	79	80	4	2	1	2
Low income	54	57	59	58	3	1	-1	3
Non-low income	80	81	82	82	2	1	0	1
Middle								
District								
All	47	50	57	57	10	7	0	8
African American	31	34	43	42	11	8	-1	10
Asian	†	†	†	†	†	†	†	†
Hispanic	34	40	47	49	14	9	1	11
White	66	68	72	73	8	5	1	6
Low income	35	38	44	45	10	7	1	8
Non-low income	61	64	71	71	10	7	0	9
State								
All	51	50	57	58	7	7	0	7
African American	29	30	39	39	9	8	0	9
Asian	66	68	73	74	8	6	2	6
Hispanic	40	41	50	51	11	9	0	10
White	64	63	68	69	5	6	1	5
Low income	37	36	44	44	7	7	0	7
Non-low income	66	65	70	70	3	5	0	4
High								
District								
All	31	31	33	37	7	6	4	4
African American	14	15	18	21	7	6	3	5
Asian	†	†	†	†	†	†	†	†
Hispanic	19	21	24	27	8	6	3	6
White	48	49	52	56	8	7	4	5
Low income	17	17	19	22	5	5	2	4
Non-low income	38	42	43	46	8	4	3	5
State								
All	33	35	37	38	5	3	1	3
African American	15	15	17	18	4	4	1	3
Asian	46	48	51	53	7	5	2	5
Hispanic	24	25	29	30	6	5	1	5
White	44	46	48	50	6	4	2	4
Low income	19	20	22	23	4	4	1	3
Non-low income	41	43	46	47	6	4	2	4

SOURCE: Analysis of state test data.
— Not available. † Data were suppressed due to unreliability or if the subgroup represented less than 5 percent of test takers at a level. See methodology section.
‡ Calculation could not be performed due to a change in the state test.
NOTES: **Positive change values** appear in color. **"Overall improvement"** was generally calculated as the difference of average performance in 2006 and 2007 and average performance in 2004 and 2005; see methodology section.

Orange County Public Schools
FLORIDA

Reading Proficiency Gaps

Percentage-point gaps in reading proficiency rates between disadvantaged and advantaged groups: 2004–2007

					Change				
	2004	2005	2006	2007	2004–2007	2005–2007	2006–2007	Overall improvement	Gap closure type
Elementary									
Internal district gap									
African American vs. White	-28	-26	-27	-29	-1	-2	-2	-1	—
Hispanic vs. White	-25	-22	-21	-23	**1**	-1	-2	**1**	**1**
Low income vs. non-low income	-27	-25	-24	-26	**1**	-1	-2	**1**	**1**
Internal district vs. internal state gap									
African American vs. White	1	1	-1	-1	-2	-2	0	-2	—
Hispanic vs. White	-5	-4	-6	-6	-1	-1	0	-1	—
Low income vs. non-low income	-2	-1	-1	-2	0	-1	-1	0	—
External gap: district disadvantaged vs. state advantaged									
African American vs. White	-29	-25	-25	-27	**2**	-2	-2	**1**	**1**
Hispanic vs. White	-26	-21	-20	-22	**4**	-1	-2	**3**	**1**
Low income vs. non-low income	-30	-26	-25	-27	**3**	-1	-2	**2**	**1**
Middle									
Internal district gap									
African American vs. White	-34	-34	-30	-31	**3**	**2**	-2	**4**	**1**
Hispanic vs. White	-31	-28	-25	-25	**7**	**4**	0	**5**	**1**
Low income vs. non-low income	-26	-26	-27	-26	-1	0	**1**	-1	—
Internal district vs. internal state gap									
African American vs. White	0	-1	0	-1	-1	0	-1	0	—
Hispanic vs. White	-7	-6	-7	-6	**1**	0	**1**	0	—
Low income vs. non-low income	4	3	-1	0	-5	-3	0	-4	—
External gap: district disadvantaged vs. state advantaged									
African American vs. White	-33	-29	-26	-27	**6**	**2**	-2	**5**	**1**
Hispanic vs. White	-30	-24	-21	-20	**9**	**3**	**1**	**6**	**1**
Low income vs. non-low income	-31	-27	-26	-25	**6**	**2**	**1**	**4**	**1**
High									
Internal district gap									
African American vs. White	-34	-34	-34	-35	-1	-1	0	-1	—
Hispanic vs. White	-29	-28	-28	-29	0	-1	-1	0	—
Low income vs. non-low income	-21	-25	-24	-25	-4	**1**	-1	-1	—
Internal district vs. internal state gap									
African American vs. White	-5	-2	-4	-4	**1**	-1	0	0	—
Hispanic vs. White	-9	-7	-9	-9	0	-2	0	-1	—
Low income vs. non-low income	1	-2	0	-1	-2	**1**	-1	0	—
External gap: district disadvantaged vs. state advantaged									
African American vs. White	-30	-31	-30	-29	**1**	**2**	**2**	**1**	**1**
Hispanic vs. White	-25	-25	-24	-22	**2**	**3**	**1**	**2**	**1**
Low income vs. non-low income	-24	-26	-26	-25	-1	**1**	**1**	0	—

SOURCE: Analysis of state test data.

— Not available. † Data were suppressed due to unreliability or if the subgroup represented less than 5 percent of test takers at a level. See methodology section. ‡ Calculation could not be performed due to a change in the state test.

NOTES: **In the first four columns,** negative numbers indicate an achievement gap, where the disadvantaged group performed lower than the advantaged group. (Positive numbers indicate the disadvantaged group performed higher than the advantaged group.) **In the "change" columns,** negative numbers indicate the achievement gap widened; positive numbers indicate the achievement gap narrowed. **Positive change values** appear in color. **Gap closure types include:** (1) Both advantaged and disadvantaged group proficiencies are increasing. The gap is closing because the disadvantaged group proficiency is increasing at a faster rate than the advantaged group. This is the most desirable type of gap closure. (2) The gap is closing; however, the advantaged group proficiency is unchanged or decreasing. (3) The disadvantaged group proficiency is unchanged or decreasing and the advantaged group proficiency is decreasing. The gap is closing because the advantaged group proficiency is decreasing at a faster rate than the disadvantaged group proficiency. (4) The number in the internal district vs. internal state improvement column is positive; however, the gap is not closing. The number is positive because the gap for the district's disadvantaged group is unchanged or increasing and the gap for the state's disadvantaged group is increasing, but the gap for the district is increasing at a slower rate. **"Overall improvement"** was generally calculated as the difference of average performance in 2006 and 2007 and average performance in 2004 and 2005; see methodology section.

Orange County Public Schools
FLORIDA

Mathematics Proficiency Data Summary

Percentage of students in the district and the state scoring at or above proficient in mathematics: 2004–2007

					Change			
	2004	2005	2006	2007	2004–2007	2005–2007	2006–2007	Overall improvement
Elementary								
District								
All	56	60	62	63	**8**	**4**	**2**	**5**
African American	38	41	44	47	**9**	**6**	**3**	**6**
Asian	†	†	†	†	†	†	†	†
Hispanic	48	53	55	56	**9**	**4**	**1**	**5**
White	71	76	78	80	**9**	**4**	**2**	**5**
Low income	44	48	50	52	**7**	**3**	**1**	**5**
Non-low income	73	76	77	79	**6**	**3**	**1**	**4**
State								
All	60	64	65	67	**7**	**4**	**2**	**5**
African American	39	43	47	49	**9**	**5**	**2**	**7**
Asian	79	82	84	85	**6**	**3**	**1**	**4**
Hispanic	54	59	62	63	**9**	**4**	**1**	**6**
White	72	73	76	77	**6**	**4**	**2**	**4**
Low income	49	51	54	56	**7**	**5**	**2**	**5**
Non-low income	75	77	79	79	**3**	**1**	0	**2**
Middle								
District								
All	48	52	54	55	**8**	**3**	**1**	**5**
African American	29	34	37	38	**9**	**5**	**2**	**6**
Asian	†	†	†	†	†	†	†	†
Hispanic	39	43	45	47	**8**	**4**	**2**	**5**
White	65	70	72	73	**8**	**3**	**1**	**5**
Low income	36	39	40	42	**6**	**2**	**1**	**4**
Non-low income	61	65	70	71	**10**	**5**	0	**7**
State								
All	51	53	56	58	**7**	**5**	**2**	**5**
African American	29	31	35	37	**8**	**6**	**2**	**6**
Asian	75	77	80	80	**5**	**3**	0	**4**
Hispanic	44	47	50	51	**7**	**4**	**1**	**5**
White	63	64	68	69	**6**	**5**	**1**	**5**
Low income	37	38	42	43	**6**	**5**	**1**	**4**
Non-low income	65	67	70	70	**5**	**3**	0	**3**
High								
District								
All	55	57	58	62	**7**	**5**	**3**	**4**
African American	34	37	41	44	**10**	**7**	**3**	**7**
Asian	†	†	†	†	†	†	†	†
Hispanic	44	47	50	52	**9**	**5**	**2**	**6**
White	75	75	78	80	**5**	**5**	**2**	**4**
Low income	42	42	45	48	**7**	**7**	**3**	**5**
Non-low income	63	67	69	70	**7**	**4**	**2**	**4**
State								
All	59	61	62	62	**3**	**2**	**1**	**2**
African American	34	37	40	41	**6**	**4**	**1**	**5**
Asian	79	82	83	83	**4**	**2**	0	**3**
Hispanic	49	53	55	55	**6**	**2**	0	**4**
White	71	73	74	75	**4**	**2**	**1**	**3**
Low income	44	47	48	48	**4**	**2**	**1**	**3**
Non-low income	68	70	71	71	**4**	**1**	0	**2**

SOURCE: Analysis of state test data.
— Not available. † Data were suppressed due to unreliability or if the subgroup represented less than 5 percent of test takers at a level. See methodology section.
‡ Calculation could not be performed due to a change in the state test.
NOTES: **Positive change values** appear in color. **"Overall improvement"** was generally calculated as the difference of average performance in 2006 and 2007 and average performance in 2004 and 2005; see methodology section.

Orange County Public Schools
FLORIDA

Mathematics Proficiency Gaps

Percentage-point gaps in mathematics proficiency rates between disadvantaged and advantaged groups: 2004–2007

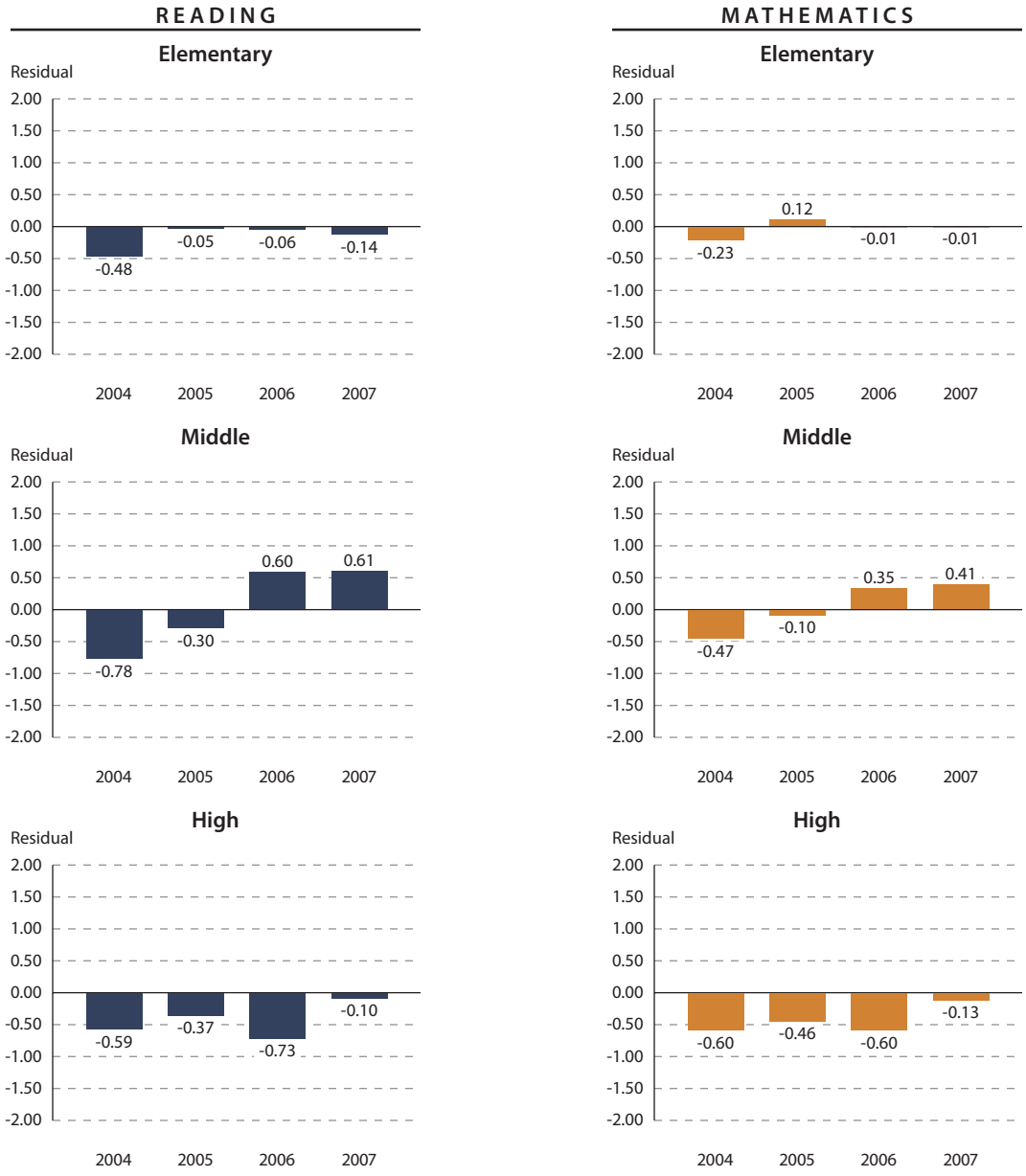
					Change				
	2004	2005	2006	2007	2004–2007	2005–2007	2006–2007	Overall improvement	Gap closure type
Elementary									
Internal district gap									
African American vs. White	-34	-35	-34	-33	1	2	1	1	1
Hispanic vs. White	-24	-24	-23	-24	0	0	0	0	—
Low income vs. non-low income	-29	-28	-27	-27	2	0	0	1	1
Internal district vs. internal state gap									
African American vs. White	-1	-5	-5	-4	-3	1	1	-2	—
Hispanic vs. White	-6	-9	-9	-9	-3	0	1	-2	—
Low income vs. non-low income	-3	-2	-3	-5	-2	-3	-2	-2	—
External gap: district disadvantaged vs. state advantaged									
African American vs. White	-34	-32	-31	-30	4	2	1	2	1
Hispanic vs. White	-24	-21	-21	-21	3	0	0	1	1
Low income vs. non-low income	-31	-29	-28	-27	4	2	1	2	1
Middle									
Internal district gap									
African American vs. White	-35	-36	-35	-35	0	1	0	1	1
Hispanic vs. White	-26	-27	-26	-26	0	1	0	0	—
Low income vs. non-low income	-25	-26	-30	-29	-4	-3	1	-4	—
Internal district vs. internal state gap									
African American vs. White	-1	-2	-3	-3	-1	0	0	-1	—
Hispanic vs. White	-7	-10	-9	-8	-1	1	1	0	—
Low income vs. non-low income	3	3	-2	-2	-5	-5	0	-5	—
External gap: district disadvantaged vs. state advantaged									
African American vs. White	-33	-31	-31	-31	3	0	0	1	1
Hispanic vs. White	-24	-22	-22	-22	2	0	0	1	1
Low income vs. non-low income	-30	-28	-29	-28	1	0	1	0	—
High									
Internal district gap									
African American vs. White	-41	-38	-37	-36	5	2	1	3	1
Hispanic vs. White	-31	-28	-28	-28	4	0	0	2	1
Low income vs. non-low income	-22	-25	-23	-22	0	3	1	1	1
Internal district vs. internal state gap									
African American vs. White	-4	-2	-3	-2	2	0	1	0	—
Hispanic vs. White	-9	-7	-9	-8	1	0	1	0	—
Low income vs. non-low income	2	-1	0	1	-1	3	1	0	—
External gap: district disadvantaged vs. state advantaged									
African American vs. White	-37	-36	-34	-31	6	5	3	4	1
Hispanic vs. White	-28	-25	-24	-22	5	3	2	3	1
Low income vs. non-low income	-26	-29	-26	-23	3	6	3	3	1

SOURCE: Analysis of state test data.
— Not available. † Data were suppressed due to unreliability or if the subgroup represented less than 5 percent of test takers at a level. See methodology section. ‡ Calculation could not be performed due to a change in the state test.
NOTES: **In the first four columns,** negative numbers indicate an achievement gap, where the disadvantaged group performed lower than the advantaged group. (Positive numbers indicate the disadvantaged group performed higher than the advantaged group.) **In the "change" columns,** negative numbers indicate the achievement gap widened; positive numbers indicate the achievement gap narrowed. **Positive change values** appear in color. **Gap closure types include:** (1) Both advantaged and disadvantaged group proficiencies are increasing. The gap is closing because the disadvantaged group proficiency is increasing at a faster rate than the advantaged group. This is the most desirable type of gap closure. (2) The gap is closing; however, the advantaged group proficiency is unchanged or decreasing. (3) The disadvantaged group proficiency is unchanged or decreasing and the advantaged group proficiency is decreasing. The gap is closing because the advantaged group proficiency is decreasing at a faster rate than the disadvantaged group proficiency. (4) The number in the internal district vs. internal state improvement column is positive; however, the gap is not closing. The number is positive because the gap for the district's disadvantaged group is unchanged or increasing and the gap for the state's disadvantaged group is increasing, but the gap for the district is increasing at a slower rate. **"Overall improvement"** was generally calculated as the difference of average performance in 2006 and 2007 and average performance in 2004 and 2005; see methodology section.

Orange County Public Schools
FLORIDA

Trends in Actual vs. Expected Performance for ALL STUDENTS

Standardized residuals[1] for the percentage of students in the district scoring at or above proficient in reading and mathematics, controlling for poverty level: 2004–2007



SOURCE: Analysis of state test data.
[1] Positive residuals indicate higher-than-expected performance, and negative residuals indicate lower-than-expected performance, given the district's poverty level. Residuals are expressed in standard units.
NOTES: **See table** on page 13 for details.

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Standardized Residuals Data for Reading and Mathematics

Standardized residuals[1] for regressions of the percentage of students in the district scoring at or above proficient on the percentage of poverty in the district: 2004–2007

	2004	2005	2006	2007	Overall performance	Overall improvement
Reading						
Elementary						
All	-0.48	-0.05	-0.06	-0.14	-0.10	**0.17**
African American	0.03	0.61	0.49	0.21	**0.35**	**0.03**
Hispanic	-0.65	-0.03	0.16	-0.16	0.00	**0.35**
Low income	-0.62	-0.25	-0.55	-0.46	-0.50	-0.07
Middle						
All	-0.78	-0.30	0.60	0.61	**0.60**	**1.14**
African American	0.02	0.36	0.95	0.85	**0.90**	**0.71**
Hispanic	-0.69	-0.23	0.16	0.41	**0.29**	**0.75**
Low income	-0.65	-0.28	0.15	0.32	**0.23**	**0.70**
High						
All	-0.59	-0.37	-0.73	-0.10	-0.41	**0.07**
African American	0.11	0.17	0.50	0.83	**0.66**	**0.52**
Hispanic	-0.68	-0.41	-0.44	-0.06	-0.25	**0.30**
Low income	†	†	-0.86	-0.51	-0.69	**0.35**
Mathematics						
Elementary						
All	-0.23	0.12	-0.01	-0.01	-0.01	**0.04**
African American	0.09	0.27	0.18	†	**0.18**	**0.01**
Hispanic	-0.47	-0.33	-0.18	-0.27	-0.22	**0.18**
Low income	-0.49	-0.17	-0.45	†	-0.45	-0.12
Middle						
All	-0.47	-0.10	0.35	0.41	**0.38**	**0.66**
African American	-0.02	0.34	0.83	0.77	**0.80**	**0.64**
Hispanic	-0.46	-0.21	-0.15	-0.04	-0.10	**0.24**
Low income	-0.31	-0.18	-0.04	0.04	0.00	**0.25**
High						
All	-0.60	-0.46	-0.60	-0.13	-0.37	**0.16**
African American	0.00	0.04	0.30	0.56	**0.43**	**0.41**
Hispanic	-0.97	-0.47	-0.53	-0.05	-0.29	**0.43**
Low income	†	-0.56	-0.49	-0.22	-0.35	**0.21**
Positive residuals, total						
All	0	1	2	2	**2**	**6**
African American	4	6	6	5	**6**	**6**
Hispanic	0	0	2	1	**1**	**6**
Low income	0	0	1	2	**1**	**4**
Available residuals, total						
All	6	6	6	6	**6**	**6**
African American	6	6	6	5	**6**	**6**
Hispanic	6	6	6	6	**6**	**6**
Low income	4	5	6	5	**6**	**6**

SOURCE: Analysis of state test data.
— Not available. † Data were suppressed due to unreliability or if the subgroup represented less than 5 percent of test takers at a level. See methodology section.
[1] Positive residuals indicate higher-than-expected performance, and negative residuals indicate lower-than-expected performance, given the district's poverty level. Residuals are expressed in standard units.
NOTES: **Positive performance** and improvement values appear in color. **For residuals, "overall performance"** is the average for 2006 and 2007. **For the count** of "positive residuals" and "available residuals", the "overall performance" column shows the total count of positive residuals in the column, and the "overall improvement" column shows the total count of available residuals in the column. **"Overall improvement"** was generally calculated as the difference of average performance in 2006 and 2007 and average performance in 2004 and 2005; see methodology section.

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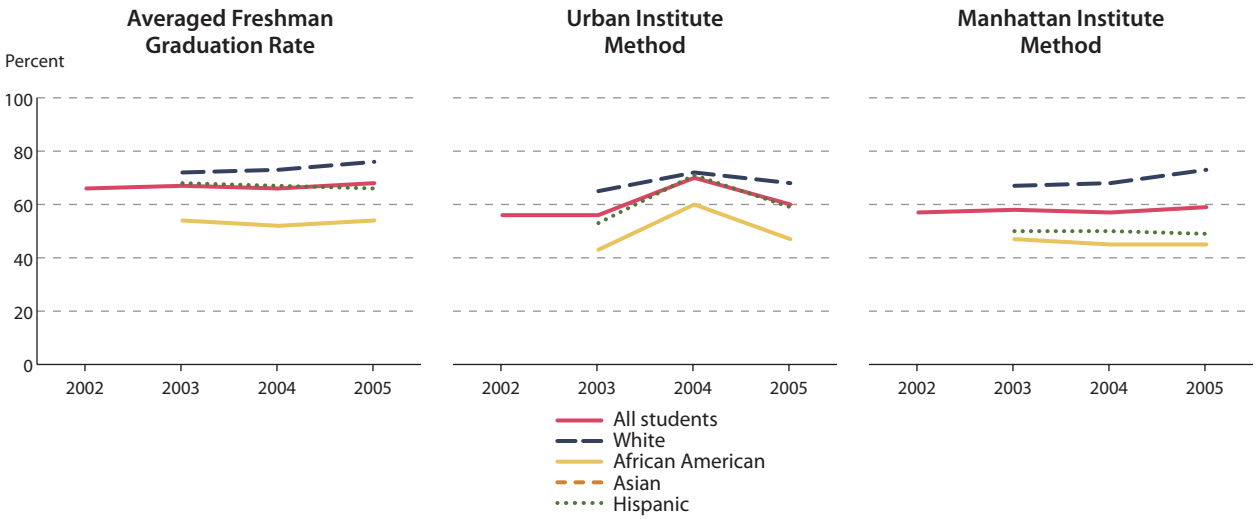
High School Graduation Rates

Three estimated high school graduation rates: 2002–2005



Estimated high school graduation rates for the classes of 2002–2005

					Change			
	2002	2003	2004	2005	2002–2005	2003–2005	2004–2005	Overall improvement
Averaged Freshman Graduation Rate								
All	66	67	66	68	**2**	**1**	**1**	0
African American	—	54	52	54	—	0	**2**	-1
Asian	—	†	†	†	—	†	†	†
Hispanic	—	68	67	66	—	-2	-1	-1
White	—	72	73	76	—	**4**	**3**	**2**
Urban Institute method[1]								
All	56	56	70	60	**5**	**4**	-9	**9**
African American	—	43	60	47	—	**4**	-13	**11**
Asian	—	†	†	†	—	†	†	†
Hispanic	—	53	71	59	—	**5**	-12	**12**
White	—	65	72	68	—	**2**	-5	**5**
Manhattan Institute method[1]								
All	57	58	57	59	**1**	**1**	**1**	0
African American	—	47	45	45	—	-2	**1**	-2
Asian	—	†	†	†	—	†	†	†
Hispanic	—	50	50	49	—	0	-1	0
White	—	67	68	73	—	**5**	**5**	**3**

SOURCE: Analysis of data from the U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD).
— Not available. † Data were suppressed due to unreliability or if a subgroup represented less than 5 percent of the population. See methodology section.
[1] The Urban Institute method is also known as Swanson's cumulative promotion index (SCPI) and the Manhattan Institute method is also known as Greene's graduation indicator (GGI).
NOTES: **Gaps in lines** represent missing data. **Positive change values** appear in color. **Graduation data** by race/ethnicity were not available for 2002. **"Overall improvement"** was generally calculated as the difference of average performance in 2004 and 2005 and average performance in 2002 and 2003; see methodology section.

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College Readiness Data

Test scores and participation rates for college readiness examinations: 2004–2007

					Change			
	2004	2005	2006	2007	2004–2007	2005–2007	2006–2007	Overall Improvement
SAT Reasoning Test[1]								
Mean total score (reading and mathematics)								
All	993	998	989	986	-7	-12	-3	-8
African American	873	875	863	862	-11	-13	-1	-12
Asian	1,027	1,060	1,044	1,034	**7**	-26	-10	-5
Hispanic	941	947	935	937	-4	-10	**2**	-8
White	1,045	1,061	1,058	1,057	**12**	-4	-1	**5**
Participation rate								
All	50	50	51	54	**4**	**5**	**3**	**3**
African American	34	35	36	39	**5**	**4**	**3**	**3**
Asian	69	70	78	79	**10**	**8**	**1**	**9**
Hispanic	35	37	41	46	**11**	**9**	**5**	**7**
White	42	50	52	54	**12**	**4**	**3**	**7**
ACT[1]								
Mean composite score (English, reading, mathematics, and science)								
All	21	21	20	19	-1	-1	-1	-1
African American	18	18	17	17	-1	-1	-1	-1
Asian	22	23	22	21	-1	-2	-1	-1
Hispanic	19	20	19	18	-2	-2	-1	-1
White	22	22	22	22	0	0	0	0
Participation rate								
All	25	24	30	37	**12**	**13**	**7**	**9**
African American	24	23	28	35	**11**	**12**	**7**	**8**
Asian	35	33	32	39	**4**	**6**	**7**	**2**
Hispanic	17	16	20	29	**12**	**13**	**9**	**8**
White	22	22	24	27	**5**	**5**	**3**	**4**
Advanced Placement (AP) (all subjects)[2]								
Percent of tests taken with scores of 3 or above								
All	54	48	44	46	-9	-2	**2**	-6
African American	35	27	26	27	-7	0	**2**	-4
Asian	52	45	41	48	-3	**3**	**7**	-3
Hispanic	58	47	46	43	-15	-4	-4	-8
White	58	52	48	51	-7	-1	**3**	-6
Participation rate								
All	15	17	20	22	**7**	**5**	**2**	**5**
African American	6	7	8	10	**4**	**3**	**1**	**3**
Asian	†	†	38	43	†	†	**6**	**6**
Hispanic	14	15	16	18	**4**	**3**	**2**	**3**
White	17	21	24	27	**10**	**6**	**2**	**6**

SOURCE: Analysis of data from the Common Core of Data (CCD), ACT, and the College Board (copyright © 2004–2007 The College Board. www.collegeboard.com).
— Not available.
† Test scores were suppressed if fewer than 15 students took the test. Participation rates were suppressed due to unreliability or if the subgroup represented less than 5 percent of district enrollment in the relevant grades. See methodology section.
[1] Describes the most recent test results for graduating seniors.
[2] Describes test results for juniors and seniors taking any AP test in the given year.
NOTES: **Subgroup participation rates** may not reflect the "all students" rate due to some test takers not reporting their race/ethnicity. **Positive change values** appear in color. **CCD data for 2007** were not available at the time of this analysis; participation rates for 2007 were estimated using 2006 enrollment data. **"Overall improvement"** was generally calculated as the difference of average performance in 2006 and 2007 and average performance in 2004 and 2005; see methodology section.

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Adequate Yearly Progress (AYP)

Breakdown by subgroup of whether or not AYP was achieved (yes or no): 2005–2007

	2005		2006		2007	
	District	State	District	State	District	State
Percent of schools meeting AYP targets	30	36	23	28	31	33
		Met AYP? (Y/N)		Met AYP? (Y/N)		Met AYP? (Y/N)
District Overall AYP Status		**N**		**N**		**N**
Proficiency						
English language arts						
All Students		Y		Y		Y
African American		Y		N		N
American Indian/Alaska Native		Y		Y		Y
Asian/Pacific Islander		Y		Y		Y
Hispanic		Y		Y		N
White		Y		Y		Y
Low income		Y		Y		N
English language learners		N		N		N
Students with disabilities		N		N		N
Mathematics						
All Students		Y		Y		Y
African American		N		N		N
American Indian/Alaska Native		Y		Y		Y
Asian/Pacific Islander		Y		Y		Y
Hispanic		Y		Y		N
White		Y		Y		Y
Low income		Y		N		N
English language learners		N		N		N
Students with disabilities		N		N		N
Participation						
English language arts						
All Students		Y		Y		Y
African American		Y		Y		Y
American Indian/Alaska Native		Y		Y		Y
Asian/Pacific Islander		Y		Y		Y
Hispanic		Y		Y		Y
White		Y		Y		Y
Low income		Y		Y		Y
English language learners		Y		Y		Y
Students with disabilities		N		Y		Y
Mathematics						
All Students		Y		Y		Y
African American		Y		Y		Y
American Indian/Alaska Native		Y		Y		Y
Asian/Pacific Islander		Y		Y		Y
Hispanic		Y		Y		Y
White		Y		Y		Y
Low income		Y		Y		Y
English language learners		Y		Y		Y
Students with disabilities		N		Y		Y

SOURCE: Data collected by American Institutes for Research from state websites and education agencies.
— Not available.

Technical Notes and Methodology

Understanding the Data Report

This data report contains all of the data collected and analyzed for selection of The 2008 Broad Prize finalists. It does not contain summaries that compare the district to other districts, nor any additional quantitative or qualitative data collected or analyzed for selection of the winner.

The Broad Prize finalists are determined by a panel of education experts from around the country, based on a review of the data and analyses for the 100 Broad Prize-eligible districts. There is neither a strict formula nor set of weighting factors applied to the data. Each Broad Prize Review Board member considers all of the data and analyses available each year and, based on his or her knowledge and expertise, selects five finalists. Both performance as of the most recent year and improvement over the four most recent years on the various measures included in this report are considered by the Review Board.

The rest of this section discusses the data collection and analysis procedures used to produce the data report. First, it describes the criteria and data sources for identifying the eligible districts. Second, it reviews each of the quantitative achievement measures used by the Review Board in March 2008 to identify the five finalists and the data on which the measures were based.

Eligible Districts

To be eligible for The Broad Prize, school districts must meet certain criteria set by The Broad Foundation related to size, poverty and urbanicity. Winners from the previous three years are ineligible. The criteria for eligibility are:

- All K–12 districts serving more than 100,000 students (25 districts).
- All K–12 districts serving between 35,000 and 99,999 students in which at least 40 percent of students are eligible for free or reduced-price school lunch (FRSL), in which at least 40 percent of student enrollment comes from minority groups, and which have an urban designation (Locale Code 1, 2 or 3 in the CCD data[1]) (63 districts).
- The largest urban district (Locale Code 1, 2 or 3) in states with no districts meeting the above criteria, as long as the district has at least 20,000 students (11 districts).
- The next largest districts in the nation meeting the criteria of 40 percent FRSL, 40 percent minority and an urban designation (Locale Code 1, 2 or 3). The purpose of this criterion was to bring the total number of districts to 100 (1 district).

For The 2008 Broad Prize, the 2005, 2006 and 2007 winners, Norfolk, Boston and New York City, respectively, were removed from eligibility and the 2004 winner (Garden Grove) became eligible again. Data for the non-eligible previous winners were also collected and reported to The Broad Prize Review Board.

1 Locale Code 1 (Large City) represents a city with a population of 250,000 or larger that is the central city in a Census Bureau Core-Based Statistical Area (CBSA) or Consolidated Statistical Area (CSA); Code 2 (Mid-size City) is a city with less than 250,000 people that nonetheless is a central city in a CBSA or CSA; and Code 3 (Urban Fringe of a Large City) represents an area defined as urban by the Census Bureau and that falls within the CBSA or CSA of a large city.

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The 100 eligible school districts are located in 38 states and the District of Columbia. Twelve states—Delaware, Hawaii, Idaho, Maine, Massachusetts, Montana, New Hampshire, North Dakota, South Dakota, Vermont, West Virginia and Wyoming—have no eligible districts this year. Hawaii is ineligible because it has a statewide school system.

Data Used for Measures of Student Achievement

Detailed data on various measures of student achievement were obtained for each district, using federal, state and other sources. Wherever possible, data were collected by grade level, race/ethnicity (African-American, Asian, Hispanic and White), and income status (low income and non-low income). The achievement data examined included performance on state achievement tests, graduation rates based on federal counts of high school enrollments and completions, college readiness data obtained from the College Board and ACT, and information on Adequate Yearly Progress (AYP) compiled and reported by the American Institutes for Research (AIR) from a database maintained by the U.S. Department of Education and from state sources.

National Assessment of Educational Progress (NAEP)

To provide context for the state achievement data, state performance on the National Assessment of Educational Progress (NAEP) was also obtained. On a regular basis, the NAEP—administered by the National Center for Education Statistics (NCES)—publishes achievement scores for the nation for students in the 4th, 8th and 12th grades (national NAEP), and achievement scores for participating states for students in the 4th and 8th grades (state NAEP). These scores are based on tests administered to samples of students at the different grade levels. State NAEP scores were presented to the Review Board as a means of "calibrating" test results among states. Additional information was presented to the Review Board from both the 2007 NAEP Trial Urban District Assessment (TUDA) and an NCES study mapping states' 2005 state proficiency standards onto the 2005 NAEP scales (a similar 2007 study is not yet available). The 2007 NAEP Trial Urban District Assessment (TUDA) data for 4th- and 8th-grade reading and mathematics were available for 11 large urban school districts, all of which were either eligible for The 2008 Broad Prize or a past winner. The results of the 2005 NCES study of proficiency standards were available for 32 of the states with eligible districts. These data were presented to provide additional contextual information for the Review Board. The NAEP scores are publicly available and are not included in this data report.

Reading and Mathematics Proficiency as Determined by State Tests

Key indicators of student performance are scores on state-mandated achievement tests and trends in scores over time. Test score data in reading and mathematics were collected from each state for 2004 through 2007.[2] These data were used to calculate the percentage of students in each district scoring at or above proficiency on their state tests in reading and mathematics in each grade. Weighted by the number of test takers at each grade level, these data on student achievement were aggregated across elementary grades (third through fifth), middle grades (sixth through eighth), and high school grades (ninth through 12th), where available. These state assessment data were analyzed (using methods described later) to calculate actual versus expected performance, gaps

2 The data were provided directly by state agencies or downloaded from their websites.

between low- and non-low-income students, and gaps between White and African-American students and White and Hispanic students. Changes in gaps over time were also computed and gap closures presented.

High School Graduation Rates

Another key measure of student performance is the graduation rate. While using longitudinal student data generates the most accurate graduation rate, such data are not currently available in most states. In the absence of longitudinal data, cross-sectional data can be used to generate estimates of rates of high school graduation. There are several methods generally considered reliable estimators of graduation rates, three of which are used in this report and are described in the next section on methods of analysis.

In order to generate estimates that are comparable across the 100 Broad Prize-eligible districts, MPR obtains diploma counts and enrollment data for the districts from the federal Common Core of Data (CCD). The data used to create graduation rate estimates include total and subgroup enrollments and completion counts for each district for the high school classes of 2002 through 2005 (the most recent years that were available at time of analysis). The different methods also employ grade-level enrollment data, but the methods vary in terms of the specific years of enrollment data used in the calculations.

College Readiness Data

District-level measures of the college readiness of their students include SAT and ACT mean scores and participation rates. These two tests are designed to assess readiness for college-level work. Scale scores for each subject (reading and math) assessed by the SAT range from 200 to 800. (Writing scores were not included because data were not available for all four years.) Scale scores for the composite ACT test (covering English, mathematics, reading and science) range from 1 to 36. With district permission, the College Board and ACT provided mean test scores for each district for 2004 through 2007, along with the number of seniors who had ever taken the test (regardless of when they took the test during high school). The most recent test scores were provided.

Another measure of college readiness is the extent to which students take and pass Advanced Placement (AP) examinations. These examinations provide a standardized measure of student performance in college-level courses taken while in high school. AP grades are reported on a five-point scale:

5 = Extremely well qualified
4 = Well qualified
3 = Qualified
2 = Possibly qualified
1 = No recommendation

With permission from each district, the College Board provided data for the district for 2004 through 2007 on the number of AP examinations at each score level and on the number of juniors and seniors who took the test. MPR

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staff used these numbers to calculate percentages of AP examinations with scores of three or above (equivalent to pass rates) for each district.

The College Board and ACT do not calculate test participation rates. MPR staff calculated participation rates using enrollment data obtained from the federal Common Core of Data (CCD) for 11th- and 12th-graders, as appropriate, in combination with the number of students taking the different tests.

Adequate Yearly Progress (AYP) Data

The data presented indicate the percentage of schools in each district and state that met federal AYP requirements in 2005 through 2007 under the No Child Left Behind (NCLB) legislation. Also presented is an indicator of whether the district met its overall AYP target in the given year and additional AYP detail for student subgroups, where available. These data were compiled by the American Institutes for Research (AIR) from a database maintained by the U.S. Department of Education and from state sources.

Data Analysis Methods

The 2008 Broad Prize data report presents data collected on district characteristics, background on state tests and AYP. In addition, MPR staff analyzed the above-described data on student achievement to develop measures of the following: achievement gaps, standardized residuals, graduation rates and college readiness. Trend data are presented where available, as are "performance" and "improvement" measures. Each data report section is explained here and the relevant report page numbers are indicated in parentheses. Additional explanatory notes are included as footnotes in the data report itself.

MPR staff analyzed the data on student achievement described above to develop measures of the following:

- District and state proficiency rates on state reading and mathematics tests by education level (elementary, middle and high school) for the All Students group, racial/ethnic subgroups—African American, Asian, Hispanic and White—and low-income and non-low-income subgroups.
- Achievement gaps between Whites and other racial/ethnic groups—African-Americans and Hispanics—and between low-income and non-low-income students, and the progress that is being made in closing these gaps.
- Expected versus actual performance on state tests, taking into consideration differences in state tests and the proportion of low-income students in each district.
- High school graduation rates.
- College readiness.

These are explained below.

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Background Information (page 2)

Description of District: 2003–2006

Background information on the finalists is presented in this section. These data were generally obtained from the U.S. Department of Education's Common Core of Data (CCD). Demographic percentages were calculated using enrollment counts. The minority percentages were calculated as the sum of non-White enrollments divided by the total district enrollment. Percent minority may not equal 100 percent minus percent White due to the small amounts of missing race/ethnicity data in some districts.

The information in the table is organized as follows:

First column: Lists the district characteristics, student characteristics and types of expenditures shown in the table

Remaining columns: Lists data for each year for which data were available (2003, 2004, 2005 and 2006)

State Test Information: 2004–2007

Key indicators of student performance include scores on state-mandated achievement tests and trends in scores over time. The state test information shows the tests and grades that were included in The 2008 Broad Prize analysis. The table notes indicate whether any tests were not comparable to other years, and may provide additional information. Non-comparable tests were not included in calculations of "change" or "overall improvement" on pages 8 through 11. Because of the "relative" nature of standardized residuals, however, data for all tests were included in calculations of "overall performance" and "overall improvement" on page 13.

The information in the table is organized as follows:

First column: Lists the subject (reading and math) and level (Elementary, Middle and High School)

Second column: Specifies the test

Remaining columns: Specifies the grades included in the analysis for 2004, 2005, 2006, and 2007

Trends in Proficiency and Participation Rates (pages 3–7)

Test score data in reading and mathematics were collected from each state for 2004 through 2007. These data were used to calculate the percentage of students scoring at or above proficiency on their state tests in reading and mathematics in each grade. Weighted by the number of test takers at each grade level, these data on student achievement were aggregated across elementary grades (third through fifth), middle grades (sixth through eighth), and high school grades (ninth through 12th), where available.

District and state trends in proficiency are shown for All Students in reading and math (page 3). Trends are also disaggregated by race/ethnicity (pages 4–5) and income status (pages 6–7) for both the district and state.

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Non-comparable test data are not included in trend lines. Data were suppressed if a subgroup represented less than 5 percent of the test takers in a subject at a level (elementary, middle, high school) or if the data were unreliable.

Trends in Overall Reading and Mathematics Proficiency (page 3)

Six different trend charts, with data for 2004, 2005, 2006 and 2007, are shown as follows:

Left side: District reading and mathematics proficiency trend lines for the elementary, middle and high school levels

Right side: State reading and mathematics proficiency trend lines for the elementary, middle and high school levels

Race/Ethnicity Trends in Reading Proficiency (page 4)

Six different trend charts, with data for 2004, 2005, 2006 and 2007, are shown as follows:

Left side: District reading proficiency trend lines for White, African-American, Asian and Hispanic students at the elementary, middle and high school levels

Right side: State reading proficiency trend lines for White, African-American, Asian and Hispanic students at the elementary, middle and high school levels

Race/Ethnicity Trends in Mathematics Proficiency (page 5)

Six different trend charts, with data for 2004, 2005, 2006 and 2007, are shown as follows:

Left side: District mathematics proficiency trend lines for White, African-American, Asian and Hispanic students at the elementary, middle and high school levels

Right side: State mathematics proficiency trend lines for White, African-American, Asian and Hispanic students at the elementary, middle and high school levels

Income Status Trends in Reading Proficiency (page 6)

Six different trend charts, with data for 2004, 2005, 2006 and 2007, are shown as follows:

Left side: District reading proficiency trend lines for all students, low-income, and non-low-income students at the elementary, middle and high school levels

Right side: State reading proficiency trend lines for all students, low-income, and non-low-income students at the elementary, middle and high school levels

Income Status Trends in Mathematics Proficiency (page 7)

Six different trend charts, with data for 2004, 2005, 2006 and 2007, are shown as follows:

Left side: District mathematics proficiency trend lines for all students, low-income, and non-low-income students at the elementary, middle and high school levels

Right side: State mathematics proficiency trend lines for all students, low-income, and non-low-income students at the elementary, middle and high school levels

Technical Notes and Methodology

Proficiency Data Summaries (pages 8 and 10)

Percentages of students scoring at or above proficiency on the state tests between 2004 and 2007 are shown for reading on page 8 and for math on page 10 for both the district and the state.

The tables also show calculations of improvement over time. Simple change is calculated as the difference between 2004 and 2007, between 2005 and 2007, and between 2006 and 2007. Where data for one or two years in the pair were not available, not comparable, or suppressed, these change calculations could not be performed.

In addition, "overall improvement" was generally calculated as the difference between the average of performance in 2006 and 2007 and the average of performance in 2004 and 2005. Missing data were handled as follows: if data were missing for either year in a pair, data for the other year were used to measure performance; if data were missing for both 2004 and 2005, improvement from 2006 to 2007 was measured; and if data were missing for both 2006 and 2007, no improvement measure was calculated.

Data could be missing either because they were not available (indicated by "—") or because they were suppressed (indicated by "†"). Data were suppressed if a subgroup represented less than five percent of the test takers in a subject at a level (elementary, middle, high school) or if the data were unreliable. Data that were not comparable to other years, due, for example, to changes in the state test as described above, appear in italics and were treated in calculations as missing data (the result is indicated by "‡").

Calculations were performed on unrounded numbers. Positive change values appear in color.

Reading and Mathematics Proficiency Data Summary (pages 8 and 10)

The information in the tables is organized as follows:

First column:	Subgroups are specified for the district and state for each of the three levels (elementary, middle and high school)
Second column:	Proficiencies are specified for the 2004 academic year
Third column:	Proficiencies are specified for the 2005 academic year
Fourth column:	Proficiencies are specified for the 2006 academic year
Fifth column:	Proficiencies are specified for the 2007 academic year
Sixth column:	Change in proficiency is shown for the 2007 academic year minus the 2004 academic year
Seventh column:	Change in proficiency is shown for the 2007 academic year minus the 2005 academic year
Eighth column:	Change in proficiency is shown for the 2007 academic year minus the 2006 academic year
Ninth column:	The overall improvement calculation is shown. Except as noted in the footnote, "overall improvement" was calculated as the difference between the average of performance in 2006 and 2007 and the average of performance in 2004 and 2005.

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Proficiency Gaps (pages 9 and 11)

Measures of gap closures are shown for reading on page 9 and for math on page 11. Two types of comparisons were made when calculating achievement gaps:

Racial/Ethnic Gaps: These compared the performance of African-American and Hispanic students to that of White students.

Income Gaps: These compared the performance of low-income students to that of non-low-income students.

Three types of gaps were measured:

Internal District Gap

This measure calculates the gap in performance between a district's disadvantaged group and the district's advantaged group. Some caution must be exercised in comparing internal gaps across districts because these comparisons may be distorted by the following factors:

- The relative absence of an advantaged group in some districts (e.g., few White or few non-low-income students). To address this issue, internal gaps were not calculated in districts where either of the groups being compared represented less than 5 percent of the district's test-takers in a given subject and at a given level.
- Differences between districts in the composition of the "advantaged" or "disadvantaged" groups (e.g., high-income Whites in one district and moderate-income Whites in another).
- Higher than average performance or improvement by the advantaged group in some districts and lower than average performance or improvement by the advantaged group in others (which could cause districts with lower performing advantaged students to appear to be doing a better job of "closing the gap").
- Ceiling or floor effects, which can distort the comparison of gaps across states.

Gaps are represented by negative numbers and the closing of such gaps is represented by positive numbers. For example, if a district's African-American students perform 30 percentage points below the district's White students, this gap is represented by –30. If the gap closes to –10 in subsequent years, then the gap closure measure is the later year's gap minus the earlier year's gap (–10 minus –30 equals +20), meaning that the African-American—White gap has closed by 20 percentage points.

Changes in gaps are rounded to whole numbers in the district reports. Positive change values appear in color.

Internal District Versus Internal State Gap

This measure corresponds to the district's internal gap minus the state's internal gap. The district's internal gap is defined as the performance of the district's disadvantaged group minus the performance of the district's advan-

taged group. The state's internal gap is defined as the performance of the state's disadvantaged group minus the performance of the state's advantaged group.

Positive numbers indicate that the district outperformed the state on the measure. For example, if the district's Hispanic students are performing 10 percentage points below the district's White students, but the state's Hispanic students are performing 15 percentage points below the state's White students, then the internal district gap is 5 percentage points smaller than the internal state gap.

By similar reasoning, a positive change in this measure over time for Hispanic students would indicate that the district's Hispanics are improving faster relative to the district's Whites than the state's Hispanics are improving relative to the state's Whites.

External Gap: District Disadvantaged Versus State Advantaged

This measure was used to compare the performance of the district's disadvantaged group with that of the state's advantaged group. Thus, if 30 percent of District A's Hispanic students, 40 percent of District B's Hispanic students, and 50 percent of the state's White students are proficient on the state test, District A's external gap for Hispanics is 30 percent minus 50 percent (or -20 percentage points), and District B's external gap for Hispanics is 40 percent minus 50 percent (or -10 percentage points). Note that comparing two districts' external gaps in the same state is really the same as comparing the performance of their disadvantaged groups.

External gap statistics are generally negative numbers, but improvement in external gaps (improvement in the performance of the district's disadvantaged students relative to the state's advantaged students) are shown as positive numbers.

An illustration of the three achievement gap measures follows:

	2004 Proficiency Rate		2007 Proficiency Rate	
	District	State	District	State
Low-income students	20	25	35	30
Non-low-income students	50	60	55	65

In this example, the gap measures would be:

Internal District Gap

- 2004 internal gap: -30 (equals 20 minus 50)
- 2007 internal gap: -20 (equals 35 minus 55)
- 2004–2007 change in internal gap: +10. This means that the district has closed its income gap by 10 percentage points since 2004.

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Internal District Versus Internal State Gap

- 2004 internal state gap: -35 (equals 25 minus 60)
- 2007 internal state gap: -35 (equals 30 minus 65)
- 2004–2007 change in internal state gap: 0. This means that the state's income gap has not changed since 2004.
- 2004 internal district vs. internal state gap: +5 (equals -30 minus -35)
- 2007 internal district vs. internal state gap: +15 (equals -20 minus -35)
- 2004–2007 change in internal district vs. internal state gap: +10. This means that the district's low-income gap has improved 10 percentage points more than its state gap since 2004.

External Gap: District Disadvantaged Versus State Advantaged

- 2004 external gap: -40 (equals 20 minus 60)
- 2007 external gap: -30 (equals 35 minus 65)
- 2004–2007 change in external gap: +10. This means that the district's low-income performance has improved relative to the performance of the state's non-low-income group by 10 percentage points since 2004.

Important Note Regarding Achievement Gap Data

Caution must be used because the three gap measures are not standardized and are even more vulnerable than are standardized measures to ceiling and floor effects. Data were suppressed if the subgroup being reported at a given level (elementary, middle or high) represented less than 5 percent of the test takers at that level.

The tables also show calculations of improvement over time. Simple change is calculated as the difference between 2004 and 2007, between 2005 and 2007, and between 2006 and 2007. Where data for one or two years in the pair were not available, not comparable, or suppressed, these change calculations could not be performed.

In addition, "overall improvement" was generally calculated as the difference between the average of performance in 2006 and 2007 and the average of performance in 2004 and 2005. Missing data were handled as follows: if data were missing for either year in a pair, data for the other year were used to measure performance; if data were missing for both 2004 and 2005, improvement from 2006 to 2007 was measured; and if data were missing for both 2006 and 2007, no improvement measure was calculated.

Data could be missing either because they were not available (indicated by "—") or because they were suppressed (indicated by "†"). Data were suppressed if a subgroup represented less than 5 percent of the test takers in a subject at a level (elementary, middle, high school) or if the data were unreliable. Data that were not comparable to other years, due, for example, to changes in the state test as described above, appear in italics and were treated in calculations as missing data (and the missing result is indicated by "‡"). Calculations were performed on unrounded numbers. Positive change values appear in color.

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Achievement gaps can close in four possible ways:

Type 1. Both the advantaged group's and the disadvantaged group's proficiencies are increasing. The gap is closing because the disadvantaged group's proficiency is increasing at a faster rate than the advantaged group's proficiency. This is the most desirable type of gap closure.

Type 2. The gap is closing; however, the advantaged group's proficiency is decreasing.

Type 3. Both advantaged and disadvantaged groups' proficiencies are decreasing. The gap is closing because the advantaged group's proficiency is decreasing at a faster rate than the disadvantaged group's proficiency.

Type 4. The number in the internal district vs. internal state change column is positive; however, the gap is not closing. The number is positive because the gaps for both the state and district's disadvantaged groups are increasing, but the gap for the district is increasing at a slower rate.

Type 1 gap closures appear in color.

Reading and Math Proficiency Gaps (pages 9 and 11)

The information in the tables is organized as follows:

First column:	The internal district gap, internal district vs. internal state gap, and external gap are specified with regard to comparing the disadvantaged vs. advantaged groups (African-American vs. White, Hispanic vs. White, and low-income vs. non-low-income students) at each of the three levels (elementary, middle and high school)
Second column:	Gaps are specified for the 2004 academic year
Third column:	Gaps are specified for the 2005 academic year
Fourth column:	Gaps are specified for the 2006 academic year
Fifth column:	Gaps are specified for the 2007 academic year
Sixth column:	Change in the gap is shown for the 2007 academic year minus the 2004 academic year
Seventh column:	Change in the gap is shown for the 2007 academic year minus the 2005 academic year
Eighth column:	Change in the gap is shown for the 2007 academic year minus the 2006 academic year
Ninth column:	The overall improvement calculation is shown. Except as noted in the footnote, "overall improvement" was calculated as the difference between the average of performance in 2006 and 2007 and the average of performance in 2004 and 2005.
Tenth column:	If the gap is closing, indicated by a positive value in the "overall improvement" column, the gap closure type is specified in this column.

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Trends in Actual Versus Expected Performance for All Students (pages 12 and 13)

The trends for standardized residuals in reading and math at the elementary, middle and high school levels are shown on pages 12 and 13.

An ordinary least squares regression (OLS) analysis was conducted to determine the extent to which each Broad Prize-eligible district performed better or worse than other districts in its state given the district's percentage of low-income students. Specifically, the dependent variable in the regression analysis was the percentage of test takers in a district in each of the three education level groupings (elementary, middle and high school) who were proficient or above on the state test. The independent variable was the percentage of test takers at each level in the district who were low income. Running the regressions required obtaining achievement data for all districts in the state, as well as data on the income status of test takers. In a few cases where data were available for the state and the eligible district, but were not available for all districts in the state, or where data on the proportion of test takers who were low income were not available, the regressions could not be run.

For each district, the expected or predicted proficiency level based on the regression was calculated. The difference between the district's actual percentage of students who scored at or above proficiency and the predicted or expected value is the residual. A positive residual indicates that the district is performing better than expected on the state test given their percentage of low-income stduents taking the test, while a negative residual indicates lower-than-expected performance.

A separate regression was run for each year of data and each subject (reading and mathematics) for each level (elementary, middle and high school) within each state. In addition, separate regressions were also conducted for the low-income, African-American and Hispanic subgroups. States generally suppressed test data for small populations, so the results for subgroups may be based on substantially fewer districts than those for "all students," depending on the distribution of disadvantaged students in a state. In addition, where subgroups comprised less than 5 percent of test takers at a level, regression results were suppressed. Hence, subgroup estimates may be less reliable than those for "all students."

It should be emphasized that residuals are relative performance measures. A district's performance was assessed relative to that of other districts in the state, not in absolute terms.

Some states changed tests over the period under review, and tests differed from state to state. Consequently, the interpretation of residuals varies. To allow for year-to-year comparisons, separate regressions for each year of data were run. In addition, in order to have a measure with greater comparability, The Broad Prize methodology uses "standardized residuals." A district's standardized residual is calculated by dividing its residual by the standard deviation of all residuals from the state regression.

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As an example, a district in Arkansas may have a residual in elementary reading of 5.7 (meaning that they had 5.7 percent more students reach proficiency than their "expected level" given their district's poverty). At the same time, a district in Wisconsin may also have a residual of 5.7 in elementary reading. The assessment of how well each district is performing, however, may not be the same even though both have the same residual. If the majority of districts in Arkansas are within 6 percentage points of the expected performance level, while the majority of districts in Wisconsin are within 2 percentage points of the expected level, then the Wisconsin district is performing much better compared to its peers than the Arkansas district is compared to its peers. Standardizing the residuals helps account for differences in variability across states.

Caution must be exercised in comparing standardized residuals. For example, a district that performs above average in a state that ranks below the national average on NAEP may be performing no better than a district that performs below average in a state that ranks above the NAEP national average.

Separate residuals were calculated for each subject (reading and mathematics), level (elementary, middle and high school) and year (2004, 2005, 2006 and 2007). These residuals were averaged across the last two years to produce a current "performance" measure (the average of performance in 2006 and 2007). "Performance" residuals were calculated separately by level (elementary, middle and high school) and subject (reading and mathematics). These "performance" measures are shown on page 12.

Performance Residuals for All Students (page 12)

Six different trend bar charts, with data for 2004, 2005, 2006 and 2007, are shown as follows:

Left side: Reading standardized performance residuals for all students for the elementary, middle and high school levels

Right side: Mathematics standardized performance residuals for all students for the elementary, middle and high school levels

Standardized Residuals Data (page 13)

The standardized residuals values in reading and math at the elementary, middle and high school levels are shown on page 13 for all students, as well as for the African-American, Hispanic and low-income subgroups.

Two columns are also added for "overall performance" and "overall improvement." "Overall performance" is the average of residuals for 2006 and 2007. "Overall improvement" was generally calculated as the difference between a district's average performance in 2006 and 2007 and its average performance in 2004 and 2005. If data were missing for either year in a pair, data for the other year were used; if data were missing for both 2004 and 2005, improvement from 2006 to 2007 was measured; and if data were missing for both 2006 and 2007, no improvement measure was calculated.

Positive values for "overall performance" and "overall improvement" are shown in color.

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Just as the "performance" residuals are based on relative performance, the "improvement" residuals are based on improvement in relative performance. Thus, a district whose proficiency rates improved, but improved more slowly than those of other districts in the state, could find itself moving upward from year to year more slowly than average. Such a district would show negative relative improvement in this analysis.

The table at the bottom of page 13 shows a summary of the count of positive residuals as well as the count of available residual measures for all students and each subgroup. Positive values are shown in color.

Consider the following when comparing the residuals of different districts:

- The analysis provides information on both performance and improvement. In theory, districts with high performance levels initially might be expected to have lower levels of improvement. A district that performed consistently above expectations during all four years, but did not improve, could still be thought of as consistently high performing.
- Because states use different tests and different standards of proficiency, individual states may be subject to "floor" or "ceiling" effects. If proficiency levels are generally very high in a state (near 90 percent, for example), then high-performing districts may not be able to show their relative achievement because their proficiency level cannot increase above 100 percent. Similarly, if state proficiency levels are very low, then the relative achievement of the higher performers may be understated because the lower performing districts cannot fall below zero percent.

Standardized Residuals Data for Reading and Mathematics (page 13)

The information in the table is organized as follows:

First column:	Standardized residuals in reading and mathematics are specified for the district at each of the three levels (elementary, middle and high school) for all students and for the African-American, Hispanic and low-income student subgroups. Reading is listed first and mathematics is listed below reading. Below mathematics, the table also shows the count of positive residuals and the count of available residual measures for all students and for the African-American, Hispanic and low-income student subgroups.
Second column:	Standardized residuals are specified for the 2004 academic year
Third column:	Standardized residuals are specified for the 2005 academic year
Fourth column:	Standardized residuals are specified for the 2006 academic year
Fifth column:	Standardized residuals are specified for the 2007 academic year
Sixth column:	The overall performance calculation is shown. "Overall performance" is the average of residuals for 2006 and 2007. This calculation does not apply to the counts of positive residuals and available residuals at the bottom of the table, which only count the applicable residuals in the "overall performance" column.

Seventh column: The overall improvement calculation is shown. "Overall improvement" was generally calculated as the difference between the average of performance in 2006 and 2007 and the average of performance in 2004 and 2005. This calculation does not apply to the counts of positive residuals and available residuals at the bottom of the table, which only count the applicable residuals in the "overall improvement" column.

High School Graduation Rates (page 14)

Three different methods were used to calculate high school graduation rates, all of which are considered reliable estimates of graduation rates in the absence of longitudinal student-level data.[3] While using longitudinal data generates the most accurate estimates of graduation rates, such information is not currently available in most states. Federal CCD data on enrollments and completions (as described above) were used to generate the graduation rate estimates. While each method uses CCD diploma counts for the graduating class in a given year, the methods rely on different years' of enrollment data and, therefore, generate somewhat different results. Further descriptions of the individual methods are provided below.

Trend lines as well as specific graduation rates are shown for 2002 through 2005. The table also shows calculations for improvement over time. Simple change is calculated as the difference between 2002 and 2005, between 2003 and 2005, and between 2004 and 2005. Where data for one or two years in the pair were not available, not comparable or suppressed, these change calculations could not be performed. In addition, "overall improvement" was generally calculated as the difference between the average of performance in 2004 and 2005 and the average of performance in 2002 and 2003. Missing data were handled as follows: if data were missing for either year in a pair, data for the other year were used to measure performance; if data were missing for both 2002 and 2003, improvement from 2004 to 2005 was measured; and if data were missing for both 2004 and 2005, no improvement measure was calculated.

Data could be missing either because they were not available (indicated by "—") or because they were suppressed (indicated by "†"). Graduation rates were suppressed if they were deemed unreliable or if a subgroup represented less than 5 percent of the district enrollment. Diploma counts by race/ethnicity were not available for 2002. Positive change values appear in color.

The three different high school graduation rate methods are:

1. The Averaged Freshman Graduation Rate (AFGR)
2. Urban Institute Graduation Rate (a.k.a. Cumulative Promotion Index or CPI)
3. Manhattan Institute Graduation Rate (a.k.a. Greene's Graduation Indicator or GGI)

The methodology for each of these is explained briefly below.

3 State education agencies may use different methods to calculate the graduation rates they report for federal accountability purposes; the graduation rates presented here may not match state-published rates. The three methods used for The Broad Prize provide comparable measures across the100 eligible districts that are located in 38 states and the District of Columbia.

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Averaged Freshman Graduation Rate (AFGR)

This method divides the number of students graduating in Year y by an average of the 8th-grade enrollment in Year *y* – 4, 9th-grade enrollment in Year *y* – 3, and 10th-grade enrollment in Year *y* – 2:

$$\text{Graduation Rate} = \frac{G_y}{\left(S_{8,y-4} + S_{9,y-3} + S_{10,y-2}\right)/3}$$

Where: G = Number of graduates receiving a regular diploma
y = School year
Denominator = Smoothed estimator for first-time 9th-grade enrollment

Urban Institute Graduation Rate (a.k.a. Cumulative Promotion Index or CPI)

This method assumes that graduation is a process composed of three grade-to-grade promotion transitions (nine to 10, 10 to 11, and 11 to 12), in addition to the graduation event (grade 12 to receipt of a diploma). Each of the transitions is calculated as a probability, based on current-year statistics, by dividing the enrollment of the current year by the enrollment of the previous year for the grade in question. These separate probabilities are then multiplied to produce the probability that a student in that school system will graduate.

$$\text{Graduation Rate} = \frac{S_{10,y+1}}{S_{9,y}} * \frac{S_{11,y+1}}{S_{10,y}} * \frac{S_{12,y+1}}{S_{11,y}} * \frac{G_y}{S_{12,y}}$$

Where: S_{grade} = Number of students in a specified grade
y = School year
G = Number of graduates receiving a regular diploma

Manhattan Institute Graduation Rate (a.k.a. Greene's Graduation Indicator or GGI)

This calculation estimates an on-time graduation rate. The number of students who receive a diploma in school year *y* is divided by an estimate of the number of students in the ninth-grade cohort three years earlier. The estimate of the ninth-grade cohort size is a smoothed estimator that takes into account population changes as students migrate between the public and private sectors between eighth and ninth grades, high ninth-grade enrollments due to higher than average retention in the ninth-grade year, and declining enrollment in 10th grade as students begin dropping out. This denominator is also adjusted for enrollment variability due to student mobility among districts and states rather than dropping out.

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$$\text{Graduation Rate} = \frac{G_y}{\left(1+\frac{\left(S_{9,y}+S_{10,y}+S_{11,y}+S_{12,y}\right)-\left(S_{9,y-3}+S_{10,y-3}+S_{11,y-3}+S_{12,y-3}\right)}{S_{9,y-3}+S_{10,y-3}+S_{11,y-3}+S_{12,y-3}}\right)*\left(\frac{S_{8,y-4}+S_{9,y-3}+S_{10,y-2}}{3}\right)}$$

Where: G = Number of graduates receiving a regular diploma

y = School year

S_{grade} = Number of students in a specified grade

A recent National Center for Education Statistics study reported that when calculating a statewide graduation rate, the Averaged Freshman Graduation Rate came closest to approximating a longitudinal graduation rate. The smaller the district, state or student group being analyzed, the less precisely the three graduation rates estimate the true longitudinal graduation rate. The different methodologies sometimes lead to very different results because each uses different types of data from different years. All three have strengths and weaknesses but are considered acceptable.

Three Estimated High School Graduation Rates: 2002–2005 (page 14)

Three different trend charts, with data for 2002, 2003, 2004 and 2005, are shown for each of the three different graduation rates for all students and for White, African-American, Asian and Hispanic student subgroups.

Estimated high school graduation rates table: 2002–2005 (page 14)

The information in the table is organized as follows:

First column:	The three different graduation rate methods, Averaged Freshmen Graduation Rate, Urban Institute Method and Manhattan Institute Method, are specified for all students and for the African-American, Asian, Hispanic and White student subgroups.
Second column:	Graduation rates are specified for the 2002 academic year
Third column:	Graduation rates are specified for the 2003 academic year
Fourth column:	Graduation rates are specified for the 2004 academic year
Fifth column:	Graduations rate are specified for the 2005 academic year
Sixth column:	Change in the graduation rates is shown for the 2005 academic year minus the 2002 academic year
Seventh column:	Change in the graduation rates is shown for the 2005 academic year minus the 2003 academic year
Eighth column:	Change in the graduation rates is shown for the 2005 academic year minus the 2004 academic year
Ninth column:	The overall improvement calculation is shown. Except as noted in the footnote, "overall improvement" was calculated as the difference between the averaged graduation rate in 2004 and 2005 and the averaged graduation rate in 2002 and 2003.

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College Readiness Data (page 15)

District-level measures of the college readiness of their students include SAT, ACT and Advanced Placement. The table provides measures of performance on these tests and participation rates.

The College Board and ACT provided SAT (reading and math) test scores and mean ACT (composite) test scores, respectively, for each district for 2004 through 2007. The SAT reading and math scores were combined to produce mean total SAT scores. Mean ACT composite scores were reported as provided. The College Board also provided the number of AP examinations at each score level (1 to 5) for each district for 2004 through 2007. The percentage of AP tests taken that earned passing scores (3 or above) was calculated. The percent of all AP tests taken with scores of three or above are detailed in this report..

The College Board and ACT do not calculate test participation rates. However, they provided the number of seniors who had taken the SAT and ACT tests (regardless of when they took the test during high school), as well as the number of juniors and seniors who took any AP test in the given year. Participation rates were calculated using these numbers as the numerator and enrollment data for 11th- and 12th-graders from the federal CCD as the denominator.[4]

The tables also show calculations of improvement over time. Simple change is calculated as the difference between 2004 and 2007, between 2005 and 2007, and between 2006 and 2007. Where data for one or two years in the pair were not available or suppressed, these change calculations could not be performed.

In addition, "overall improvement" was generally calculated as the difference between the average of performance in 2006 and 2007 and the average of performance in 2004 and 2005. Missing data were handled as follows: if data were missing for either year in a pair, data for the other year were used to measure performance; if data were missing for both 2004 and 2005, improvement from 2006 to 2007 was measured; and if data were missing for both 2006 and 2007, no improvement measure was calculated. Calculations were performed on unrounded numbers. Positive change values appear in color.

Data were suppressed if they were deemed unreliable. Test scores were suppressed if they were based on the performance of fewer than 15 students, as required by the College Board. Participation rates were suppressed if a subgroup represented less than 5% of enrollment in the relevant grades.

4 Participation rates in 2007 were calculated using 2006 CCD enrollments as the denominator, because 2007 enrollment data were not yet available.

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Test scores and participation rates on college readiness examinations: 2004–2007 (page 15)

The information in the table is organized as follows:

First column:	The table is divided into the three different college readiness sections: SAT, ACT and Advanced Placement. Each college readiness section first shows performance measures and then participation rates for all students as well as for the African-American, Asian, Hispanic and White student subgroups.
Second column:	Relevant values are listed for the 2004 academic year
Third column:	Relevant values are listed for the 2005 academic year
Fourth column:	Relevant values are listed for the 2006 academic year
Fifth column:	Relevant values are listed for the 2007 academic year
Sixth column:	Change in values is shown for the 2007 academic year minus the 2004 academic year
Seventh column:	Change in values is shown for the 2007 academic year minus the 2005 academic year
Eighth column:	Change in values is shown for the 2007 academic year minus the 2006 academic year
Ninth column:	The overall improvement calculation is shown. Except as noted in the footnote, "overall improvement" was calculated based on the difference between the average in 2006 and 2007 and the average in 2004 and 2005.

Adequate Yearly Progress (AYP) (page 16)

The table shows AYP results for 2005, 2006 and 2007. For each year, the top row shows the percentage of schools in the district meeting AYP targets and the percentage of schools in the state meeting AYP targets. A "Y" or "N" in the second row indicates whether the district as a whole met its AYP target.

The information in the rest of the table is organized as follows:

First column:	The breakdown of AYP results based on proficiency and participation standards in English language arts and in mathematics are specified for the specific student subgroups for which districts and schools are held accountable in the state.
Second column:	AYP results are listed for the 2005 academic year
Third column:	AYP results are listed for the 2006 academic year
Fourth column:	AYP results are listed for the 2007 academic year

If the state AYP results are reported separately at the elementary, middle or high school levels, these are indicated under the year columns.

