

State Indicators of Science and Mathematics Education: 2007

The present report on state indicators of science and math education for 2007 is the latest in a series of biennial reports on state and national indicators that were initiated in 1991. The reports are intended for use by policymakers, educators, and researchers.

The Council's efforts to develop and report a set of comparable, reliable indicators of science mathematics education have been supported by the state departments of education, the National Science Foundation, and the National Center for Education Statistics of the U.S. Department of Education. State education leaders, researchers, and professional organizations made major contributions in development of the indicators system through advice on selection of indicators, collecting and reporting data from schools, and disseminating the indicators within states.

The 2007 edition of the Science and Mathematics Indicator series includes four parts.

- 1) State-level Science and Mathematics Secondary Student Course Enrollments and Teacher Assignments
- 2) Closing the Gap in Reading and Math: NAEP Trends Show Significant Positive Effects for Almost Half the States
- 3) Closing the Gap in Science Achievement: Using NAEP Science Assessment Scores to Analyze State Trends
- 4) 50-State Analysis of the Preparation of Teachers and the Conditions for Teaching, based on SASS teacher surveys

State-level Science and Mathematics Secondary Student Course Enrollments and Teacher Assignments

States collect data from districts and schools annually including in many states course offerings, number of students taking each course, and the assignments of current teachers by subject or field. State aggregate figures are compiled by CCSSO every two years through cooperation with the state departments of education and managers of state education information systems. The state systems vary in capacity for reporting current data by state certification, degrees, and teacher demographics. To view detailed data for each state reporting on science and math for 2005-06, see the CCSSO project website http://www.ccsso.org/projects/Science_and_Mathematics_Education_Indicators/.

Rationale for State Science and Mathematics Indicators

The science and mathematics indicators developed and reported by CCSSO and the states address several priority needs:

- a) Measure Progress: Reliable, comparable indicators, by state, to assess progress toward state and national goals for improving schooling;
- b) Analyze Policies: A range of measures that are useful for analyzing the effects of state education policies and reform initiatives;
- c) Assess Needs and Plan: Indicators to address the quality of science and mathematics instruction and teacher preparation are useful to policymakers for evaluating programs, identifying problems, and recommending new initiatives.

Secondary Course Enrollments: Are more students taking challenging math and science courses in high school and middle school?

Educators and leaders find that having data that allows tracking trends in enrollments of higher level, challenging courses in science and mathematics are critical information for analysis. Several reasons are cited:

- **Relationship to achievement.** Extensive research on differences in student achievement has consistently shown that the number and level of secondary courses completed by students explain the degree of student achievement. Course enrollment rates by race/ethnicity or gender allow us to examine efforts to close the gap.
- **Analysis of student progress by state.** Comparable, reliable course-taking indicators allow states, districts, and professional groups to assess how far our students are progressing through the school science and math curriculum. The rates of course enrollments in Algebra 2, Trigonometry, and Pre-calculus in math, and science rates in Chemistry, Physics, and Advanced Life Science provide a state-by-state indicator of the proportion of students being offered more challenging math and science content in high schools.
- **Effects of state policies.** Course-taking patterns can be analyzed in relation to state high school graduation requirements, which have shown significant increases since the mid-1980s.

High School Mathematics

Table 1.1 (see attached Tables) lists the percentage of students in reporting states that took four levels of high school mathematics courses by their graduation--Algebra 1, Geometry, Algebra 2, Trigonometry/ Pre-calculus. The table also shows trends in course-taking percentages from 1996 to 2006.

As of 2005-06, a majority of reporting states had over 70 percent of students taking Algebra 2 by graduation. Many of the states increased the percent of students taking Algebra 2 by 15 to 20 percentage points, showing a high policy and program focus on moving more students into higher level coursework in math. States with major increases were Utah, Texas, West Virginia, Missouri, and North Carolina (Note: In this category, New York percentages declined due to a mismatch in course titles for the 2005-06 school year.)

At the fourth level of high school math, a majority of states had over 40 percent of students take a course such as Trigonometry or Pre-calculus. This represents significant increases for course taking at this level from 1996, particularly for Tennessee, Arkansas, Hawaii, and Iowa.

Challenging Mathematics in Middle Grades: Algebra I in Grade 8

Table 1.2 shows that 34 percent of grade 8 students took Algebra I for high school credit in 2005, as compared to 27 percent in 2003, an increase of 7 percentage points. Additionally, 7 percent of 8th grade students were taking geometry or algebra II. In 9 states over 30 percent of students reported taking Algebra 1 in grade 8 as of 2005; and a majority of states had over 25 percent taking Algebra. This is a key indicator for math and science. Many states and districts are moving toward a grade 8 curriculum with greater emphasis on algebra for all students, based on state and national professional standards (NCTM, 2000). Additionally, higher level high school science and math courses often require algebra completion as a prerequisite.

Additional data from NAEP on Algebra I grade 8 state percentages show disaggregated rates by race/ethnicity. The data show that many states have closed the gap. Nationally the gap for course-taking at this level has narrowed for African American students (29% in 2005) and Hispanic students (37%).

The percent of grade 8 students taking Algebra 1 in 2003 varied from 40 percent in California and Utah to 17 Louisiana. (The percentages have standard errors from 3 to 5 percent per state per year, based on school level sampling.) The focus on Algebra 1 percentages does not account for students that are enrolled in other courses such as Integrated or Unified Math, which include significant course content in algebra and are typically offered in schools in New York state.

High School Science

Table 1.3 shows the percentage of high school students in each reporting state that took a first-year course in Chemistry, Physics, Biology, and Earth Science by graduation. The table also shows the change in enrollments from 1996 to 2006. State data on science courses show that in most states almost all high school students take Biology by their high school graduation. Across the states, enrollment in Earth Science at the high school is extremely varied.

State enrollments in Physics and Chemistry are widely varied. In 2006, five of 30 reporting states had more than 30 percent of students take Physics by graduation, while thirteen states had less than 20 percent of students take Physics. A majority of these states reported declining enrollments in physics over 10 years. In 2006, ten states had more than 60 percent of their students take Chemistry by graduation. Chemistry enrollments increased more than 10 percentage points in five states.

National trends on course-taking based on states data can be compared with results from national sample surveys of high school transcripts, from studies conducted by NCES from 1982 to 2001, and statistics from the two sources show similar patterns (NCES, High School Transcript Study Tabulations, 2001).

Enrollments by High School Graduation requirements

Current efforts toward improving science and math education at the secondary level are aimed toward increasing enrollments in challenging courses that are more likely to meet state and national content standards for student learning. One method of analyzing trends at the state level is to track enrollment levels in higher level challenging courses by state course credit requirements. This analysis allows us to analyze the question of whether higher requirements do in fact increase student enrollments in higher level, academically challenging courses. (see CCSSO, Key State Policies for PK-12 Education, 2006; <http://www.ccsso.org/publications/details.cfm?PublicationID=348>)

Since 1990 when the CCSSO science and math indicators reports were initiated, CCSSO has documented the role of increasing state-level requirements for graduation in relation to student course-taking. The state course data provide a method of assessing change in course enrollments in relation to an individual state's requirements for graduation.

Over 40 states raised the number of credits required for graduation in science and mathematics, and recently additional requirements have been added. In total 42 states require at least two years of math and science, while in the mid-1980s, only nine states had even this requirement. As of 1992, only 13 states required 3 or more credits of math and six states required 3 or more credits in science, and currently XX states require 3 or 4 credits of math for graduation and YY states require 3 or 4 credits of science.

Table 1.4 displays the change in higher-level Mathematics enrollments by state graduation requirements. The data show that almost all states had significant increases and 9 of the 30 reporting states increased their enrollments in higher-level courses by 10 or more percentage points from 1996 to 2006. Among the states with highest requirements (2.5 to 4 credits), five states were among those with the highest rate of increase in math higher-level course taking.

Arkansas, Hawaii, North Carolina, Ohio, Tennessee, and Texas had the greatest increases in percent of grade 9-12 students taking a higher-level math course in 2005-06 (i.e., Geometry, Algebra 2, Trigonometry, or higher).

Table 1.5 shows the change in Science higher level course enrollments by state requirements. States with more than 10 percent increases since 1996 are West Virginia, Texas, Tennessee, and South Dakota.

Middle Grades Science Courses

The Science courses and curriculum taught in grades 7-8 vary widely across the states, as shown in **Table 1.6**. The percentages by course indicate that states have taken different approaches to structuring the middle grades science curriculum—and there is division across the states in courses called General Science, Life Science, Earth Science, Physical Science, and Integrated or Coordinated Science.

Trends in Numbers of Mathematics and Science Teachers

Trend data from states over the past decade—1996 to 2006-- show significant increases in number of high school Math teachers, and smaller increases in number of high school Science teachers.

- High School Math Teachers (Table 2.1): For the nation in 2006, 125,000 teachers in grades 9-12 had Math as their main assignment, as compared to 61,000 in 1990 and 93,000 in 1996.

- High School Science Teachers (Table 2.1): In 2006, 109,000 teachers had their main assignment in one of the science subjects, as compared to 51,000 in 1990 and 84,000 in 1996.

- Increases/Decreases by State: In high school Mathematics, 18 of 25 states with trend data from 1996 to 2006 showed increases in teachers with the main assignment in math. In Science, 15 of 25 states had increased numbers of teachers with main assignment in science. Other states trends either were constant or showed slight declines in teacher numbers.

Figure 2.1 and 2.2 shows the change in the numbers of high school (9-12) Math teachers and Science Teachers by state with their main assignment on one of these subjects (i.e., more than 50 percent of time). There are notable changes in the size of the Math teaching force with main assignment in math from 1996 to 2006 in several states. The states of California, Texas, Ohio, Illinois, and North Carolina had major increases in their high school math teaching force. States such as Indiana, Wisconsin, Colorado, Mississippi, and West Virginia also had significant increases in high school math teachers over the period. A few states, such as Louisiana, Nebraska, and Utah had slight declines in high school teachers with main assignment in math.

In Science, the large states—California, Ohio, Illinois, and North Carolina—increased the numbers of Science teachers from 1996 to 2006, while Texas science teachers declined during the period. Other states with significant increases in Science teachers were: Tennessee, Mississippi, Connecticut, Colorado, and Minnesota. What accounts for increases across states? Total student enrollments at the secondary level went up during this period, but it is notable that several states had increases in math and science teachers that are greater than expected based only on numbers of students—such as Ohio, Indiana, Mississippi, and West Virginia. Certainly, other factors are increases in state requirements, increased course offerings in schools, and greater local attention to math and science.

NCLB Requirements for Highly Qualified Teachers

By 2005-06 school year, states must guarantee that all teachers of core subjects (e.g., math, science, language arts, social studies, foreign language, special education, etc.) meet the highly qualified definition, including:

- Have completed a bachelor's degree;
- Hold full state certification;
- Pass rigorous subject content and pedagogy tests to demonstrate competence in assigned subject;
- Middle and high school teachers may demonstrate competence in their assigned subject(s) by holding a degree major in the assigned subject.

For current teachers only, state may propose another method of evaluating and reporting on competence of teachers in their assigned subject(s). (NCLB, Section 1111(h).

Further detailed data on High School and Middle grades Math and Science teachers by specific assignment (main vs. secondary assignment), by specific field of science, and trends analysis are available in the Appendix to this report on the CCSSO website http://www.ccsso.org/projects/Science_and_Mathematics_Education_Indicators/.

Middle Grades Mathematics and Science Teachers

The number of teachers in Grades 7-8 increased in most states in Math and Science. The number of teachers with their main assignment in Math grades 7-8 increased significantly from 1996 to 2006, as well as in Science, as shown in Figures 2.3. and 2.4. Nationally, the number of 7-8 teachers with main assignment in Math increased from 54,000 in 1996 to over 64,000 in 2006. In Science, the total number of middle grades teachers increased from 46,000 to 56,000. Several states had major increases in the number of Math middle grades teachers including: Ohio, California, Florida, Tennessee, West Virginia, Minnesota, Utah, and Mississippi.

In Science, states with significant increases in teachers with main assignment in science were: California, Florida, Missouri, Tennessee, Connecticut, Minnesota, and Utah. Further details on middle grade teachers by state are displayed in Tables 2.3 and 2.4.

State Certified Teachers in Science and Mathematics

State certification in the assigned teaching field indicates that teachers have met the core state requirements for preparation in the subject they are teaching. CCSSO requested that states apply teacher personnel files and current assignment data for all teachers in order to determine which current teachers had full certification in each of subjects of science and math they were assigned.

The proportion of teachers who are certified in the subjects they are teaching is an important policy indicator for state and local educators because state certification is often used as a basic, but essential measure of teacher qualification and as an indicator of teacher supply and shortage. It is not, however, a wholly adequate measure of quality of teacher preparation, particularly in cross-state comparisons, because of the differing state standards for certification (Ingersoll, 2003). Now, NCLB requires that states report on the proportion of teachers that meet a separate criterion of subject knowledge in the assigned field/subject— i.e., either passing a teacher assessment in the field or hold a major in assigned field (USED, 2003). State certification requirements are tracked by CCSSO every two years for secondary, middle grades, and elementary teachers, and they are reported in *Key State Education Policies on PK-12 Education* (2006).

In the following analysis, “certification” in a field means the teacher holds a state’s regular, standard, advanced, or probationary certificate in the assigned field/subject. In science, the teacher holds a “specific-field” certification (e.g., biology) or a “broad-field” certification (multiple fields of science). “Not certified” means the teacher holds an emergency or temporary certificate or holds a certification in a field other than the assigned field.

High School Teachers Certified in Field

Mathematics Certification rates vary widely by state (Table 2.5). Of 30 reporting states, 11 had over 95 percent of high school math teachers certified in their assigned field, while six states had less than 75 percent certified.

Science teacher certification--of the 30 reporting states, 20 states had over 90 percent of teachers in Biology and Chemistry certified in field, and five had less than 80 percent certified. In Physics and Earth Science, 13 states had less than 80 percent of teachers certified in one field or both fields.

A major factor in the lack of improvement in certified teachers by state is the continued increased demand and insufficient supply of well-prepared teachers. Since 1996, the number of high school teachers of mathematics with main assignment in math went up over 20 percent. The number of high school teachers of science also increased by about 20 percent. In many states the numbers of certified teachers have increased but the high demand for teachers has kept the rate of certified teachers about the same or a slight decrease.

Middle-Level Teachers Certified in Field

The rate of certification for middle school science and mathematics teachers is a key statistic for gauging teacher preparation and supply. Middle grades classes are often where students develop strong interests and aspirations in science and mathematics or where interests fall off, and well-prepared teachers are likely to be key to building student interest. Secondly, middle grades are often where states, districts, and schools find it is difficult to fill positions with well-qualified teachers in science and mathematics.

The statistics in Table 2.14 highlight the differences among states in teachers certified in elementary vs. teachers certified in a specific subject they are assigned in middle level teaching. NCLB now requires that middle grades teachers be “highly-qualified” in the assigned subject(s) of teaching. States have widely differing levels of certified teachers in middle grades math and science-- of the 30 states reporting certification data for grade 7-8 teachers, nine states have 90 percent or more of their middle grades teachers certified in math, while 10 states have less than 60 percent certified in math.

Only eight of the 30 states reporting data on middle grades science teachers have 90 percent or more certified middle school science teachers, while 10 states have less than 60 percent certified in science. States with mainly elementary certified teachers are Georgia, Idaho, Nevada, New Mexico, Ohio, North Dakota, and Oklahoma.

For Teacher Demographics by subject and state—including Race/ethnicity, Age, and Gender of Math and Science Teachers, go to the electronic Appendix.

State Indicators of Science and Mathematics Education 2007

List of Tables and Figures

Table 1.1	Students Taking Higher-Level Mathematics Courses by Graduation, 2006; Change 1996 to 2006
Figure 1.1	Percent of High School Students Taking Algebra 2 or Integrated Math 3 Prior to Graduation, 1996 to 2006
Table 1.2	Algebra 1 Enrollments as a Percentage of Grade 9 Students, 2006; Students Reporting Taking Algebra in Grade 8, 2005
Table 1.3	Students Taking Higher-Level Science Courses by Graduation, 2006; Change 1996 to 2006
Figure 1.2	Percent of High School Students Taking Chemistry Prior to Graduation, 1996 to 2006
Table 1.4	Change in Higher-Level Mathematics Enrollments by State Graduation Requirements, 1996 to 2006
Table 1.5	Change in Higher-Level Science Enrollments by State Graduation Requirements, 1996 to 2006
Table 1.6	Middle Grades Science Enrollments by Course Type, Grades 7-8, 2006
Table 2.1	High School Teachers with MAIN Assignment in Mathematics or Science, 1996 to 2006
Figure 2.1	Teachers with Main Assignment in Mathematics, Grades 9-12, 1996 to 2006
Figure 2.2	Teachers with Main Assignment in Science, Grades 9-12, 1996 to 2006
Table 2.2	Total Number of Mathematics and Science Teachers, Grades 9-12, 2006
Table 2.3	Middle Grades Teachers with MAIN Assignment in Mathematics or Science, 1996 to 2006
Table 2.4	Total Number of Mathematics and Science Teachers, Grades 7-8, 2006
Table 2.5	Certification of High School Mathematics and Science Teachers in Grades 9-12, 2006
Table 2.6	Number of Mathematics Teachers and Certification, Grades 9-12, 2006, 2004, and 1996
Table 2.7	Number of Biology and Chemistry Teachers, Grades 9-12, 2006, 2004, and 1996
Table 2.8	Number of Physics and Earth Science Teachers, Grades 9-12, 2006, 2004, and 1996
Table 2.9	Certification of Biology and Chemistry Teachers, Grades 9-12, 2006, 2004, and 1996
Table 2.10	Certification of Physics and Earth Science Teachers, Grades 9-12, 2006, 2004, and 1996
Table 2.11	High School Teachers with Main Assignment in Mathematics, 2006, 2004, and 1996
Table 2.12	High School Teachers with Main Assignment in Biology and Chemistry, 2006, 2004, and 1996
Table 2.13	High School Teachers with Main Assignment in Physics and Earth Science, 2006, 2004, and 1996
Table 2.14	Certification of Middle Grades (7-8) Mathematics and Science Teachers, 2006
Table 2.15	Number of Mathematics Teachers and Certification, Grades 7-8, 2006, 2004, and 1996
Table 2.16	Number of Science Teachers and Certification, Grades 7-8, 2006, 2004, and 1996
Table 2.17	Middle Grades Teachers with Main Assignment in Mathematics, 2006, 2004, and 1996
Table 2.18	Middle Grades Teachers with Main Assignment in Science, 2006, 2004, and 1996

Table 1.1**Students Taking Higher-Level Mathematics Courses by Graduation, 2006; Change 1996 to 2006**

STATE	Trigonometry/ Pre-Calculus (Level 4)		Algebra 2/ Integrated Math 3 (Level 3)		Geometry/ Integrated Math 2 (Level 2)		Algebra 1/ Integrated Math 1 (Level 1)	
	Change		Change		Change		Change	
	2006	1996 to '06	2006	1996 to '06	2006	1996 to '06	2006	1996 to '06
South Carolina	75	—	76	—	69	—	51	—
North Carolina	67	-2	83	+12	95+	0	95+	0
West Virginia	67	+16	84	+13	85	0	95+	0
Texas	60	+21	90	+19	95+	+22	90	-5
Iowa	56	+18	80	+12	92	+15	95+	+6
Ohio	53	+15	76	+13	95+	+21	95+	0
Wisconsin	52	+6	77	+9	95+	0	95+	0
Arkansas	51	+20	84	+17	95+	+23	95+	0
Utah	49	-4	95+	+17	95+	+2	95+	0
South Dakota	48	+9	73	-4	84	+1	95+	+1
Mississippi	47	+7	64	-13	81	+6	81	-14
North Dakota	46	-5	77	0	88	+6	95+	0
Hawaii	45	+25	83	+46	95+	+44	95+	+27
Pennsylvania	44	-17	76	+7	76	+6	95+	0
Tennessee	42	+19	85	+20	86	+18	95+	0
Indiana	41	+7	72	+13	80	+13	95+	+4
Missouri	41	+8	91	+16	79	+7	95+	0
Dist. of Columbia	39	+18	78	+10	86	-9	95+	0
Michigan	38	—	43	—	45	—	65	—
Oklahoma	36	+8	72	+5	81	+14	95+	0
Wyoming	36	—	65	—	73	—	95+	—
New York	36	+5	26	-26	95+	+27	95+	0
Louisiana	35	+6	72	+8	87	-1	95+	0
Idaho	33	+3	64	+3	74	+8	95+	0
Minnesota	31	-10	53	-9	73	+5	95+	+14
California	26	+1	58	+9	77	+20	95+	0
New Mexico	24	-1	55	-3	66	+10	95+	0

Example: 76% of Ohio students took Algebra 2 or Integrated Math 3 (3rd year of high school math) prior to graduation, based on data from 2005-06 school year. This represents an increase of thirteen percentage points since the 1995-96 school year.

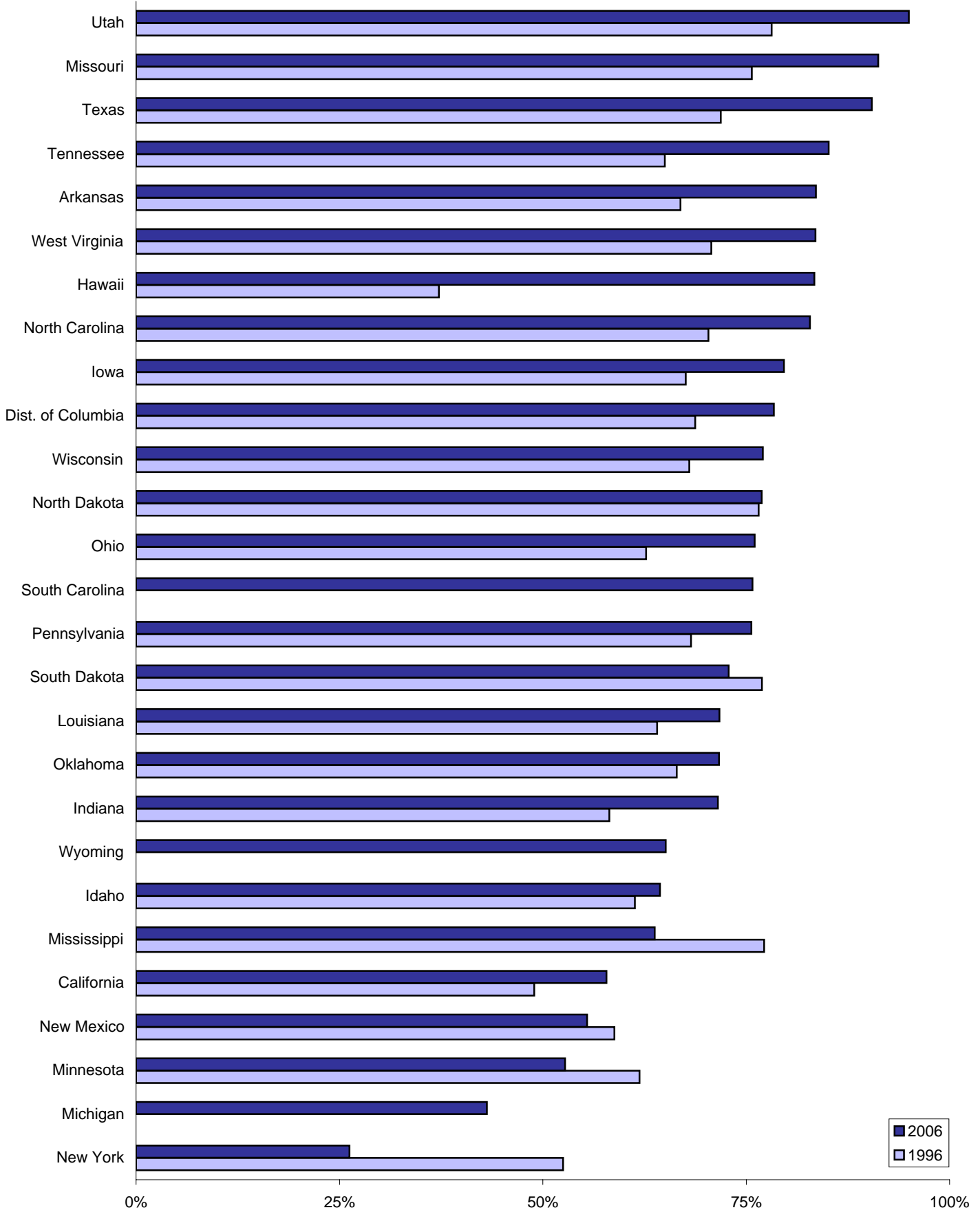
— Data not available. New York: transition from math sequence courses 1, 2, 3 to Math A and B sequence; North Carolina: estimated fall enrollment for Level 4 due to compressed scheduling.

Note on course estimates by graduation: Each state percent is a statistical estimate of course taking of public high school students by the time they graduate based on the total course enrollment in grades 9-12 in fall 2004 divided by the estimated number of students in a grade cohort during four years of high school. The statistical estimating method is imprecise above 95%. Nation = Percent of all public high school students estimated to take each course, including imputation for nonreporting states (see Appendix ??).

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Figure 1.1 Percent of High School Students Taking Algebra 2 or Integrated Math 3 Prior to Graduation, 1996 to 2006



See Table 1.1

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

**Percentage of Students Who Reported Taking Algebra I and Algebra II or Geometry
in Grade 8, 2003 to 2005 NAEP**

State	Algebra I			Algebra II or Geometry		
	2005	2003	Change 03-05	2005	2003	Change 03-05
Alabama	29	17	+12	4	3	+1
Alaska	-	-	-	-	-	-
Arizona	26	22	+4	12	4	+8
Arkansas	27	18	+9	5	2	+3
California	60	46	+14	11	10	+1
Colorado	33	27	+6	10	6	+4
Connecticut	37	31	+6	7	4	+3
Delaware	27	21	+6	10	6	+4
District of Columbia	34	16	+18	12	6	+6
DoDEA	37	33	+4	4	3	+1
Florida	35	28	+7	8	5	+3
Georgia	42	27	+15	7	4	+3
Hawaii	22	17	+5	8	3	+5
Idaho	31	28	+3	4	3	+1
Illinois	30	23	+7	9	6	+3
Indiana	33	24	+9	3	2	+1
Iowa	22	19	+3	4	2	+2
Kansas	34	28	+6	5	4	+1
Kentucky	27	20	+7	7	3	+4
Louisiana	22	11	+11	6	3	+3
Maine	25	21	+4	5	4	+1
Maryland	42	32	+10	14	11	+3
Massachusetts	42	33	+9	9	5	+4
Michigan	30	21	+9	8	4	+4
Minnesota	25	22	+3	7	5	+2
Mississippi	19	16	+3	3	1	+2
Missouri	30	26	+4	5	3	+2
Montana	22	20	+2	5	2	+3
Nebraska	31	28	+3	4	3	+1
Nevada	47	32	+15	6	3	+3
New Hampshire	28	27	+1	3	3	0
New Jersey	35	26	+9	8	4	+4
New Mexico	29	20	+9	5	3	+2
New York	18	9	+9	8	5	+3
North Carolina	29	29	0	7	4	+3
North Dakota	18	18	0	2	1	+1
Ohio	29	23	+6	7	3	+4
Oklahoma	26	25	+1	3	3	0
Oregon	30	25	+5	8	6	+2
Pennsylvania	32	31	+1	7	5	+2
Rhode Island	36	31	+5	8	5	+3
South Carolina	34	24	+10	6	3	+3
South Dakota	27	24	+3	3	2	+1
Tennessee	25	20	+5	4	2	+2
Texas	28	25	+3	5	2	+3
Utah	47	40	+7	12	12	0
Vermont	23	20	+3	4	3	+1
Virginia	34	28	+6	7	5	+2
Washington	24	20	+4	9	4	+5
West Virginia	28	25	+3	9	5	+4
Wisconsin	25	22	+3	6	4	+2
Wyoming	26	25	+1	4	3	+1
NATION	34	27	+7	7	5	+2

Percentage rounds to zero; * Sample size is insufficient to permit a reliable estimate; — not available.

Caution: Standard error per group varies from 2 to 5%.

Source: NCES, National Assessment of Educational Progress (NAEP) 2003, 2005 Mathematics Assessments.

Council of Chief State School Officers, State Education Indicators, Washington, DC, 2007.

Note: Algebra I= Algebra I (1-yr crs), 1st yr 2-yr Algebra I, and 2nd yr 2-yr Algebra I

Table 1.3**Students Taking Higher-Level Science Courses by Graduation, 2006; Change 1996 to 2006**

STATE	Chemistry 1st Year		Physics 1st Year		Biology 1st Year		Earth Science 1st Year
	% 2006	Change 1996 to '06	% 2006	Change 1996 to '06	% 2006	Change 1996 to '06	% 2006
Texas	87	+32	95+	—	95+	0	0
Iowa	86	+18	32	0	95+	0	28
South Carolina	82	—	26	—	93	—	5
Dist. of Columbia	76	-1	23	-4	84	-11	12
Wisconsin	74	-2	31	-5	95+	0	20
Pennsylvania	69	+3	37	-2	95+	0	27
Louisiana	66	+12	20	-6	95+	0	4
Tennessee	66	+14	11	-2	95+	+3	5
New York	62	-2	26	-6	95+	0	68
Ohio	62	+4	24	+1	95+	0	24
Arkansas	59	-6	23	-19	95+	0	11
South Dakota	58	+6	21	-6	93	+2	7
Indiana	56	-1	23	-1	95+	0	39
North Dakota	55	-5	21	-5	95+	0	1
North Carolina	54	-9	12	-8	95+	0	95+
Wyoming	51	—	23	—	94	—	20
California	49	+10	19	+1	91	+12	21
Minnesota	49	-2	20	-5	95+	0	13
Mississippi	48	-10	11	-6	90	-5	2
Utah	48	+1	24	-6	95+	0	83
Missouri	48	-3	14	-4	95+	0	12
Michigan	43	—	19	—	73	—	20
New Mexico	41	0	12	0	78	-17	10
Oklahoma	39	-1	9	-3	89	-6	12
Idaho	29	-12	11	-4	93	-2	36
West Virginia	13	-47	10	-6	16	-4	2
Hawaii	—	—	33	+4	79	-16	3

— Data not available.

Texas: Physics enrollment includes Physical Science. West Virginia: Percentages do not include Coordinated and Thematic Science (CATS 9 = 95+%, CATS 10 = 95+%, CATS 11 & 12 = 15% by graduation).

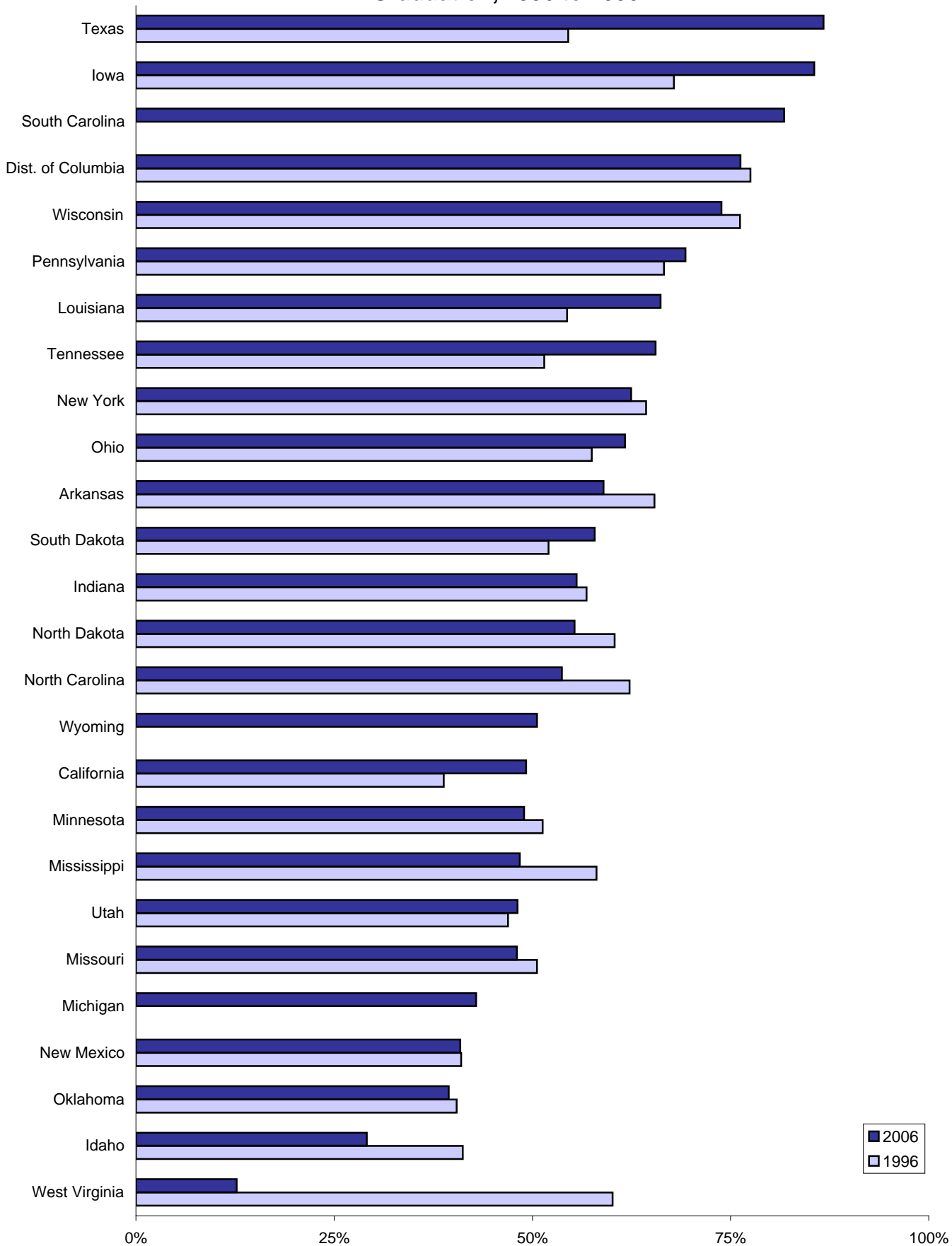
See note on course estimates by graduation, Table 1.1.

Course categories and definitions: See online report at http://www.ccsso.org/projects/Science_and_Mathematics_Education_Indicators/.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, State Services and Technical Assistance, Washington, DC, 2007.

Figure 1.2 Percent of High School Students Taking Chemistry Prior to Graduation, 1996 to 2006



See Table 1.3
 Source: State Departments of Education, Data on Public Schools, 2005-06.
 Council of Chief State School Officers, Washington, DC, 2007.

Table 1.4**Change in Higher-Level Mathematics Enrollments by State Graduation Requirements, 1996 to 2006**

State (By Requirements)	PERCENT OF GRADES 9-12 STUDENTS		
	% Students Taking Math at Geometry Level or Higher		% Students Taking Math (any course)
	2006	Change 1996 to 2006	2006
<i>2.5 to 4 Credits (as of 2006)</i>			
Arkansas	59	+16	102
District of Columbia	50	+2	87
DoDEA	57	—	87
Hawaii	57	+30	134
Idaho	46	+5	82
Indiana	51	+9	84
Louisiana	48	+4	89
Michigan	33	—	64
Minnesota	42	-3	72
Mississippi	48	+2	92
New Mexico	37	+2	78
New York	53	+13	91
North Carolina	80	+21	99
Ohio	62	+17	99
Oklahoma	49	+8	87
South Carolina	54	—	99
South Dakota	55	+5	90
Tennessee	55	+16	99
Texas	64	+20	90
West Virginia	60	+8	99
Wyoming	47	—	81
<i>2 Credits (as of 2006)</i>			
California	43	+9	80
Missouri	56	+10	95
Utah	69	+10	95
Wisconsin	63	+8	99
<i>Local Board Policies</i>			
Iowa	62	+14	99
North Dakota	54	+1	92
Pennsylvania	52	0	99
<i>Requirements Unknown</i>			
Virgin Islands	60	—	99

Example: 55 percent of South Dakota students in grades 9-12 in 2005-06 school year were taking a high school math course in Geometry, Algebra 2, Trigonometry, Calculus, or other higher-level math course at level 2, 3, 4, or 5.

Minnesota, Texas: 1996 data=1994-95 data.

Source: State Departments of Education, Data on Public Schools, 2005-06; NCES, CCD Fall Membership 2004.

Council of Chief State School Officers, Washington, DC, 2007.

Table 1.5**Change in Higher-Level Science Enrollments by State Graduation Requirements, 1996 to 2006**

State (By Requirements)	PERCENT OF GRADES 9-12 STUDENTS		
	% Students Taking Chemistry, Physics, or Advanced Science		% Students Taking Science (any course)
	2006	Change 1996 to 2006	2006
<i>2.5 to 4 Credits (as of 2006)</i>			
Arkansas	24	-4	91
District of Columbia	31	+5	73
DoDEA	39	—	80
Hawaii	28	+7	68
Idaho	18	+1	77
Indiana	28	-1	77
Louisiana	24	+3	89
Michigan	22	—	60
Minnesota	27	-1	72
Mississippi	40	0	91
New Mexico	22	+4	64
New York	35	+7	99
North Carolina	24	-6	99
Ohio	29	+4	99
Oklahoma	28	+3	89
South Carolina	36	—	98
South Dakota	39	+10	91
Tennessee	30	+11	92
Texas	56	+33	88
West Virginia	46	+13	99
Wyoming	25	—	84
<i>2 Credits (as of 2006)</i>			
California	25	+6	68
Missouri	33	+3	92
Utah	29	-3	75
Wisconsin	38	0	99
<i>Local Board Policies</i>			
Iowa	47	+20	99
North Dakota	33	-1	86
Pennsylvania	39	+2	91
<i>Requirements Unknown</i>			
Virgin Islands	20	—	90

Higher-level science courses = Chemistry, Physics, Advanced Life, Physical, or Earth Sciences.

Minnesota, Texas: 1996 data=1994-95 data.

Source: State Departments of Education, Data on Public Schools, 2005-06; NCES, CCD Fall Membership 2004.

Council of Chief State School Officers, Washington, DC, 2007.

Table 1.6
Middle Grades Science Enrollments by Course Type, Grades 7-8, 2006

PERCENT OF GRADES 7-8 STUDENTS

State	General Science	Life Science	Earth Science	Physical Science	Integrated or Coordinated Science
Arkansas	94	0	0	0	0
California	47	16	0.5	16	—
Delaware	—	—	—	—	100
District of Columbia	11	33	4	35	—
DoDEA	—	—	—	—	91
Hawaii	21	25	23	2	9
Idaho	40	28	27	2	0
Indiana	94	0.3	0.2	0.02	—
Louisiana	43	15	12	2	3
Michigan	27	6	5	7	15
Minnesota	—	46	30	9	5
Mississippi	91	—	0	0.002	—
Missouri	58	19	14	3	—
New Mexico	2	19	14	7	45
New York	14	20	10	23	12
North Carolina	0	0.04	1	0.2	94
North Dakota	—	38	42	—	—
Ohio	89	1	2	1	2
Oklahoma	13	0	8	3	67
Pennsylvania	29	24	21	25	5
South Carolina	28	28	30	—	—
South Dakota	41	15	15	1	19
Tennessee	—	—	—	—	95
Utah	0	0	0	0	97
Virgin Islands	80	—	—	—	—
West Virginia	0	0	0.1	0	97
Wisconsin	47	17	15	6	2
Wyoming	18	33	28	10	6

— Data not available. Percentages may sum over 100%, indicating students reported for more than one subject, e.g., semester courses. In some states data from self-contained classrooms are not included in the totals. Denominator is total student membership in grades 7 and 8.

North Carolina: Integrated Science includes students reported in "Other Science" category.

Source: State Departments of Education, Data on Public Schools, 2005-06; NCES, CCD Fall Membership 2004.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.1**High School Teachers with MAIN Assignment in Mathematics or Science, 1996 and 2006**

State	MAIN ASSIGNMENT TEACHERS			
	Number 9-12 Math		Number 9-12 Science	
	2006	1996	2006	1996
Alaska	340	—	249	—
Arkansas	1,259	719	2,094	645
California	12,125	7,324	8,793	4,908
Colorado	1,912	1,271	1,770	1,138
Connecticut	1,698	1,300	1,834	1,070
Delaware	288	206	270	213
Georgia	3,519	—	3,003	—
Hawaii	328	586	251	315
Idaho	554	418	254	327
Illinois	4,432	3,908	4,246	3,381
Indiana	2,300	2,061	2,080	1,866
Kansas	1,441	—	1,213	—
Louisiana	1,133	1,456	1,026	1,085
Maine	708	—	782	—
Michigan	3,592	—	3,257	—
Minnesota	1,849	1,491	1,618	1,170
Mississippi	1,261	972	2,285	816
Missouri	2,171	1,884	2,007	1,618
New Jersey	5,634	—	4,116	—
New Mexico	714	597	619	425
New York	9,429	6,054	9,525	9,553
North Carolina	3,541	2,421	2,667	2,077
North Dakota	331	331	196	186
Ohio	6,149	3,611	5,369	3,035
Oklahoma	2,086	1,735	1,582	1,257
Pennsylvania	5,755	6,301	4,428	5,980
South Dakota	337	360	168	225
Texas	11,162	7,654	8,427	8,806
Utah	711	962	626	791
Virgin Islands	27	—	21	—
Virginia	2,246	—	2,496	—
West Virginia	1,268	389	938	367
Wisconsin	2,274	1,923	2,174	1,877
NATION	124,860	93,326	109,983	84,127

— Data not available. Main Assignment = 50% or more time assigned to subject.

Science=sum biology, chemistry, physics, earth science, general science, physical science, integrated science.

1996 data: District of Columbia (1993-94 data), Minnesota (1994-95 data), Pennsylvania: grades 7-12.

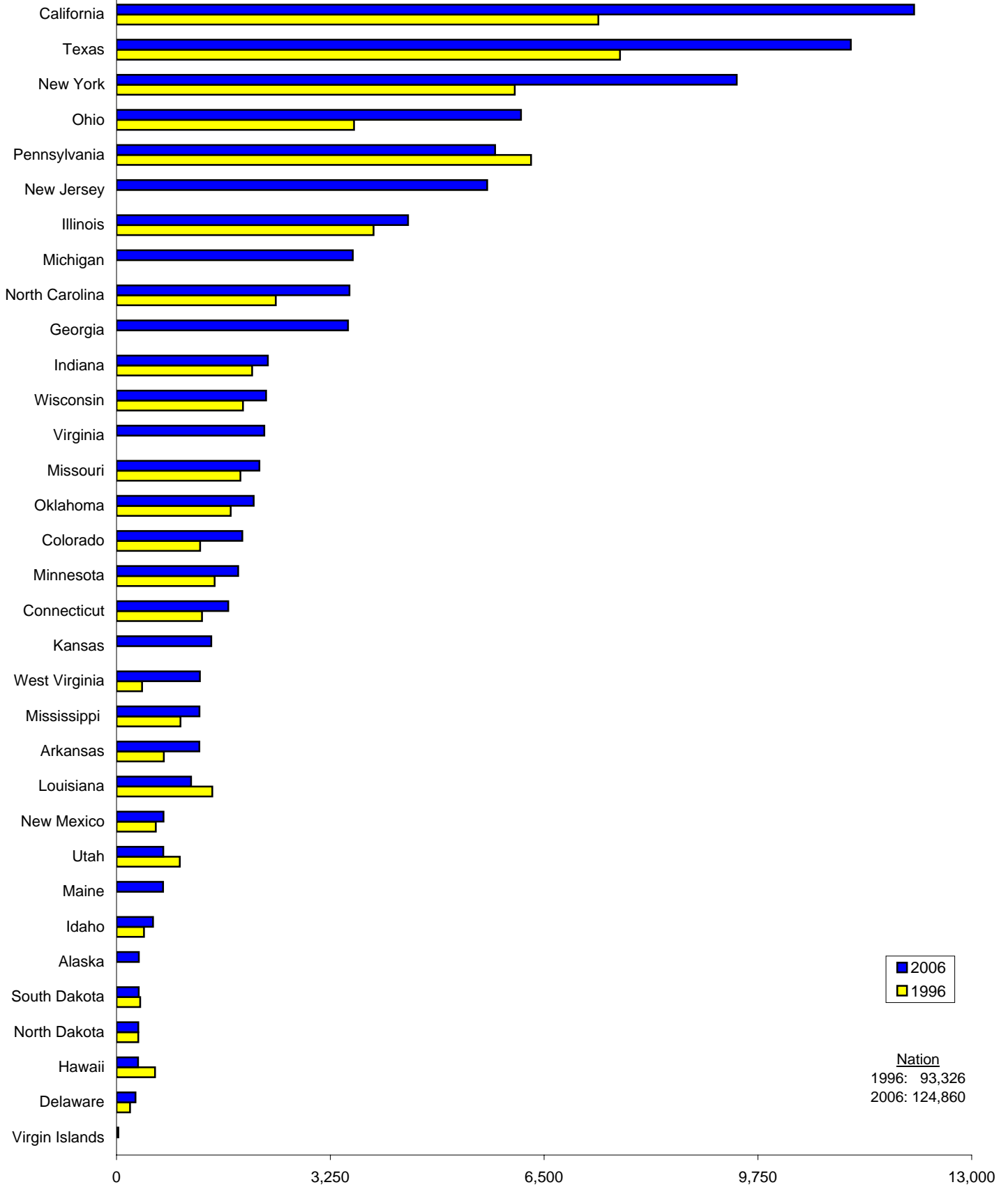
National totals include imputation for nonreporting states (except Integrated Science and Other Science).

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Figure 2.1

Teachers with Main Assignment in Mathematics, Grades 9-12, 1996 to 2006



■ 2006
■ 1996

Nation
1996: 93,326
2006: 124,860

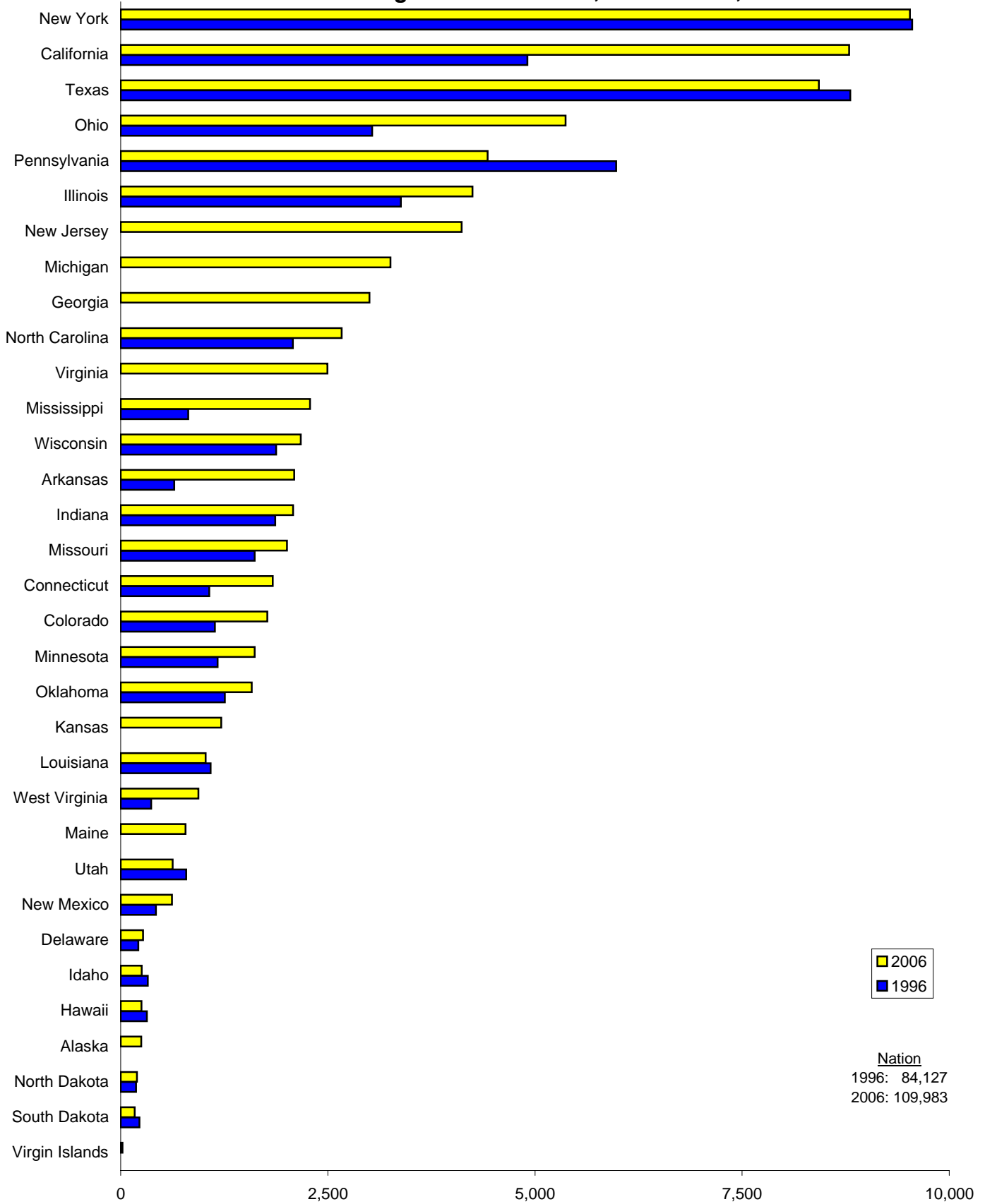
Main Assignment = 50% or more time assigned to subject.

Source: State Departments of Education, Data on Public Schools, 2005-

Council of Chief State School Officers, Washington, DC,

Figure 2.2

Teachers with Main Assignment in Science, Grades 9-12, 1996 to 2006



Main Assignment = 50% or more time assigned to subject.

Source: State Departments of Education, Data on Public Schools, 2005-

Council of Chief State School Officers, Washington, DC,

2006
1996
 Nation
 1996: 84,127
 2006: 109,983

Table 2.2**Total Number of Mathematics and Science Teachers, Grades 9-12, 2006**

State	Math	Biology	Chemistry	Physics	Earth Science	General Science	Physical Science	Integrated Science	Other Science
Alaska	646	240	85	63	126	243	136	—	22
Arkansas	1,661	675	411	313	99	0	593	0	391
California	14,182	5,361	2,493	1,370	1,489	420	1,059	1,469	1,079
Colorado	2,018	1,852	—	—	—	—	—	—	—
Connecticut	1,748	812	449	231	174	362	101	44	20
Delaware	288	103	60	28	14	31	30	4	0
DoDEA	356	165	122	124	78	2	0	0	32
Georgia	3,596	1,333	318	126	42	—	1,306	—	—
Hawaii	394	142	63	62	55	52	76	13	64
Idaho	719	254	125	89	98	17	179	8	2
Illinois	4,650	1,825	1,066	477	296	618	0	0	35
Indiana	2,562	1,186	644	371	422	3	482	25	206
Iowa	1,365	647	433	341	153	33	357	137	302
Kansas	1,676	634	460	326	76	332	306	—	27
Louisiana	4,313	1,674	565	283	89	30	771	—	20
Maine	751	321	213	166	161	—	129	142	64
Massachusetts	3,018	1,050	618	472	216	490	—	—	—
Michigan	3,903	1,321	687	389	298	1,794	207	11	33
Minnesota	2,146	1,011	560	360	153	—	586	13	250
Mississippi	1,274	789	305	204	341	0	265	—	395
Missouri	2,417	1,368	688	401	190	159	844	—	110
New Hampshire	624	277	103	58	32	70	59	—	—
New Jersey	5,840	1,655	689	302	323	676	619	—	86
New Mexico	842	414	192	104	91	65	178	45	164
New York	11,254	4,762	2,329	1,343	2,934	—	—	176	3,149
North Carolina	6,257	1,619	713	350	1,546	—	1,030	—	266
North Dakota	417	254	165	114	17	8	219	0	4
Ohio	6,621	2,434	1,260	816	760	37	1,344	1,886	1,099
Oklahoma	2,235	1,134	504	210	125	16	657	0	372
Pennsylvania	5,780	1,638	1,157	637	322	552	117	19	0
South Dakota	487	269	166	121	34	35	201	0	1
Tennessee	2,374	1,197	593	205	76	—	769	—	217
Texas	15,468	5,390	3,548	5,524	427	0	0	3	1,711
Utah	1,132	483	192	141	363	0	0	4	0
Virgin Islands	27	8	3	1	0	9	0	0	0
Virginia	3,164	1,317	635	386	815	—	—	33	290
West Virginia	1,771	273	166	116	235	0	39	1,279	0
Wisconsin	2,391	1,111	614	392	148	424	299	0	33
NATION	152,028	59,163	29,522	22,056	16,211	9,472	18,700	5,311	10,444

Number of Teachers=Assigned to teach course/subject one or more periods.

— Data not available. Colorado: Biology = all science.

National totals include imputation for nonreporting states (except Integrated Science and Other Science).

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.3**Middle Grades Teachers with MAIN Assignment in Mathematics or Science, 1996 and 2006**

State	MAIN ASSIGNMENT TEACHERS			
	Number 7-8 Math		Number 7-8 Science	
	2006	1996	2006	1996
Alaska	276	—	233	—
Arkansas	0	—	0	—
California	6,144	3,901	5,791	3,751
Colorado	1,128	942	1,019	871
Connecticut	983	715	913	693
Delaware	222	143	177	134
Georgia	3,053	—	2,392	—
Hawaii	293	84	195	82
Idaho	316	193	281	212
Illinois	1,499	1,257	1,359	1,157
Indiana	1,378	1,206	1,240	1,182
Kansas	1,000	—	755	—
Louisiana	923	451	676	396
Maine	394	—	294	—
Michigan	2,640	—	2,417	—
Minnesota	955	534	877	515
Mississippi	862	678	815	604
Missouri	1,217	983	1,171	977
New Jersey	303	—	211	—
New Mexico	539	335	551	224
New York	5,582	4,489	4,978	3,593
North Carolina	814	1,103	1,262	1,171
North Dakota	213	140	111	133
Ohio	4,502	1,864	3,546	1,758
Oklahoma	722	725	728	733
Pennsylvania	2,641	—	2,166	—
South Dakota	225	161	148	163
Utah	687	240	414	183
Virgin Islands	17	—	21	—
Virginia	1,548	—	1,478	—
West Virginia	626	413	400	296
Wisconsin	1,256	1,140	1,170	1,070
NATION	64,923	53,921	56,112	45,987

— Data not available. Main Assignment = 50% or more time assigned to subject.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.4
Total Number of Mathematics and Science Teachers, Grades 7-8, 2006

State	Mathematics	Science
Alaska	660	445
Arkansas	975	921
California	8,668	7,365
Colorado	1,249	1,101
Connecticut	1,045	946
Delaware	222	177
DoDEA	337	228
Georgia	3,281	2,574
Hawaii	455	326
Idaho	570	439
Illinois	1,586	1,423
Indiana	1,646	1,430
Kansas	1,228	933
Louisiana	1,805	1,410
Maine	467	336
Michigan	2,982	2,690
Minnesota	1,302	1,138
Mississippi	865	821
Missouri	1,541	1,426
New Hampshire	291	162
New Jersey	308	215
New Mexico	685	688
New York	7,158	6,190
North Carolina	4,148	3,135
North Dakota	333	256
Ohio	4,978	4,035
Oklahoma	1,253	1,215
Pennsylvania	2,643	2,169
South Dakota	701	455
Tennessee	2,092	1,593
Utah	1,251	553
Virgin Islands	17	21
Virginia	1,948	1,646
West Virginia	905	646
Wisconsin	1,521	1,407
NATION	92,811	76,255

Number of Teachers=Assigned to teach course/subject one or more periods.

— Data not available.

National totals include imputation for nonreporting states.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.5**Certification of High School Mathematics and Science Teachers in Grades 9-12, 2006****Percent of Teachers Certified**

State	Math	Biology	Chemistry	Physics	Earth Science
Alaska	52	75	88	86	63
Arkansas	98	95	97	96	91
California	83	84	82	85	61
Colorado	92	94	—	—	—
Connecticut	99	99	97	98	94
Delaware	93	92	92	93	100
Georgia	95	92	95	90	74
Hawaii	39	50	52	55	18
Idaho	95	99	100	100	100
Illinois	79	79	78	77	40
Indiana	96	95	98	96	95
Kansas	96	97	93	90	70
Maine	92	92	95	92	81
Minnesota	99	100	98	98	94
Missouri	100	100	100	100	100
New Mexico	100	100	100	100	99
New York	93	91	87	77	77
North Carolina	87	90	93	90	86
North Dakota	100	100	100	100	100
Ohio	96	85	96	98	73
Oklahoma	99	99	99	97	89
Pennsylvania	93	98	98	98	98
South Dakota	94	99	99	93	100
Texas	82	72	76	54	56
Utah	89	90	92	88	73
Virginia	99	99	99	99	99
West Virginia	98	95	96	91	83
Wisconsin	100	100	100	98	100
NATION	90	88	88	74	76

— Data not available.

Certified = Teacher assigned to subject one or more periods and has state certification in subject.

Colorado: Biology = all science. National totals include imputation for nonreporting states.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.6**Number of Mathematics Teachers and Certification, Grades 9-12, 2006, 2004, and 1996**

State	Total Teachers (Grades 9-12)			% Certified (Grades 9-12)		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	1,747	—	—	96
Alaska	646	555	—	52	52	—
Arizona	—	—	—	—	—	—
Arkansas	1,661	1,485	3,074	98	—	94
California	14,182	13,212	9,727	83	82	80
Colorado	2,018	1,902	1,382	92	—	—
Connecticut	1,748	1,643	1,527	99	100	99
Delaware	288	270	206	93	92	93
District of Columbia	—	—	306	—	—	100
DoDEA	356	319	—	—	—	—
Florida	—	8,099	—	—	—	—
Georgia	3,596	3,430	—	95	91	—
Guam	—	53	—	—	83	—
Hawaii	394	—	825	39	—	76
Idaho	719	708	880	95	93	98
Illinois	4,650	4,502	4,208	79	72	95
Indiana	2,562	2,534	2,356	96	95	97
Iowa	1,365	1,346	1,501	—	—	—
Kansas	1,676	1,569	996	96	97	—
Kentucky	—	—	1,618	—	—	98
Louisiana	4,313	1,301	1,524	—	95	88
Maine	751	—	635	92	—	—
Maryland	—	—	—	—	—	—
Massachusetts	3,018	—	2,662	—	—	91
Michigan	3,903	—	—	—	—	—
Minnesota	2,146	2,148	1,885	99	99	100
Mississippi	1,274	1,237	1,147	—	96	—
Missouri	2,417	2,355	2,235	100	96	95
Montana	—	—	555	—	—	98
Nebraska	—	1,171	1,266	—	91	90
Nevada	—	664	—	—	97	—
New Hampshire	624	611	579	—	—	—
New Jersey	5,840	4,452	—	—	—	—
New Mexico	842	1,005	741	100	87	95
New York	11,254	—	7,901	93	—	93
North Carolina	6,257	5,736	4,412	87	76	87
North Dakota	417	426	457	100	100	100
Ohio	6,621	6,096	4,790	96	95	96
Oklahoma	2,235	2,108	1,897	99	99	100
Oregon	—	—	991	—	—	—
Pennsylvania	5,780	6,384	6,557	93	—	91
Puerto Rico	—	—	2,628	—	—	90
Rhode Island	—	—	694	—	—	100
South Carolina	—	—	—	—	—	—
South Dakota	487	492	570	94	94	92
Tennessee	2,374	2,070	2,282	—	98	90
Texas	15,468	14,669	23,947	82	81	81
Utah	1,132	906	1,395	89	87	89
Vermont	—	—	—	—	—	—
Virgin Islands	27	55	—	15	0	—
Virginia	3,164	3,305	—	99	91	—
Washington	—	—	—	—	—	—
West Virginia	1,771	1,161	1,240	98	96	—
Wisconsin	2,391	2,362	2,218	100	100	100
Wyoming	—	271	264	—	100	—

— Data not available. Number of Teachers = Assigned to teach course/subject one or more periods; * = unedited data.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.7**Number of Biology and Chemistry Teachers, Grades 9-12, 2006, 2004, and 1996**

State	Total Biology Teachers (Grades 9-12)			Total Chemistry Teachers (Grades 9-12)		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	927	—	—	407
Alaska	240	186	—	85	76	—
Arizona	—	—	—	—	—	—
Arkansas	675	640	612	411	414	348
California	5,361	4,729	3,693	2,493	2,255	1,587
Colorado	1,852	1,724	1,236	—	—	—
Connecticut	812	794	737	449	452	401
Delaware	103	74	60	60	47	27
District of Columbia	—	—	92	—	—	45
DoDEA	165	117	—	122	74	—
Florida	—	2,720	—	—	997	—
Georgia	1,333	1,458	—	318	—	—
Guam	—	13	—	—	7	—
Hawaii	142	—	200	63	—	90
Idaho	254	318	302	125	141	134
Illinois	1,825	1,968	1,680	1,066	1,346	1,115
Indiana	1,186	1,170	1,133	644	637	592
Iowa	647	631	734	433	443	421
Kansas	634	576	600	460	436	381
Kentucky	—	—	752	—	—	424
Louisiana	1,674	523	613	565	204	214
Maine	321	—	318	213	—	191
Maryland	—	—	—	—	—	—
Massachusetts	1,050	—	1,046	618	—	630
Michigan	1,321	—	—	687	—	—
Minnesota	1,011	1,003	827	560	545	513
Mississippi	789	804	753	305	295	321
Missouri	1,368	1,357	1,193	688	687	626
Montana	—	—	290	—	—	168
Nebraska	—	558	593	—	338	316
Nevada	—	305	—	—	144	—
New Hampshire	277	279	205	103	103	76
New Jersey	1,655	1,507	—	689	812	—
New Mexico	414	371	376	192	170	154
New York	4,762	—	5,538	2,329	—	2,044
North Carolina	1,619	1,494	1,322	713	656	606
North Dakota	254	259	256	165	175	166
Ohio	2,434	2,330	1,971	1,260	1,256	1,084
Oklahoma	1,134	1,110	1,033	504	509	492
Oregon	—	—	296	—	—	—
Pennsylvania	1,638	1,933	1,990	1,157	1,086	1,137
Puerto Rico	—	—	513	—	—	319
Rhode Island	—	—	185	—	—	101
South Carolina	—	—	—	—	—	—
South Dakota	269	273	291	166	167	192
Tennessee	1,197	825	1,111	593	497	470
Texas	5,390	5,381	8,692	3,548	3,179	2,441
Utah	483	381	530	192	190	147
Vermont	—	—	—	—	—	—
Virgin Islands	8	16	—	3	7	—
Virginia	1,317	1,318	—	635	645	—
Washington	—	—	—	—	—	—
West Virginia	273	305	257	166	148	128
Wisconsin	1,111	1,040	970	614	585	589
Wyoming	—	119	107	—	68	60

— Data not available. Number of Teachers = Assigned to teach course/subject one or more periods; Colorado: Biology = all science.

Source: State Departments of Education, Data on Public Schools, 2005-06.
 Council of Chief State School Officers, Washington, DC, 2007.

Table 2.8**Number of Physics and Earth Science Teachers, Grades 9-12, 2006, 2004, and 1996**

State	Total Physics Teachers (Grades 9-12)			Total Earth Science Teachers (Grades 9-12)		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	274	—	—	29
Alaska	63	45	—	126	75	—
Arizona	—	—	—	—	—	—
Arkansas	313	91	234	99	—	71
California	1,370	1,325	1,006	1,489	1,055	567
Colorado	—	—	—	—	—	—
Connecticut	231	251	278	174	190	265
Delaware	28	33	29	14	12	11
District of Columbia	—	—	21	—	—	0
DoDEA	124	80	—	78	44	—
Florida	—	486	—	—	1,671	—
Georgia	126	—	—	42	—	—
Guam	—	2	—	—	—	—
Hawaii	62	—	56	55	—	70
Idaho	89	112	99	98	138	174
Illinois	477	824	714	296	460	340
Indiana	371	385	407	422	416	307
Iowa	341	344	360	153	165	217
Kansas	326	323	257	76	56	53
Kentucky	—	—	226	—	—	48
Louisiana	283	91	108	89	18	60
Maine	166	—	155	161	—	147
Maryland	—	—	—	—	—	—
Massachusetts	472	—	417	216	—	329
Michigan	389	—	—	298	—	—
Minnesota	360	353	390	153	171	93
Mississippi	204	205	213	341	336	20
Missouri	401	406	395	190	199	172
Montana	—	—	147	—	—	208
Nebraska	—	281	279	—	209	270
Nevada	—	71	—	—	119	—
New Hampshire	58	58	39	32	32	43
New Jersey	302	—	—	323	—	—
New Mexico	104	98	92	91	98	63
New York	1,343	—	1,202	2,934	—	3,095
North Carolina	350	344	346	1,546	1,382	636
North Dakota	114	118	126	17	25	11
Ohio	816	836	767	760	799	444
Oklahoma	210	214	270	125	132	60
Oregon	—	—	—	—	—	—
Pennsylvania	637	630	737	322	545	772
Puerto Rico	—	—	227	—	—	26
Rhode Island	—	—	67	—	—	17
South Carolina	—	—	—	—	—	—
South Dakota	121	125	154	34	39	42
Tennessee	205	259	246	76	120	104
Texas	5,524	1,694	1,330	427	485	3,323
Utah	141	136	90	363	167	206
Vermont	—	—	—	—	—	—
Virgin Islands	1	3	—	0	0	—
Virginia	386	426	—	815	1,003	—
Washington	—	—	—	—	—	—
West Virginia	116	152	52	235	242	30
Wisconsin	392	378	414	148	143	143
Wyoming	—	43	—	—	42	19

— Data not available. Number of Teachers = Assigned to teach course/subject one or more periods.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.9**Certification of Biology and Chemistry Teachers, Grades 9-12, 2006, 2004, and 1996**

State	% Certified Biology (Grades 9-12)			% Certified Chemistry (Grades 9-12)		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	96	—	—	92
Alaska	75	68	—	88	57	—
Arizona	—	—	—	—	—	—
Arkansas	95	—	94	97	—	93
California	84	84	82	82	81	82
Colorado	94	—	—	—	—	—
Connecticut	99	99	97	97	97	95
Delaware	92	84	93	92	83	93
District of Columbia	—	—	100	—	—	100
DoDEA	—	—	—	—	—	—
Florida	—	—	—	—	—	—
Georgia	92	92	—	95	—	—
Guam	—	85	—	—	71	—
Hawaii	50	—	76	52	—	69
Idaho	99	99	99	100	100	78
Illinois	79	53	88	78	68	94
Indiana	95	97	96	98	98	96
Iowa	—	—	—	—	—	—
Kansas	97	94	—	93	94	—
Kentucky	—	—	97	—	—	97
Louisiana	—	96	83	—	89	83
Maine	92	—	—	95	—	—
Maryland	—	—	—	—	—	—
Massachusetts	—	—	92	—	—	96
Michigan	—	—	—	—	—	—
Minnesota	100	98	100	98	98	100
Mississippi	—	96	—	—	93	—
Missouri	100	93	94	100	92	94
Montana	—	—	99	—	—	99
Nebraska	—	92	90	—	79	77
Nevada	—	99	—	—	99	—
New Hampshire	—	—	—	—	—	—
New Jersey	—	—	—	—	—	—
New Mexico	100	94	94	100	96	98
New York	91	—	89	87	—	91
North Carolina	90	81	88	93	82	91
North Dakota	100	100	100	100	100	100
Ohio	85	87	89	96	95	93
Oklahoma	99	100	100	99	99	100
Oregon	—	—	—	—	—	—
Pennsylvania	98	—	96	98	—	95
Puerto Rico	—	—	99	—	—	99
Rhode Island	—	—	100	—	—	100
South Carolina	—	—	—	—	—	—
South Dakota	99	98	96	99	98	95
Tennessee	—	98	92	—	97	93
Texas	72	74	74	76	78	87
Utah	90	87	89	92	88	84
Vermont	—	—	—	—	—	—
Virgin Islands	0	19	—	33	—	—
Virginia	99	93	—	99	92	—
Washington	—	—	—	—	—	—
West Virginia	95	98	—	96	94	—
Wisconsin	100	100	100	100	100	100
Wyoming	—	100	—	—	100	—

— Data not available. * = unedited data.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.10**Certification of Physics and Earth Science Teachers, Grades 9-12, 2006, 2004, and 1996**

State	% Certified Physics (Grades 9-12)			% Certified Earth Science (Grades 9-12)		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	85	—	—	59
Alaska	86	53	—	63	47	—
Arizona	—	—	—	—	—	—
Arkansas	96	—	88	91	—	92
California	85	83	84	61	59	66
Colorado	—	—	—	—	—	—
Connecticut	98	93	91	94	98	78
Delaware	93	58	86	100	58	82
District of Columbia	—	—	100	—	—	—
DoDEA	—	—	—	—	—	—
Florida	—	—	—	—	—	—
Georgia	90	—	—	74	—	—
Guam	—	100	—	—	—	—
Hawaii	55	—	75	18	—	73
Idaho	100	100	77	100	99	94
Illinois	77	62	94	40	35	93
Indiana	96	95	86	95	95	74
Iowa	—	—	—	—	—	—
Kansas	90	89	—	70	88	—
Kentucky	—	—	85	—	—	46
Louisiana	—	81	68	—	67	48
Maine	92	—	—	81	—	—
Maryland	—	—	—	—	—	—
Massachusetts	—	—	96	—	—	89
Michigan	—	—	—	—	—	—
Minnesota	98	97	100	94	91	100
Mississippi	—	73	—	—	92	—
Missouri	100	84	85	100	86	72
Montana	—	—	97	—	—	96
Nebraska	—	71	69	—	69	66
Nevada	—	100	—	—	99	—
New Hampshire	—	—	—	—	—	—
New Jersey	—	—	—	—	—	—
New Mexico	100	93	97	99	93	97
New York	77	—	85	77	—	78
North Carolina	90	80	88	86	73	77
North Dakota	100	100	100	100	100	100
Ohio	98	97	92	73	77	72
Oklahoma	97	97	99	89	91	98
Oregon	—	—	—	—	—	—
Pennsylvania	98	—	95	98	—	95
Puerto Rico	—	—	94	—	—	92
Rhode Island	—	—	100	—	—	100
South Carolina	—	—	—	—	—	—
South Dakota	93	96	89	100	100	95
Tennessee	—	66	83	—	79	88
Texas	54	79	77	56	56	53
Utah	88	91	84	73	62	71
Vermont	—	—	—	—	—	—
Virgin Islands	0	—	—	—	—	—
Virginia	99	85	—	99	73	—
Washington	—	—	—	—	—	—
West Virginia	91	94	—	83	95	—
Wisconsin	98	100	100	100	100	100
Wyoming	—	100	—	—	100	—

— Data not available. * = unedited data.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.11**High School Teachers with Main Assignment in Mathematics, 2006, 2004, and 1996**

State	MAIN ASSIGNMENT TEACHERS		
	Number 9-12 Math		
	2006	2004	1996
Alabama	—	—	1,453
Alaska	340	319	—
Arizona	—	—	—
Arkansas	1,259	—	719
California	12,125	11,144	7,324
Colorado	1,912	1,791	1,271
Connecticut	1,698	1,588	1,300
Delaware	288	270	206
District of Columbia	—	—	306
DoDEA	—	—	—
Florida	—	5,006	—
Georgia	3,519	3,315	—
Guam	—	53	—
Hawaii	328	—	586
Idaho	554	283	418
Illinois	4,432	4,302	3,908
Indiana	2,300	2,271	2,061
Iowa	—	—	—
Kansas	1,441	—	—
Kentucky	—	—	1,461
Louisiana	1,133	1,199	1,456
Maine	708	—	—
Maryland	—	—	—
Massachusetts	—	—	2,318
Michigan	3,592	—	—
Minnesota	1,849	1,835	1,491
Mississippi	1,261	1,230	972
Missouri	2,171	2,101	1,884
Montana	—	—	390
Nebraska	—	1,031	1,085
Nevada	—	639	—
New Hampshire	—	—	—
New Jersey	5,634	4,318	—
New Mexico	714	803	597
New York	9,429	—	6,054
North Carolina	3,541	3,204	2,421
North Dakota	331	327	331
Ohio	6,149	5,602	3,611
Oklahoma	2,086	1,940	1,735
Oregon	—	—	980
Pennsylvania	5,755	6,369	6,301
Puerto Rico	—	—	1,727
Rhode Island	—	—	694
South Carolina	—	—	—
South Dakota	337	320	360
Tennessee	—	1,907	1,820
Texas	11,162	10,496	7,654
Utah	711	669	962
Vermont	—	—	—
Virgin Islands	27	55	—
Virginia	2,246	3,191	—
Washington	—	—	—
West Virginia	1,268	1,161	389
Wisconsin	2,274	2,262	1,923
Wyoming	—	241	231

— Data not available. Main Assignment = 50% or more time assigned to subject.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.12**High School Teachers with Main Assignment in Biology and Chemistry, 2006, 2004, and 1996**

State	MAIN ASSIGNMENT TEACHERS					
	Number 9-12 Biology			Number 9-12 Chemistry		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	625	—	—	175
Alaska	89	94	—	34	32	—
Arizona	—	—	—	—	—	—
Arkansas	571	—	250	366	—	128
California	3,714	3,191	2,182	1,780	58	874
Colorado	1,770	1,637	1,138	—	—	—
Connecticut	722	673	451	394	375	222
Delaware	103	74	60	60	47	27
District of Columbia	—	—	92	—	—	45
DoDEA	—	—	—	—	—	—
Florida	—	1,084	—	—	519	—
Georgia	1,286	1,302	—	295	—	—
Guam	—	13	—	—	7	—
Hawaii	83	—	122	34	—	61
Idaho	101	157	165	28	50	38
Illinois	1,805	1,648	1,366	1,060	995	754
Indiana	907	861	871	473	480	447
Iowa	—	—	—	—	—	—
Kansas	466	—	—	239	—	—
Kentucky	—	—	553	—	—	280
Louisiana	388	413	521	230	142	161
Maine	244	—	—	156	—	—
Maryland	—	—	—	—	—	—
Massachusetts	—	—	839	—	—	512
Michigan	1,014	—	—	225	—	—
Minnesota	752	695	530	307	306	263
Mississippi	787	794	532	302	293	170
Missouri	983	939	812	332	327	286
Montana	—	—	101	—	—	33
Nebraska	—	326	340	—	116	90
Nevada	—	277	—	—	114	—
New Hampshire	—	—	—	—	—	—
New Jersey	1,604	—	—	644	—	—
New Mexico	248	181	223	112	68	68
New York	3,579	—	3,828	1,764	—	1,377
North Carolina	949	909	850	436	431	377
North Dakota	107	108	95	26	31	28
Ohio	1,552	1,511	1,279	756	784	647
Oklahoma	814	802	723	177	165	165
Oregon	—	—	294	—	—	—
Pennsylvania	1,631	1,925	1,736	1,156	1,084	970
Puerto Rico	—	—	474	—	—	270
Rhode Island	—	—	156	—	—	101
South Carolina	—	—	—	—	—	—
South Dakota	82	88	113	30	30	34
Tennessee	—	780	598	—	429	253
Texas	3,100	2,984	3,978	2,065	1,870	1,089
Utah	271	234	364	121	118	98
Vermont	—	—	—	—	—	—
Virgin Islands	8	16	—	3	7	—
Virginia	968	1,094	—	473	533	—
Washington	—	—	—	—	—	—
West Virginia	113	305	84	72	148	57
Wisconsin	947	891	784	449	415	382
Wyoming	—	78	83	—	31	30

— Data not available. Main Assignment = 50% or more time assigned to subject; Colorado: Biology = all science.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.13**High School Teachers with Main Assignment in Physics and Earth Science, 2006, 2004, and 1996**

State	MAIN ASSIGNMENT TEACHERS					
	Number 9-12 Physics			Number 9-12 Earth Science		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	28	—	—	7
Alaska	7	6	—	26	16	—
Arizona	—	—	—	—	—	—
Arkansas	287	—	10	86	—	22
California	704	652	331	805	483	184
Colorado	—	—	—	—	—	—
Connecticut	196	192	111	147	164	144
Delaware	28	33	29	14	12	11
District of Columbia	—	—	21	—	—	0
DoDEA	—	—	—	—	—	—
Florida	—	227	—	—	1,326	—
Georgia	118	—	—	39	—	—
Guam	—	2	—	—	—	—
Hawaii	28	—	41	16	—	48
Idaho	7	11	9	46	46	70
Illinois	474	450	341	284	279	200
Indiana	149	152	147	269	293	184
Iowa	—	—	—	—	—	—
Kansas	92	—	—	32	—	—
Kentucky	—	—	46	—	—	6
Louisiana	52	44	56	14	9	45
Maine	106	—	—	90	—	—
Maryland	—	—	—	—	—	—
Massachusetts	—	—	294	—	—	215
Michigan	188	—	—	186	—	—
Minnesota	123	127	119	67	82	39
Mississippi	198	199	23	339	334	1
Missouri	85	92	67	68	69	74
Montana	—	—	14	—	—	51
Nebraska	—	58	38	—	45	67
Nevada	—	50	—	—	96	—
New Hampshire	—	—	—	—	—	—
New Jersey	277	—	—	292	—	—
New Mexico	37	19	11	27	0	14
New York	859	—	667	2,124	—	1,928
North Carolina	79	92	89	762	640	227
North Dakota	5	6	7	4	3	1
Ohio	280	297	211	314	318	205
Oklahoma	43	33	33	42	47	13
Oregon	—	—	—	—	—	—
Pennsylvania	635	628	541	321	544	628
Puerto Rico	—	—	170	—	—	22
Rhode Island	—	—	59	—	—	11
South Carolina	—	—	—	—	—	—
South Dakota	6	7	12	3	3	22
Tennessee	—	236	33	—	112	30
Texas	2,908	697	328	107	101	1,643
Utah	67	71	40	167	56	113
Vermont	—	—	—	—	—	—
Virgin Islands	1	3	—	0	0	—
Virginia	250	280	—	700	854	—
Washington	—	—	—	—	—	—
West Virginia	25	152	7	33	242	2
Wisconsin	173	162	155	89	82	84
Wyoming	—	13	—	—	19	8

— Data not available. Main Assignment = 50% or more time assigned to subject.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.14**Certification of Middle Grades (7-8) Mathematics and Science Teachers, 2006**

State	MATHEMATICS			SCIENCE		
	% Certified Math	% Certified Elementary	% Not Certified	% Certified Science	% Certified Elementary	% Not Certified
Alaska	20	52	28	45	40	15
California	57	37	7	60	34	6
Colorado	41	52	7	68	28	5
Connecticut	65	33	2	62	30	8
Delaware	76	15	9	72	22	6
Georgia	56	44	—	61	39	—
Hawaii	24	1	75	21	—	79
Idaho	99	0	1	100	0	0
Illinois	64	21	14	70	14	17
Indiana	88	7	5	89	5	6
Kansas	38	58	4	52	44	3
Maine	98	—	—	100	0	0
Minnesota	100	—	0.4	99	—	1
Missouri	100	0	0	100	0	0
New Mexico	31	0.4	68	50	1	49
New York	92	0	8	92	0	8
North Carolina	73	—	26	71	—	29
North Dakota	87	13	0	89	11	—
Ohio	29	47	24	21	60	19
Oklahoma	77	22	1	59	40	1
Pennsylvania	86	9	5	87	9	5
South Dakota	76	23	1	91	9	0
Utah	88	12	0.2	81	18	1
Virgin Islands	6	12	82	19	5	76
Virginia	99	0	1	99	0	1
West Virginia	91	9	0	96	4	0
Wisconsin	100	—	—	100	—	—

— Data not available.

Certified Math/Science = Teacher assigned to subject one or more period and has state certification in secondary math/science or middle grades math/science. Certified Elementary = Certification in elementary education, general secondary/middle education, or subject not assigned.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.15**Number of Mathematics Teachers and Certification, Grades 7-8, 2006, 2004, and 1996**

State	Total Teachers (Grades 7-8)			% Certified (Grades 7-8)		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	1,395	—	—	78
Alaska	660	459	—	20	26	—
Arizona	—	—	—	—	—	—
Arkansas	975	874	—	88	81	—
California	8,668	8,440	7,178	57	55	51
Colorado	1,249	1,234	1,176	41	—	—
Connecticut	1,045	994	1,000	65	62	48
Delaware	222	171	143	76	71	77
District of Columbia	—	—	272	—	—	100
DoDEA	337	281	—	—	—	—
Florida	—	6,344	—	—	—	—
Georgia	3,281	2,783	—	56	12	—
Guam	—	46	—	—	48	—
Hawaii	455	—	226	24	—	19
Idaho	570	559	384	99	99	54
Illinois	1,586	1,654	1,435	64	51	0
Indiana	1,646	1,559	1,498	88	90	90
Iowa	—	—	—	—	—	—
Kansas	1,228	1,075	—	38	61	—
Kentucky	—	—	1,141	—	—	28
Louisiana	1,805	493	528	—	94	85
Maine	467	—	463	98	—	—
Maryland	—	—	—	—	—	—
Massachusetts	—	—	1,801	—	—	62
Michigan	2,982	—	—	—	—	—
Minnesota	1,302	1,269	874	100	99	100
Mississippi	865	914	945	—	64	39
Missouri	1,541	1,489	1,356	100	90	82
Montana	—	—	440	—	—	47
Nebraska	—	99	210	—	86	92
Nevada	—	514	—	—	53	—
New Hampshire	291	294	19	—	—	—
New Jersey	308	—	—	—	—	—
New Mexico	685	702	417	31	31	49
New York	7,158	—	6,447	92	—	91
North Carolina	4,148	3,821	3,029	73	63	65
North Dakota	333	407	441	87	54	59
Ohio	4,978	4,456	2,828	29	28	—
Oklahoma	1,253	1,250	1,434	77	68	49
Oregon	—	—	608	—	—	—
Pennsylvania	2,643	—	—	86	—	—
Puerto Rico	—	—	1,698	—	—	84
Rhode Island	—	—	239	—	—	100
South Carolina	—	—	—	—	—	—
South Dakota	701	710	413	76	72	97
Tennessee	2,092	1,467	1,476	—	96	96
Texas	—	—	15,915	—	—	63
Utah	1,251	961	302	88	86	80
Vermont	—	—	—	—	—	—
Virgin Islands	17	37	—	6	8	—
Virginia	1,948	2,132	—	99	90	—
Washington	—	—	—	—	—	—
West Virginia	905	963	947	91	94	—
Wisconsin	1,521	1,305	1,339	100	100	—
Wyoming	—	167	153	—	81	—

— Data not available. Number of Teachers = Assigned to teach course/subject one or more periods; * = unedited data.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.16**Number of Science Teachers and Certification, Grades 7-8, 2006, 2004, and 1996**

State	Total Teachers (Grades 7-8)			% Certified (Grades 7-8)		
	2006	2004	1996	2006	2004	1996
Alabama	—	—	1,268	—	—	80
Alaska	445	370	—	45	22	—
Arizona	—	—	—	—	—	—
Arkansas	921	—	—	59	—	—
California	7,365	7,577	6,406	60	59	44
Colorado	1,101	1,142	1,093	68	—	—
Connecticut	946	954	871	62	62	53
Delaware	177	151	134	72	75	81
District of Columbia	—	—	130	—	—	100
DoDEA	228	200	—	—	—	—
Florida	—	5,786	—	—	—	—
Georgia	2,574	2,125	—	61	14	—
Guam	—	42	—	—	55	—
Hawaii	326	—	256	21	—	29
Idaho	439	404	364	100	77	75
Illinois	1,423	1,495	1,325	70	56	0
Indiana	1,430	1,402	1,405	89	93	92
Iowa	—	—	—	—	—	—
Kansas	933	1,030	—	52	63	—
Kentucky	—	—	1,040	—	—	23
Louisiana	1,410	561	479	—	92	74
Maine	336	—	278	100	—	—
Maryland	—	—	—	—	—	—
Massachusetts	—	—	1,514	—	—	68
Michigan	2,690	—	—	—	—	—
Minnesota	1,138	1,081	748	99	98	100
Mississippi	821	114	836	—	96	45
Missouri	1,426	1,430	1,335	100	89	76
Montana	—	—	369	—	—	54
Nebraska	—	98	190	—	91	73
Nevada	—	391	—	—	63	—
New Hampshire	162	164	—	—	—	—
New Jersey	215	—	—	—	—	—
New Mexico	688	607	328	50	43	45
New York	6,190	—	5,155	92	—	85
North Carolina	3,135	2,942	2,675	71	56	60
North Dakota	256	351	370	89	35	69
Ohio	4,035	—	2,408	21	43	—
Oklahoma	1,215	1,210	1,324	59	59	60
Oregon	—	—	556	—	—	—
Pennsylvania	2,169	—	—	87	—	—
Puerto Rico	—	—	831	—	—	99
Rhode Island	—	—	253	—	—	100
South Carolina	—	—	—	—	—	—
South Dakota	455	456	361	91	87	93
Tennessee	1,593	1,392	1,480	—	86	93
Texas	—	—	8,212	—	—	60
Utah	553	651	258	81	78	70
Vermont	—	—	—	—	—	—
Virgin Islands	21	36	—	19	3	—
Virginia	1,646	1,836	—	99	89	—
Washington	—	—	—	—	—	—
West Virginia	646	725	584	96	92	—
Wisconsin	1,407	1,161	1,285	100	100	—
Wyoming	—	147	148	—	90	—

— Data not available. Number of Teachers = Assigned to teach course/subject one or more periods; * = unedited data.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.17**Middle Grades Teachers with Main Assignment in Mathematics, 2006, 2004, and 1996**

State	MAIN ASSIGNMENT TEACHERS		
	2006	2004	1996
Alabama	—	—	954
Alaska	276	223	—
Arizona	—	—	—
Arkansas	—	617	—
California	6,144	5,674	3,901
Colorado	1,128	1,056	942
Connecticut	983	931	715
Delaware	222	170	143
District of Columbia	—	—	272
DoDEA	—	—	—
Florida	—	3,132	—
Georgia	3,053	2,522	—
Guam	—	46	—
Hawaii	293	—	84
Idaho	316	272	193
Illinois	1,499	1,465	1,257
Indiana	1,378	1,332	1,206
Iowa	—	—	—
Kansas	1,000	—	—
Kentucky	—	—	877
Louisiana	923	399	451
Maine	394	—	—
Maryland	—	—	—
Massachusetts	—	—	1,321
Michigan	2,640	—	—
Minnesota	955	950	534
Mississippi	862	910	678
Missouri	1,217	1,178	983
Montana	—	—	170
Nebraska	—	95	193
Nevada	—	491	—
New Hampshire	—	—	—
New Jersey	303	—	—
New Mexico	539	468	335
New York	5,582	—	4,489
North Carolina	814	894	1,103
North Dakota	213	234	140
Ohio	4,502	4,195	1,864
Oklahoma	722	656	725
Oregon	—	—	600
Pennsylvania	2,641	—	—
Puerto Rico	—	—	1,309
Rhode Island	—	—	234
South Carolina	—	—	—
South Dakota	225	221	161
Tennessee	—	1,458	1,082
Texas	—	—	6,277
Utah	687	711	240
Vermont	—	—	—
Virgin Islands	17	37	—
Virginia	1,548	1,957	—
Washington	—	—	—
West Virginia	626	963	413
Wisconsin	1,256	1,091	1,140
Wyoming	—	130	129

— Data not available. Main Assignment = 50% or more time assigned to subject; * = unedited data.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.

Table 2.18**Middle Grades Teachers with Main Assignment in Science, 2006, 2004, and 1996**

State	MAIN ASSIGNMENT TEACHERS		
	Number 7-8 Science		
	2006	2004	1996
Alabama	—	—	909
Alaska	233	209	—
Arizona	—	—	—
Arkansas	—	—	—
California	5,791	5,877	3,751
Colorado	1,019	1,009	871
Connecticut	913	913	693
Delaware	177	151	134
District of Columbia	—	—	130
DoDEA	—	—	—
Florida	—	2,883	—
Georgia	2,392	1,980	—
Guam	—	42	—
Hawaii	195	—	82
Idaho	281	235	212
Illinois	1,359	1,336	1,157
Indiana	1,240	1,238	1,182
Iowa	—	—	—
Kansas	755	—	—
Kentucky	—	—	808
Louisiana	676	462	396
Maine	294	—	—
Maryland	—	—	—
Massachusetts	—	—	1,224
Michigan	2,417	—	—
Minnesota	877	826	515
Mississippi	815	113	604
Missouri	1,171	1,172	977
Montana	—	—	162
Nebraska	—	96	173
Nevada	—	380	—
New Hampshire	—	—	—
New Jersey	211	—	—
New Mexico	551	335	224
New York	4,978	—	3,593
North Carolina	1,262	1,378	1,171
North Dakota	111	122	133
Ohio	3,546	260	1,758
Oklahoma	728	666	733
Oregon	—	—	552
Pennsylvania	2,166	—	—
Puerto Rico	—	—	717
Rhode Island	—	—	243
South Carolina	—	—	—
South Dakota	148	159	163
Tennessee	—	1,384	1,062
Texas	—	—	4,333
Utah	414	548	183
Vermont	—	—	—
Virgin Islands	21	36	—
Virginia	1,478	1,695	—
Washington	—	—	—
West Virginia	400	725	296
Wisconsin	1,170	1,019	1,070
Wyoming	—	111	129

— Data not available. Main Assignment = 50% or more time assigned to subject; * = unedited data.

Source: State Departments of Education, Data on Public Schools, 2005-06.

Council of Chief State School Officers, Washington, DC, 2007.