

NAEP

National Assessment of Educational Progress

South Dakota Results 2005 Math

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Student, School/District Characteristics for South Dakota Public Schools

Student Characteristics

Number enrolled: **125,537**

Percent in Title I schools: **42.9%**

With Individualized Education Programs (IEP): **13.6%**

Percent in limited-English proficiency programs: **3.6%**

Percent eligible for free/reduced lunch: **31.4%**

Racial/Ethnic Background

White: **84.9%¹**

Black: **1.5%¹**

Hispanic: **1.8%¹**

Asian/Pacific Islander: **1.0%**

American Indian/Alaskan Native: **10.7%¹**

School/District Characteristics

Number of school districts: **172***

Number of schools: **741**

Number of charter schools: **N/A**

Per-pupil expenditures: **\$6,675¹**

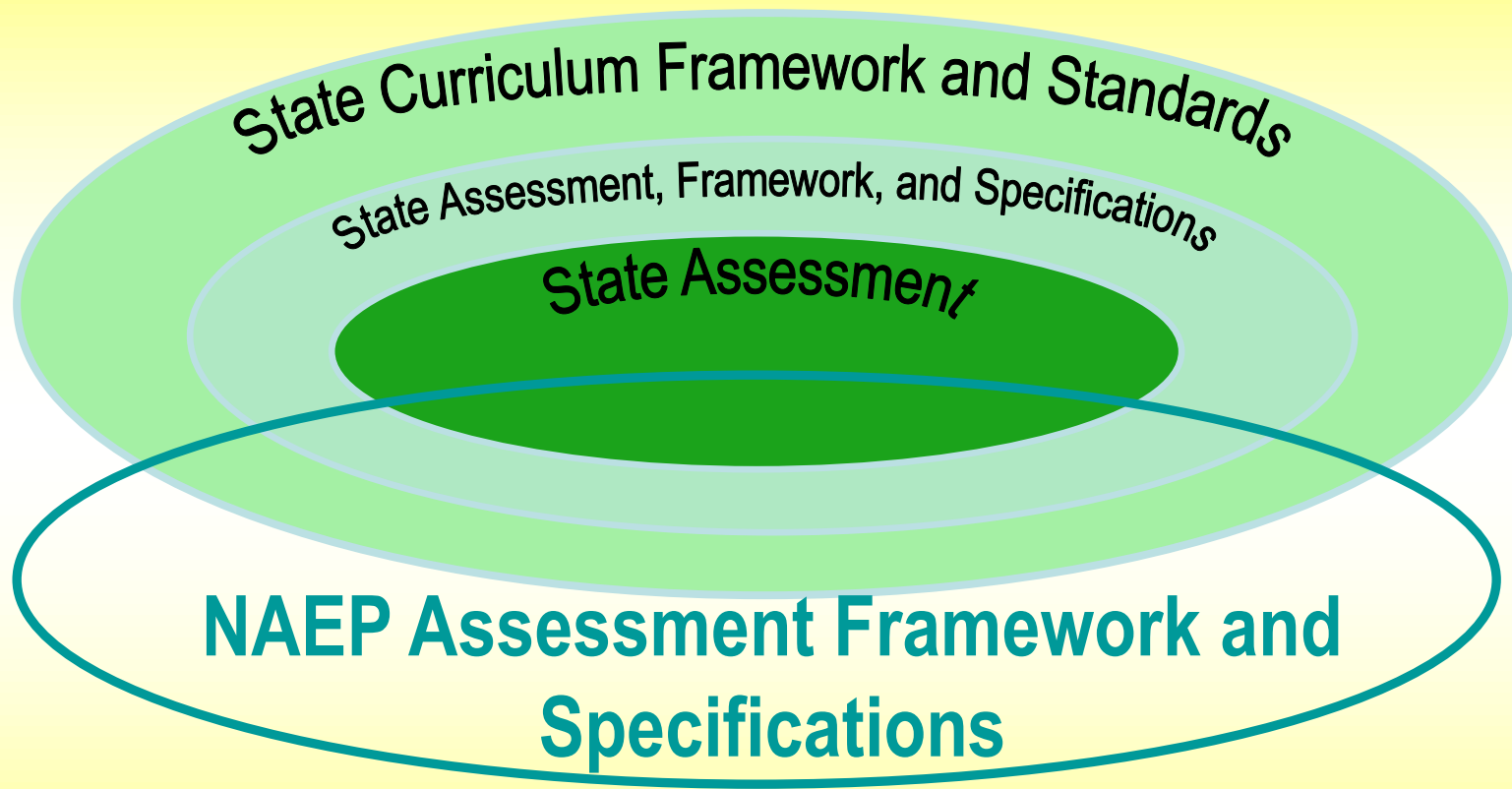
Pupil/teacher ratio: **13.6**

Number of FTE teachers: **9,245**

CAUTION INTERPRETING RESULTS

The averages and percentages in this report are ***estimates based on samples of students*** rather than on entire populations. Moreover, the collection of questions used at each grade level is only a sample of the many questions that could have been asked to assess the skills and abilities described in the NAEP framework. ***Therefore, the results are subject to a measure of uncertainty, reflected in the standard error of the estimates—a range of up to a few points above or below the score or percentage—which takes into account potential score fluctuation due to sampling error and measurement error.*** Statistical tests that factor in these standard errors are used to determine whether the differences between average scores or percentages are significant. All differences were tested for statistical significance at the .05 level.

Defining the content domain to be assessed



Subject Area Domain

NAEP Math Test

A combination of multiple-choice and constructed-response questions was used to assess students' mathematics performance. Short constructed-response questions ask students to provide the answer for a numerical problem or to briefly describe the solution to a problem. Longer constructed-response questions require students to produce both a solution and a justification, explanation, or interpretation for the solution.

Released test questions, along with student performance data by state, are available on the NAEP website (<http://nces.ed.gov/nationsreportcard/itmrls/>)

The framework incorporates the use of calculators (four-function at grade 4 and scientific at grade 8), rulers, protractors (grade 8), and manipulatives such as spinners and geometric shapes. The use of these ancillary materials and the use of calculators were incorporated into some parts of the assessment, but not all. Calculator use was permitted on approximately one-third of the test questions.

Distribution of Items by Content Area

Table 1. Percentage Distribution of Items by Grade and Content Area

Content Area (2005)	Grade 4 (%)	Grade 8 (%)	Grade 12 (%)
Number Properties and Operations	40	20	10
Measurement	20	15	30
Geometry	15	20	
Data Analysis and Probability	10	15	25
Algebra	15	30	35

Overall Math Results for Grade 4

- ❑ In 2005, the average scale score for fourth-grade students in South Dakota was 242. This was higher¹ than their average score in 2003 (237).
- ❑ South Dakota's average score (242) in 2005 was higher than that of the Nation's public schools (237).
- ❑ Of the 52 states and other jurisdictions² that participated in the 2005 fourth-grade assessment, students' average scale scores in South Dakota were higher than those in 29 jurisdictions, not significantly different from those in 17 jurisdictions, and lower than those in 5 jurisdictions.
- ❑ The percentage of students in South Dakota who performed at or above the NAEP *Proficient* level was 41 percent in 2005. This percentage was greater than that in 2003 (34 percent)
- ❑ The percentage of students in South Dakota who performed at or above the NAEP *Basic* level was 86 percent in 2005. This percentage was greater than that in 2003 (82 percent).

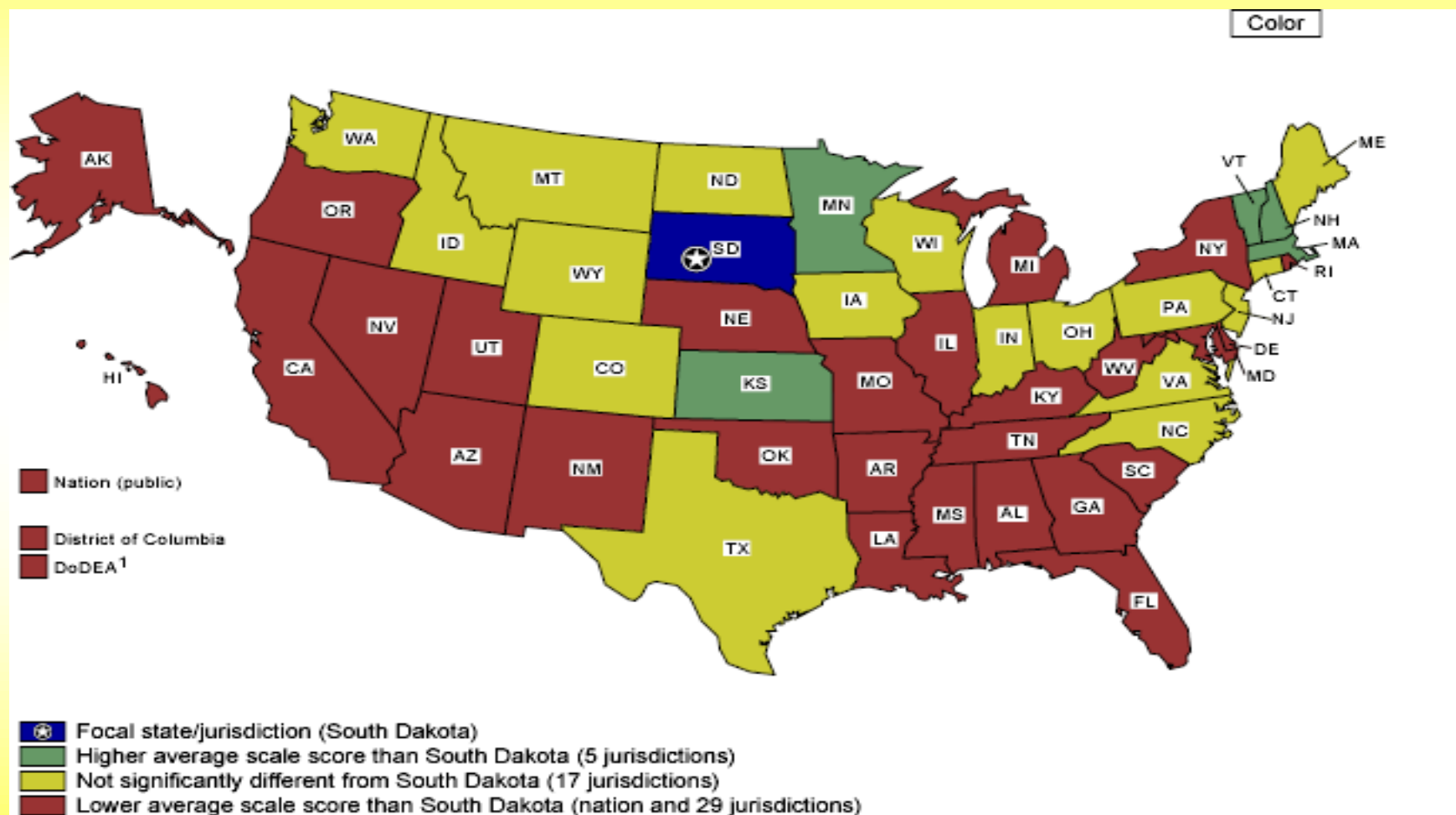
Performance of NAEP Reporting Groups in South Dakota Grade 4 Math

<u>Group</u>	2003	2005	Dif
Males	239	243	+4
Females	235	240	+5
White	241	245	+4
Native American	217	221	+4
Eligible for free/reduced lunch	227	232	+5
Not eligible for free/reduced lunch	244	249	+5
Students classified as having a disability	219	225	+6

Math Grade 4 Comparison— Highest and Bordering States 2003-2005

<u>Jurisdiction</u>	<u>2003</u>	<u>2005</u>
Massachusetts	242	247
Minnesota	242	246
Wyoming	241	243
North Dakota	238	243
South Dakota	237	242
Iowa	238	240
Nebraska	236	238

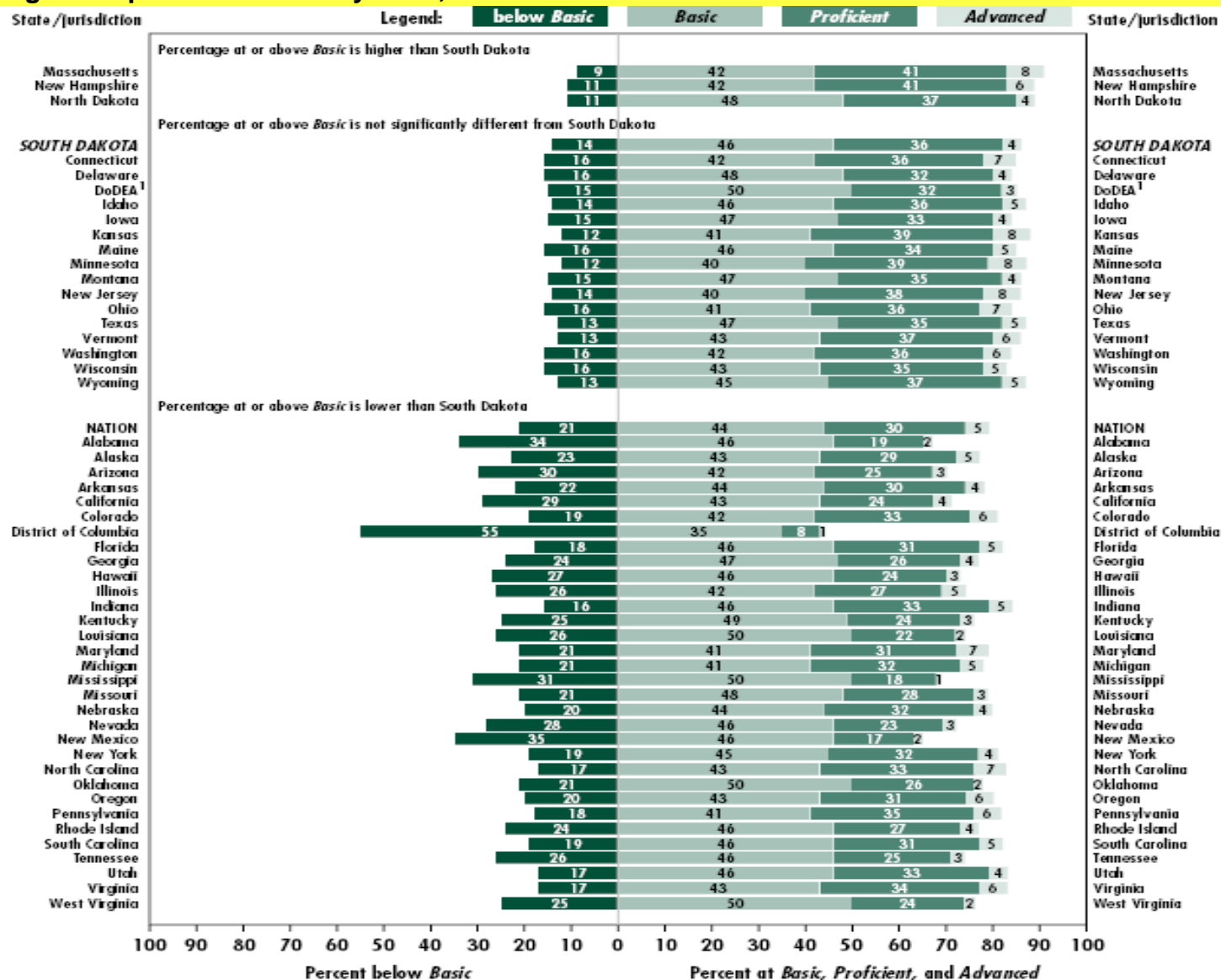
South Dakota's average mathematics scale score compared with scores for the nation and other participating jurisdictions, grade 4 public schools: 2005



¹ Department of Defense Education Activity schools (domestic and overseas).

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment.

Percentage of students within each mathematics achievement level, and South Dakota's percentage at or above *Basic* compared with the nation and other participating jurisdictions, grade 4 public schools: By state, 2005

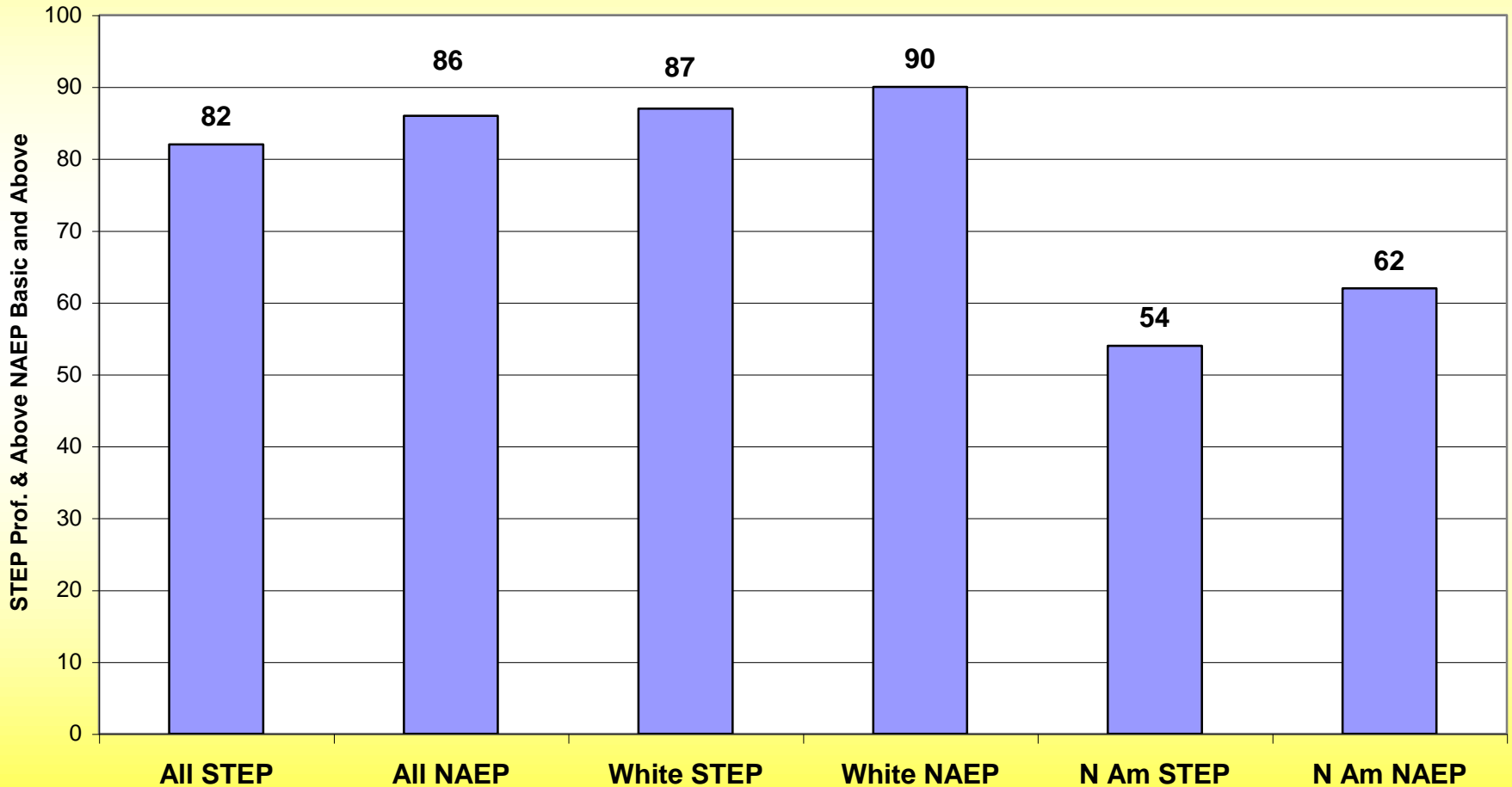


¹ Department of Defense Education Activity schools (domestic and overseas).

NOTE: The bars above contain percentages of students in each NAEP mathematics achievement level. Achievement levels corresponding to each population of students are aligned at the point where the *Proficient* category begins, so that they may be compared at *Basic* and above. Detail may not sum to totals because of rounding. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment.

Dakota STEP Levels Compared to NAEP Levels Math Grade 4 2005



Overall Math Results for Grade 8

- ❑ In 2005, the average scale score for eighth-grade students in South Dakota was 287. This was higher¹ than their average score in 2003 (285).
- ❑ South Dakota's average score (287) in 2005 was higher than that of the Nation's public schools (278).
- ❑ Of the 52 states and other jurisdictions² that participated in the 2005 eighth-grade assessment, students' average scale scores in South Dakota were higher than those in 44 jurisdictions, not significantly different from those in 6 jurisdictions, and lower than those in 1 jurisdiction.
- ❑ The percentage of students in South Dakota who performed at or above the NAEP *Proficient* level was 36 percent in 2005. This percentage was not significantly different from that in 2003 (35 percent)
- ❑ The percentage of students in South Dakota who performed at or above the NAEP *Basic* level was 80 percent in 2005. This percentage was not significantly different from that in 2003 (78 percent).

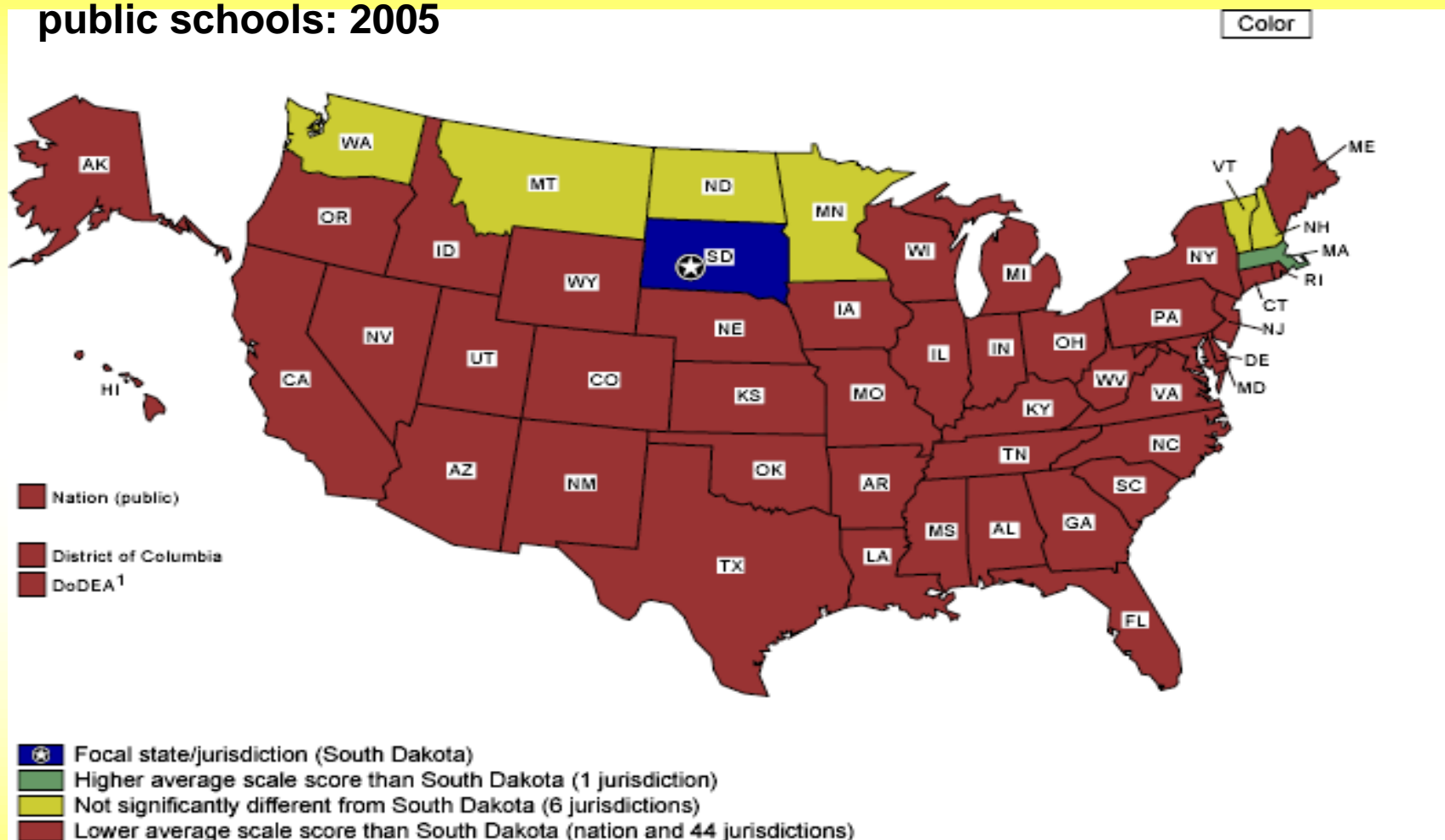
Performance of NAEP Reporting Groups in South Dakota Grade 8 Math

<u>Group</u>	2003	2005	Dif
Males	286	287	+1
Females	284	287	+3
White	288	291	+3
Native American	255	260	+5
Eligible for free/reduced lunch	272	276	+4
Not eligible for free/reduced lunch	291	294	+3
Students classified as having a disability	246	250	+4

Math Grade 8 Comparison— Highest and Bordering States 2003-2005

<u>Jurisdiction</u>	<u>2003</u>	<u>2005</u>
Massachusetts	287	292
Minnesota	291	290
South Dakota	285	287
North Dakota	287	287
Nebraska	282	284
Iowa	284	284
Wyoming	284	282

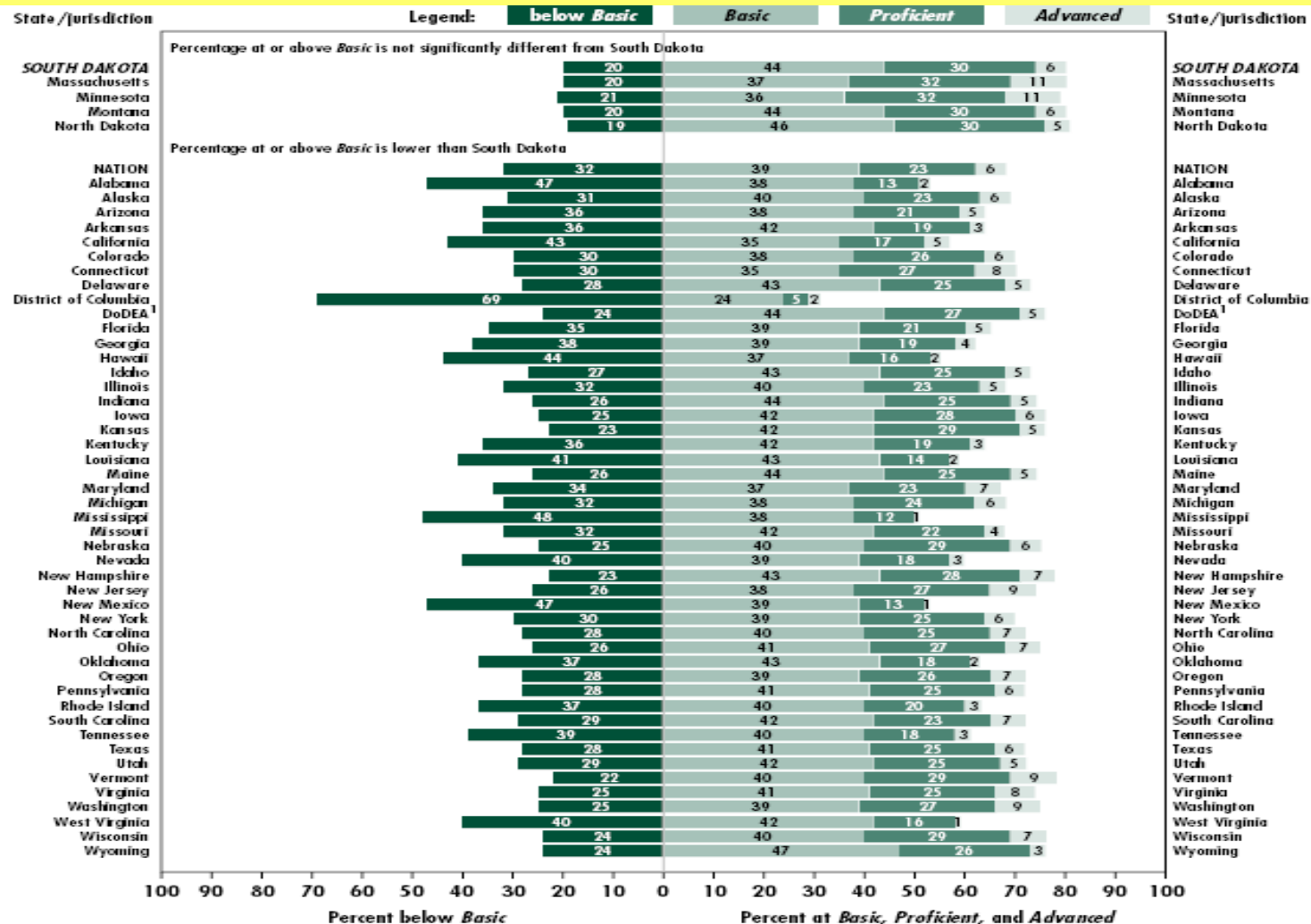
South Dakota's average mathematics scale score compared with scores for the nation and other participating jurisdictions, grade 8 public schools: 2005



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SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment.

Percentage of students within each mathematics achievement level, and South Dakota's percentage at or above *Basic* compared with the nation and other participating jurisdictions, grade 8 public schools: By state, 2005

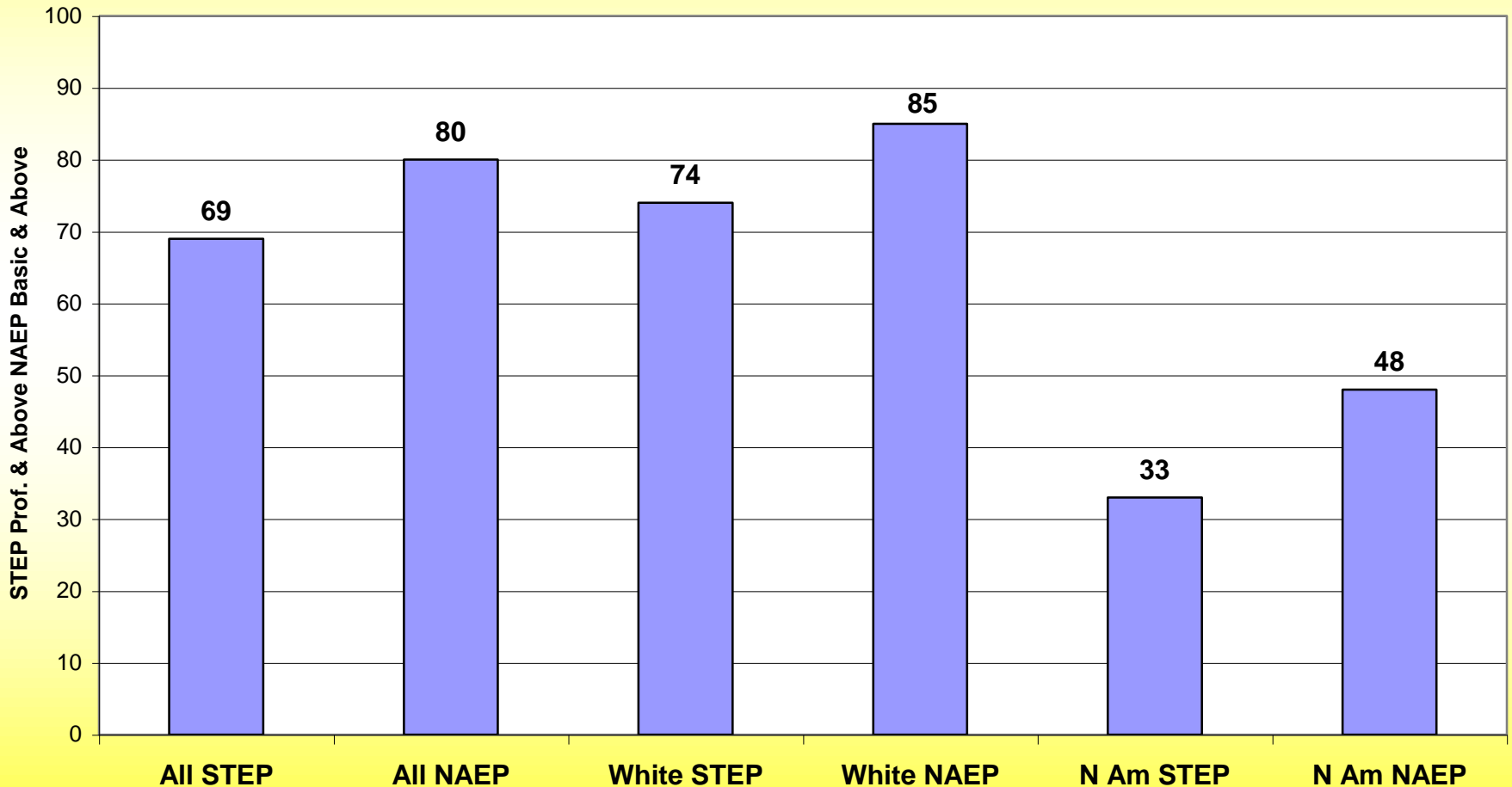


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SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Mathematics Assessment.

Dakota STEP Levels Compared to NAEP Levels Math Grade 8 2005



<http://nces.ed.gov/nationsreportcard/>