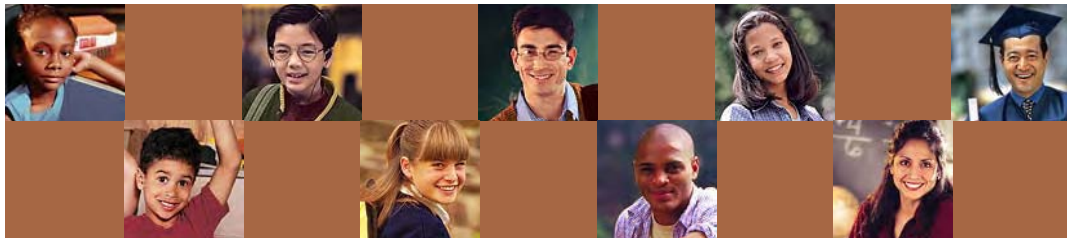


the condition of education 2005



INDICATOR 14

Student Reading and Mathematics Performance in Public Schools by Urbanicity

The indicator and corresponding tables are taken directly from *The Condition of Education 2005*. Therefore, the page numbers may not be sequential.

Additional information about the survey data and supplementary notes can be found in the full report. For a copy of *The Condition of Education 2005*, visit the NCES website (<http://nces.ed.gov/pubsearch/pubsinfo.sap?pubid=2005094>) or contact ED PUBs at 1-877-4ED-PUBS.

Suggested Citation:

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Academic Outcomes

Student Reading and Mathematics Performance in Public Schools by Urbanicity

In 2003, 4th- and 8th-grade students in large central city public schools were outperformed by their peers in other types of communities in reading and mathematics.

The National Assessment of Educational Progress (NAEP) assessed the performance of 4th- and 8th-graders in mathematics and reading in 2003. Examining the results by urbanicity provides an opportunity to compare the performance of public school students in large central cities with that of public school students in other types of communities. A large central city school is defined as a school in a central city within a Metropolitan Statistical Area (MSA) of 2.5 million or larger.

The distribution of students in large central city public schools differs from the distribution of students in other public schools in notable ways. For example, in 2003, large central city schools were the only types of schools in which the percentages of Black and Hispanic students were greater than the percentage of White students in grades 4 and 8 (see supplemental table 14-1). In addition, schools in large central cities, on average, were more likely than schools in other types of communities to have more than 75 percent of their 4th- and 8th-graders eligible for free or reduced-price lunch and to have a minority enrollment of more than 75 percent.

Overall, in 2003, 4th- and 8th-graders in large central city public schools had lower average scores, which represent what students know and can do, in reading and mathematics than students in other public schools, including those in rural, urban fringe, and all central city schools (see supplemental table 14-2).

Achievement levels, which identify what students should know and be able to do, provide another measure of student performance. In both reading and mathematics, the percentages of 4th- and 8th-graders in large central city public schools who performed at or above *Basic* and at or above *Proficient* were lower than the national percentages at each level. In addition, the percentages of students in large central city schools performing at or above each of these levels were lower than the percentages of students in rural, urban fringe, and all central city public schools. For example, while 30 percent of all public school 4th-graders performed at or above *Proficient* in reading in 2003, only 18 percent of 4th-graders in large central cities did so, compared with larger percentages of urban fringe, rural, and all central city students (34, 32, and 22 percent, respectively).

¹“Large central city” includes all students enrolled in schools that are located in a “central city” of a Metropolitan Statistical Area (MSA) of at least 2.5 million in total population.

NOTE: An MSA is a Census Bureau designation encompassing a “large population nucleus together with adjacent communities that have a high degree of economic and social integration with that core.” The majority of large central city schools in this indicator are in what are commonly considered to be inner cities. A few schools not thought to be in what is commonly considered to be an “inner city” are included in this category because within each MSA the *largest city* is designated a “central city,” even if the geographic area of this city does not technically meet the Census requirements concerning population size and commuting patterns to be designated as a “central city” area. For more information about community type, see *supplemental note 1*. For more information on the National Assessment of Educational Progress (NAEP), see *supplemental note 4*.

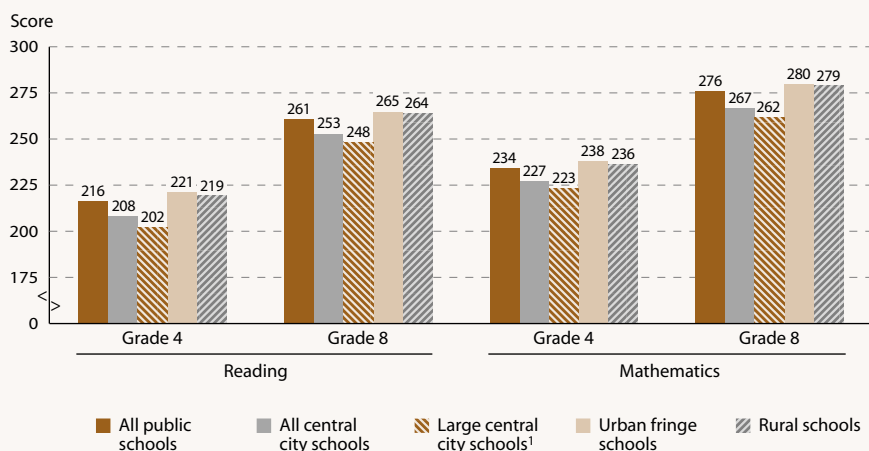
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Reading and Mathematics Assessments, previously unpublished tabulation (January 2005).

FOR MORE INFORMATION:
Supplemental Notes 1,4
Supplemental Tables 14-1,
14-2

NCES 2004–458
NCES 2004–459



URBAN PERFORMANCE: Average reading and mathematics scores of public school students, by grade and school location: 2003



Student Reading and Mathematics Performance in Public Schools by Urbanicity

Table 14-1. Percentage distribution of 4th- and 8th-grade public school students, by school location and selected student and school characteristics: 2003

Student or school characteristic	Grade 4					Grade 8				
	All public schools	All central city schools	Large central city schools ¹	Urban fringe schools	Rural schools	All public schools	All central city schools	Large central city schools ¹	Urban fringe schools	Rural schools
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex										
Male	50.5	50.1	49.8	50.5	51.0	50.2	50.2	48.8	50.1	50.3
Female	49.5	49.9	50.2	49.5	49.0	49.8	49.8	51.2	49.9	49.7
Race/ethnicity ²										
American Indian	1.2	0.9	0.6	0.7	2.3	1.3	1.0	0.7	0.8	2.1
Asian/Pacific Islander	4.0	5.4	6.7	4.9	1.4	4.3	5.9	9.2	5.5	1.4
Black	17.4	31.3	34.0	13.0	10.1	17.3	30.3	34.1	14.1	10.1
White	58.6	33.9	20.6	61.6	78.6	61.4	36.9	21.1	64.3	79.0
Hispanic	18.0	27.9	37.9	18.9	7.0	15.2	25.5	34.8	14.7	6.9
Percent of students in school eligible for free or reduced-price lunch										
0–10	15.2	5.9	6.1	24.5	11.3	17.7	6.8	6.9!	28.0	13.3
11–25	17.7	9.9	5.0	23.2	17.6	21.5	13.0	6.3	26.7	22.0
26–50	24.6	18.2	11.1	22.2	34.2	27.8	24.1	15.2	22.7	37.9
51–75	19.9	20.1	16.5	15.4	26.0	18.5	24.2	23.6	14.6	18.8
76–100	22.5	45.9	61.3	14.7	11.0	14.5	31.9	48.0	8.0	8.1
Percent of minority students in school										
0–10	29.9	7.8	1.7!	27.8	54.4	30.5	7.4	1.4!	28.2	53.8
11–25	18.9	12.0	6.3	24.0	18.7	20.2	12.8	6.6	26.1	18.8
26–50	16.4	16.6	9.4	18.9	12.8	18.0	20.0	9.4	18.6	15.3
51–75	13.0	19.1	16.7	12.1	8.1	12.9	21.3	19.2	12.3	6.2
76–100	21.8	44.5	66.0	17.2	6.0	18.5	38.4	63.4	14.7	6.0

! Interpret data with caution (estimates are unstable).

¹ "Large central city" includes all students enrolled in schools that are located in a "central city" of a Metropolitan Statistical Area (MSA) of at least 2.5 million in total population.

² American Indian includes Alaska Native, Black includes African American, Pacific Islander includes Native Hawaiian, and Hispanic includes Latino. Race categories exclude Hispanic origin unless specified.

NOTE: Detail may not sum to totals because of rounding. An MSA is a Census Bureau designation encompassing a "large population nucleus together with adjacent communities that have a high degree of economic and social integration with that core." The majority of large central city schools in this indicator are in what are commonly considered to be inner cities. A few schools not thought to be in what is commonly considered to be an "inner city" are included in this category because within each MSA the largest city is designated a "central city," even if the geographic area of this city does not technically meet the Census requirements concerning population size and commuting patterns to be designated as a "central city" area. For more information about community type and the National School Lunch Program, see *supplemental note 1*. For more information on the National Assessment of Educational Progress (NAEP), see *supplemental note 4*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Reading Assessment, previously unpublished tabulation (January 2005).

Student Reading and Mathematics Performance in Public Schools by Urbanicity

Table 14-2. Percentile distribution of average reading and mathematics scores of 4th- and 8th-grade public school students and the percentage of students at each achievement level, by school location: 2003

Grade, percentile, and achievement level	Reading					Mathematics				
	All public schools	All central city schools	Large central city schools ¹	Urban fringe schools	Rural schools	All public schools	All central city schools	Large central city schools ¹	Urban fringe schools	Rural schools
Average score										
Grade 4	216	208	202	221	219	234	227	223	238	236
Grade 8	261	253	248	265	264	276	267	262	280	279
Percentile										
Grade 4										
10th	167	157	152	172	172	196	189	185	200	201
25th	193	182	177	198	198	215	207	203	219	219
50th	219	209	203	223	222	235	227	223	239	237
75th	243	234	229	247	244	254	247	244	258	255
90th	262	256	251	265	262	270	265	262	273	269
Grade 8										
10th	215	206	200	219	220	228	218	214	233	235
25th	240	230	225	244	243	253	242	237	257	257
50th	264	255	249	268	266	278	268	262	282	281
75th	286	278	273	289	286	301	293	287	305	302
90th	304	298	293	307	304	321	316	311	325	320
Percentage at achievement level										
Grade 4										
Below Basic	38	49	55	34	34	24	33	38	20	20
At or above Basic	62	51	45	66	66	76	67	62	80	80
At or above Proficient	30	22	18	34	32	31	23	20	36	32
At Advanced	7	5	4	8	7	4	3	2	5	3
Grade 8										
Below Basic	28	37	43	24	25	33	44	50	29	29
At or above Basic	72	63	57	76	75	67	56	50	71	71
At or above Proficient	30	22	18	34	31	27	20	16	31	28
At Advanced	3	2	1	3	2	5	4	3	6	4

¹"Large central city" includes all students enrolled in schools that are located in a "central city" of a Metropolitan Statistical Area (MSA) of at least 2.5 million in total population.

NOTE: An MSA is a Census Bureau designation encompassing a "large population nucleus together with adjacent communities that have a high degree of economic and social integration with that core." The majority of large central city schools in this indicator are in what are commonly considered to be inner cities. A few schools not thought to be in what is commonly considered to be an "inner city" are included in this category because within each MSA the largest city is designated a "central city," even if the geographic area of this city does not technically meet the Census requirements concerning population size and commuting patterns to be designated as a "central city" area. For more information about community type and the National School Lunch Program, see *supplemental note 1*. For more information on the National Assessment of Educational Progress (NAEP), see *supplemental note 4*.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Reading and Mathematics Assessments, previously unpublished tabulation (January 2005).

Student Reading and Mathematics Performance in Public Schools by Urbanicity

Table S14. Standard errors for the average reading and mathematics scores of public school students, by grade and school location: 2003

Subject and community type	Grade 4	Grade 8
Reading		
All public schools	0.3	0.2
All central city schools	0.6	0.5
Large central city schools	1.0	1.2
Urban fringe schools	0.3	0.5
Rural schools	0.5	0.4
Mathematics		
All public schools	0.2	0.3
All central city schools	0.5	0.5
Large central city schools	0.8	1.0
Urban fringe schools	0.3	0.5
Rural schools	0.3	0.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Reading and Mathematics Assessments, previously unpublished tabulation (January 2005).

Student Reading and Mathematics Performance in Public Schools by Urbanicity

Table S14-1. Standard errors for the percentage distribution of 4th- and 8th-grade public school students, by school location and selected student and school characteristics: 2003

Student or school characteristic	Grade 4					Grade 8				
	All public schools	All central city schools	Large central city schools	Urban fringe schools	Rural schools	All public schools	All central city schools	Large central city schools	Urban fringe schools	Rural schools
Total	†	†	†	†	†	†	†	†	†	†
Sex										
Male	0.20	0.37	0.41	0.34	0.31	0.22	0.45	0.59	0.29	0.30
Female	0.20	0.37	0.41	0.34	0.31	0.22	0.45	0.59	0.29	0.30
Race/ethnicity										
American Indian	0.05	0.06	0.10	0.07	0.16	0.07	0.08	0.14	0.07	0.18
Asian/Pacific Islander	0.20	0.44	0.67	0.37	0.13	0.19	0.46	1.16	0.32	0.10
Black	0.31	0.64	1.37	0.50	0.32	0.32	0.72	1.60	0.50	0.46
White	0.38	0.65	1.25	0.60	0.71	0.36	0.63	1.24	0.59	0.56
Hispanic	0.38	0.60	1.45	0.60	0.76	0.31	0.61	1.10	0.53	0.49
Percent of students in school eligible for free or reduced-price lunch										
0–10	0.60	0.93	1.58	1.03	0.98	0.69	0.88	2.19	1.40	1.09
11–25	0.76	1.18	1.01	1.29	1.25	0.82	1.41	1.42	1.52	1.65
26–50	0.80	1.36	1.79	1.34	1.18	0.78	1.54	2.26	0.98	1.51
51–75	0.71	1.61	2.62	1.25	1.52	0.92	1.67	3.31	1.32	1.32
76–100	0.62	1.66	2.84	1.01	0.76	0.59	1.40	3.42	0.95	0.82
Percent of minority students in school										
0–10	0.58	0.53	0.66	0.97	1.10	0.44	0.69	0.59	0.83	1.04
11–25	0.73	0.97	1.31	1.32	1.28	0.55	1.04	1.62	0.99	1.15
26–50	0.59	1.24	1.40	1.10	0.78	0.65	1.40	1.62	1.19	0.75
51–75	0.67	1.40	2.62	1.11	1.19	0.66	1.20	2.38	1.23	0.67
76–100	0.51	1.15	2.36	0.77	0.76	0.55	0.97	2.59	1.09	0.67

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Reading Assessment, previously unpublished tabulation (January 2005).

Student Reading and Mathematics Performance in Public Schools by Urbanicity

Table S14-2. Standard errors for the percentile distribution of average reading and mathematics scores of 4th- and 8th-grade public school students and the percentage of students at each achievement level, by school location: 2003

Grade, percentile, and achievement level	Reading					Mathematics				
	All public schools	All central city schools	Large central city schools	Urban fringe schools	Rural schools	All public schools	All central city schools	Large central city schools	Urban fringe schools	Rural schools
Average score										
Grade 4	0.3	0.6	1.0	0.3	0.5	0.2	0.5	0.8	0.3	0.3
Grade 8	0.2	0.5	1.2	0.5	0.4	0.3	0.5	1.0	0.5	0.4
Percentile										
Grade 4										
10th	0.5	0.9	1.4	0.6	1.0	0.3	0.5	1.1	0.7	0.6
25th	0.4	0.8	1.3	0.3	0.7	0.3	0.6	0.8	0.5	0.4
50th	0.4	0.7	0.9	0.4	0.7	0.2	0.5	0.9	0.4	0.3
75th	0.2	0.5	1.1	0.4	0.4	0.3	0.6	1.0	0.4	0.3
90th	0.3	0.5	2.0	0.4	0.5	0.2	0.5	1.1	0.5	0.3
Grade 8										
10th	0.5	1.0	2.3	1.0	0.9	0.6	0.8	1.8	0.8	0.7
25th	0.3	0.7	1.6	0.6	0.5	0.4	0.7	1.3	0.5	0.5
50th	0.3	0.5	1.2	0.6	0.4	0.4	0.7	1.2	0.5	0.4
75th	0.3	0.4	0.9	0.5	0.5	0.3	0.5	1.1	0.3	0.5
90th	0.3	0.6	0.9	0.4	0.5	0.3	1.0	1.8	0.7	0.4
Percentage at achievement level										
Grade 4										
Below Basic	0.3	0.6	1.0	0.4	0.6	0.3	0.7	1.1	0.4	0.5
At or above Basic	0.3	0.6	1.0	0.4	0.6	0.3	0.7	1.1	0.4	0.5
At or above Proficient	0.3	0.5	0.9	0.4	0.5	0.3	0.6	0.9	0.5	0.4
At Advanced	0.1	0.2	0.4	0.2	0.2	0.1	0.2	0.3	0.2	0.2
Grade 8										
Below Basic	0.3	0.6	1.3	0.4	0.4	0.3	0.7	1.3	0.5	0.5
At or above Basic	0.3	0.6	1.3	0.4	0.4	0.3	0.7	1.3	0.5	0.5
At or above Proficient	0.3	0.5	0.9	0.5	0.5	0.3	0.5	0.8	0.5	0.4
At Advanced	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.3	0.2

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Reading and Mathematics Assessments, previously unpublished tabulation (January 2005).