

Section Three

Science and Mathematics Classes

In both 1993 and 2000, the National Survey of Science and Mathematics Education asked teachers to indicate the number of minutes spent in the most recent lesson in a randomly selected class. Since some subjects may not be taught every day in some classes, teachers were also asked to indicate if the selected lesson had taken place on the most recent school day. As can be seen in Table 3.1, in grades 1–4, mathematics continues to be taught more often than science, though the gap is closing. In 1993, 95 percent of grade 1–4 classes received instruction in mathematics on a typical day, compared to only 62 percent for science. In 2000, the percentage of classes receiving science instruction on a typical day increased to 72 percent. There have been no significant changes in grades 5–8 and 9–12, where instruction tends to be departmentalized, and students receive instruction in each subject every time the class meets.

Table 3.1
Science and Mathematics Lessons Taught on Most
Recent Day of School, by Grade Range: 1993 and 2000

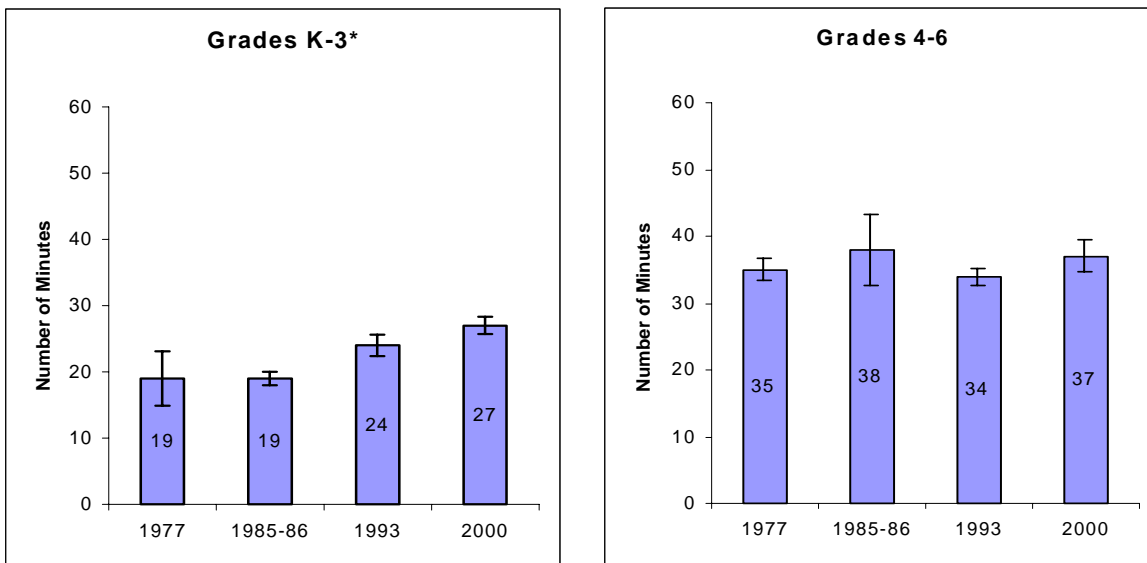
	Percent of Classes			
	1993		2000	
Science				
Grades 1–4	62	(2.8)	72*	(2.4)
Grades 5–8	85	(2.2)	90	(1.9)
Grades 9–12	94	(1.0)	93	(1.1)
Mathematics				
Grades 1–4	95	(1.1)	95	(1.2)
Grades 5–8	93	(1.8)	93	(1.8)
Grades 9–12	93	(1.1)	92	(1.0)

* $p < 0.05$

As can be seen in Figures 3.1 and 3.2, between 1977 and 2000 the time spent on science in grades K–3 increased slightly and the time spent on mathematics has increased in both grades K–3 and 4–6. Time spent on mathematics in grades 4–6 also increased between 1993 and 2000. Although time spent on science in grades K–3 increased slightly between 1977 and 2000, science still receives much less attention than mathematics.

A similar pattern was found when teachers were asked about their typical instruction rather than their most recent lesson. Elementary teachers were asked for the approximate number of minutes per day they spent teaching mathematics, science, social studies, and reading/language arts. Examining the responses of only those teachers who teach all four subject areas, the amount of time spent on mathematics has increased steadily since 1977 (Figures 3.3 and 3.4). The amount of time spent on science, while greater than in 1977, is the same as in 1993.

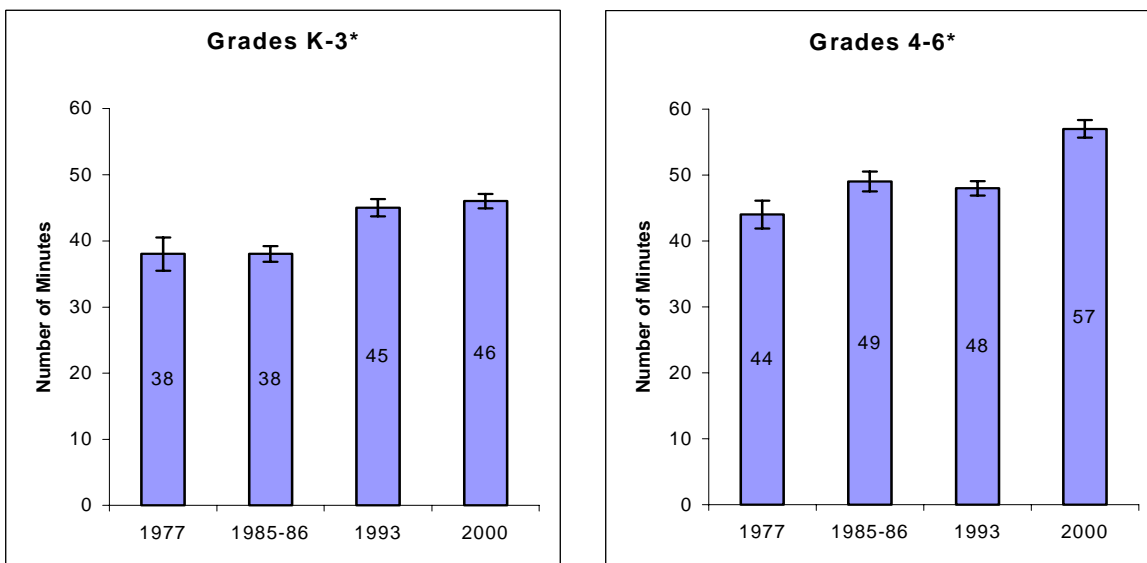
**Average Number of Minutes Per Day Spent
in Elementary School Science Class^{16, 17}**



* Grades K-3: 2000 ≠ 1977, $p < 0.05$

Figure 3.1

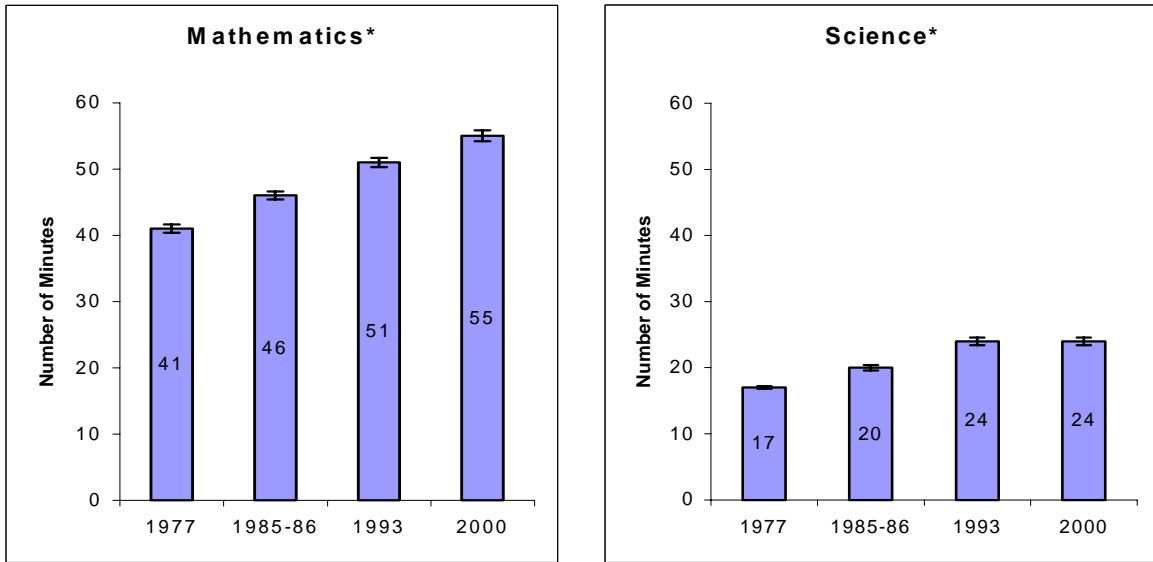
**Average Number of Minutes Per Day Spent
In Elementary School Mathematics Class^{18, 19}**



* Grades K-3: 2000 ≠ 1977; Grades 4-6: 2000 ≠ 1993, 2000 ≠ 1977, $p < 0.05$

Figure 3.2

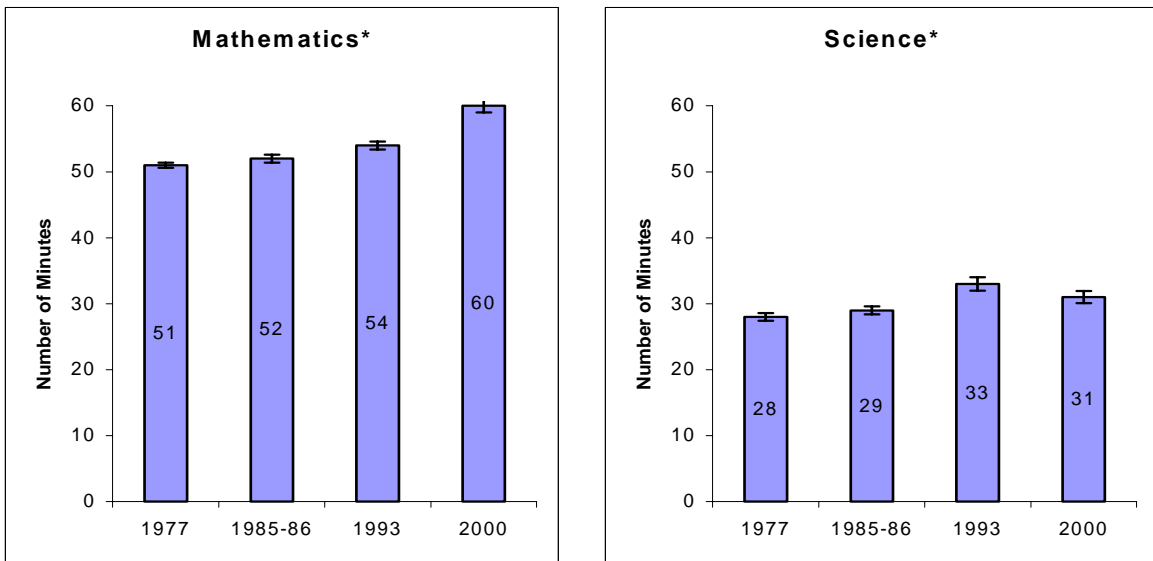
**Average Number of Minutes Per Day Spent Teaching
Each Subject in Grade 1–3 Self-Contained Classrooms^{20, 21}**



* Reading/Language Arts: 2000 ≠ 1993, 2000 ≠ 1977; Mathematics: 2000 ≠ 1993, 2000 ≠ 1977; Science: 2000 ≠ 1977, $p < 0.05$

Figure 3.3

**Average Number of Minutes Per Day Spent Teaching
Each Subject in Grade 4–6 Self-Contained Classrooms²²**



* Reading/Language Arts: 2000 ≠ 1993, 2000 ≠ 1977; Mathematics: 2000 ≠ 1993, 2000 ≠ 1977; Social Studies: 2000 ≠ 1993; Science: 2000 ≠ 1977, $p < 0.05$

Figure 3.4

Data from the program questionnaire sent to each school in the sample shed light on middle and high school course offerings. Table 3.2 shows the percentage of schools with grades 7 or 8 offering various science courses. Although the percentage of these schools offering life, earth, and physical science has remained fairly stable, there has been an increase in the offering of general or integrated science.

Table 3.2
Schools Offering Various Science
Courses, Grades 7 or 8²³: 1993 and 2000

	Percent of Schools			
	1993		2000	
Life science	68	(5.5)	63	(4.2)
Earth science	53	(4.9)	48	(4.2)
Physical science	36	(4.8)	43	(4.3)
General or integrated science ²⁴	42	(5.8)	65*	(4.3)

* $p < 0.05$

In high schools, there appears to be a trend towards increased offering of advanced science courses, with more schools offering 2nd year or AP chemistry and physics. (See Table 3.3.) Fewer high schools are offering general science, and more are offering environmental science and integrated science.

Table 3.3
Schools Offering Various Science
Courses in Grades 10, 11, or 12: 1993 and 2000

	Percent of Schools			
	1993		2000	
Biology				
1st Year	96	(1.8)	91	(2.9)
1st Year, Applied	22	(2.1)	28	(3.7)
Any 1st Year	98	(1.0)	95	(1.7)
2nd Year, AP	22	(2.8)	28	(3.1)
2nd Year, Advanced	49	(3.0)	48	(3.7)
2nd Year, Other	20	(2.4)	23	(3.0)
Any 2nd Year	74	(1.9)	69	(4.6)
Chemistry				
1st Year	94	(2.2)	91	(3.2)
1st Year, Applied	14	(2.0)	13	(2.0)
Any 1st Year	94	(2.2)	91	(3.1)
2nd Year, AP	18	(1.6)	24*	(2.6)
2nd Year, Advanced	16	(1.5)	17	(2.2)
Any 2nd Year	18	(1.6)	36*	(3.5)
Physics				
1st Year	88	(3.9)	81	(4.1)
1st Year, Applied	9	(1.5)	14	(2.2)
Any 1st Year	88	(3.8)	83	(4.1)
2nd Year, AP	10	(1.1)	15*	(1.9)
2nd Year, Advanced	5	(1.1)	6	(1.2)
Any 2nd Year	14	(1.3)	20*	(2.3)
Physical Science	44	(3.0)	48	(3.6)
Earth Science				
Astronomy/Space Science	6	(1.1)	19*	(2.8)
Geology	5	(1.5)	8	(2.0)
Meteorology	1	(0.5)	3	(1.2)
Oceanography/Marine Science	7	(1.0)	10	(1.9)
1st Year	30	(3.0)	31	(3.0)
1st Year, Applied	2	(0.3)	8	(3.2)
Any 1st Year	38	(3.3)	34	(3.5)
2nd Year, Advanced	2	(0.6)	2	(0.8)
Other Science				
General Science	29	(3.4)	19*	(3.0)
Environmental Science	24	(2.3)	39*	(3.4)
Coordinated Science	2	(0.6)	4	(2.4)
Integrated Science	4	(1.3)	12*	(1.9)
Other				
Coordinated/Integrated Science	6	(1.4)	16*	(2.9)
General, Coordinated, or Integrated Science	34	(3.2)	32	(3.3)

* $p < 0.05$

Turning to mathematics, there have been no significant changes in the courses being offered in schools with grade 7 or grade 8. (See Table 3.4.) “Regular” mathematics is still the most widely offered course in both grades, and Algebra 1 is offered in about 60 percent of schools that include grades 7 and/or 8.

Table 3.4
Schools Offering Various
Mathematics Courses, Grades 7 or 8: 1993 and 2000

	Percent of Schools			
	1993		2000	
Grades 7				
Remedial Mathematics	33	(5.4)	27	(3.6)
Regular Mathematics	91	(2.4)	88	(3.1)
Accelerated Mathematics	51	(6.0)	41	(4.1)
Grade 8				
Remedial Mathematics	32	(4.8)	30	(3.6)
Regular Mathematics	79	(5.1)	76	(3.7)
Enriched Mathematics	34	(4.4)	25	(3.3)
Grade 7 or 8				
Algebra 1	58	(5.5)	62	(4.3)

* $p < 0.05$

However, there have been two notable changes in the mathematics courses offered at the high school level. First, there has been a marked decrease in the percentage of schools offering “review” mathematics courses. (See Table 3.5.) There has also been an increase in the percentage of schools offering courses in probability and statistics. Both of these changes may reflect an influence of the NCTM *Standards* that call for an end to low-level mathematics courses and for including additional topics such as probability, statistics, and discrete mathematics in the mathematics curriculum.

Table 3.5
Schools Offering Various Mathematics
Courses in Grades 10, 11, or 12: 1993 and 2000

	Percent of Schools			
	1993		2000	
Review Mathematics				
Level 1 (e.g., Remedial Mathematics)	41	(2.7)	28*	(2.5)
Level 2 (e.g., Consumer Mathematics)	56	(3.7)	27*	(2.5)
Level 3 (e.g., General Mathematics 3)	28	(3.5)	17*	(2.4)
Level 4 (e.g., General Mathematics 4)	11	(3.2)	10	(1.8)
Informal Mathematics				
Level 1 (e.g., Pre-Algebra)	57	(3.5)	50	(3.5)
Level 2 (e.g., Basic Geometry)	31	(3.3)	23	(2.7)
Level 3 (e.g., after Pre-Algebra, but not Algebra 1)	17	(2.6)	17	(2.1)
Formal Mathematics				
Level 1 (e.g., Algebra 1 or Integrated Math 1)	98	(1.2)	98	(0.8)
Level 2 (e.g., Geometry or Integrated Math 2)	97	(1.4)	94	(2.2)
Level 3 (e.g., Algebra 2 or Integrated Math 3)	97	(1.5)	96	(2.0)
Level 4 (e.g., Algebra 3 or Pre-Calculus)	90	(2.7)	89	(2.9)
Level 5 (e.g., Calculus)	41	(2.8)	43	(3.5)
Level 5, AP	34	(2.7)	36	(3.2)
Other Mathematics Courses				
Probability and Statistics	13	(2.0)	23*	(2.7)
Mathematics integrated with other subjects	3	(0.8)	4	(0.8)

* $p < 0.05$

The program questionnaire provided information about the percentage of the nation’s schools offering various science and mathematics courses; in order to distinguish between courses offered but rarely taken, and those with large enrollments, the teacher questionnaire asked each teacher to provide the title of a randomly selected class. As can be seen in Table 3.6, in grades 7–8, life science accounted for only 25 percent of science classes in 2000, down from 44 percent in 1993, with the opposite pattern for general/integrated science. The distribution of grade 9–12 science classes in 2000 was not markedly different from that in 1993.

Table 3.6
Grade 7–8 and Grade 9–12
Science Classes: 1993 and 2000

	Percent of Classes			
	1993		2000	
Grades 7–8²⁵				
Life Science	44	(5.0)	25*	(3.6)
Earth Science	21	(3.6)	17	(3.2)
Physical Science	12	(2.1)	12	(2.8)
General or integrated science ²⁶	23	(3.7) ²⁷	46*	(4.0)
Grades 9–12				
1st Year Biology	33	(2.1)	30	(2.1)
Advanced Biology	7	(1.3)	6	(0.8)
1st Year Chemistry	16	(1.1)	19	(1.2)
Advanced Chemistry	2	(2.1)	3	(1.6)
1st Year Physics	7	(0.6)	10*	(1.0)
Advanced Physics	2	(0.5)	2	(0.3)
Physical Science	15	(1.5)	7*	(1.0)
Earth Science	10	(2.2)	7	(1.0)
General Science	4	(1.2)	3	(0.7)
Integrated/Coordinated/Other Science	4	(0.7)	14*	(1.3)

* p < 0.05

As can be seen in Table 3.7, the distribution of mathematics classes in grades 7–8 and 9–12 has remained fairly stable, with some increase in Algebra 1 classes in grades 7–8 and some decrease in review/general mathematics classes at the high school level.

Table 3.7
Grade 7–8 and Grade 9–12
Mathematics Classes: 1993 and 2000

	Percent of Classes			
	1993		2000	
Grades 7–8				
Remedial Mathematics, 7	2	(0.7)	6*	(1.2)
Regular Mathematics, 7	32	(3.3)	30	(2.5)
Accelerated Mathematics, 7	18	(2.8)	11	(2.3)
Remedial Mathematics, 8	3	(0.9)	1*	(0.4)
Regular Mathematics, 8	22	(3.1)	21	(2.5)
Enriched Mathematics, 8	14	(2.4)	15	(2.5)
Algebra 1, Grade 7 or 8	10	(2.1)	17*	(2.3)
Grades 9–12				
Algebra 1/Mathematics 1	22	(1.5)	23	(1.7)
Geometry/Mathematics 2	21	(1.7)	20	(1.4)
Algebra 2/Mathematics 3	19	(1.8)	18	(1.4)
Advanced Mathematics/Calculus	15	(1.2)	19	(1.7)
Informal/Basic Mathematics	13	(1.3)	12	(1.2)
Review/General Mathematics	10	(1.3)	5*	(0.8)

* p < 0.05

Data from this series of surveys show a pattern of decreased class sizes in all grade ranges in both science and mathematics since 1977. (See Figures 3.5 and 3.6.) In addition, grade 1–3 science and mathematics classes are smaller in 2000 than they were in 1993, reflecting the class size reduction efforts of the past few years.

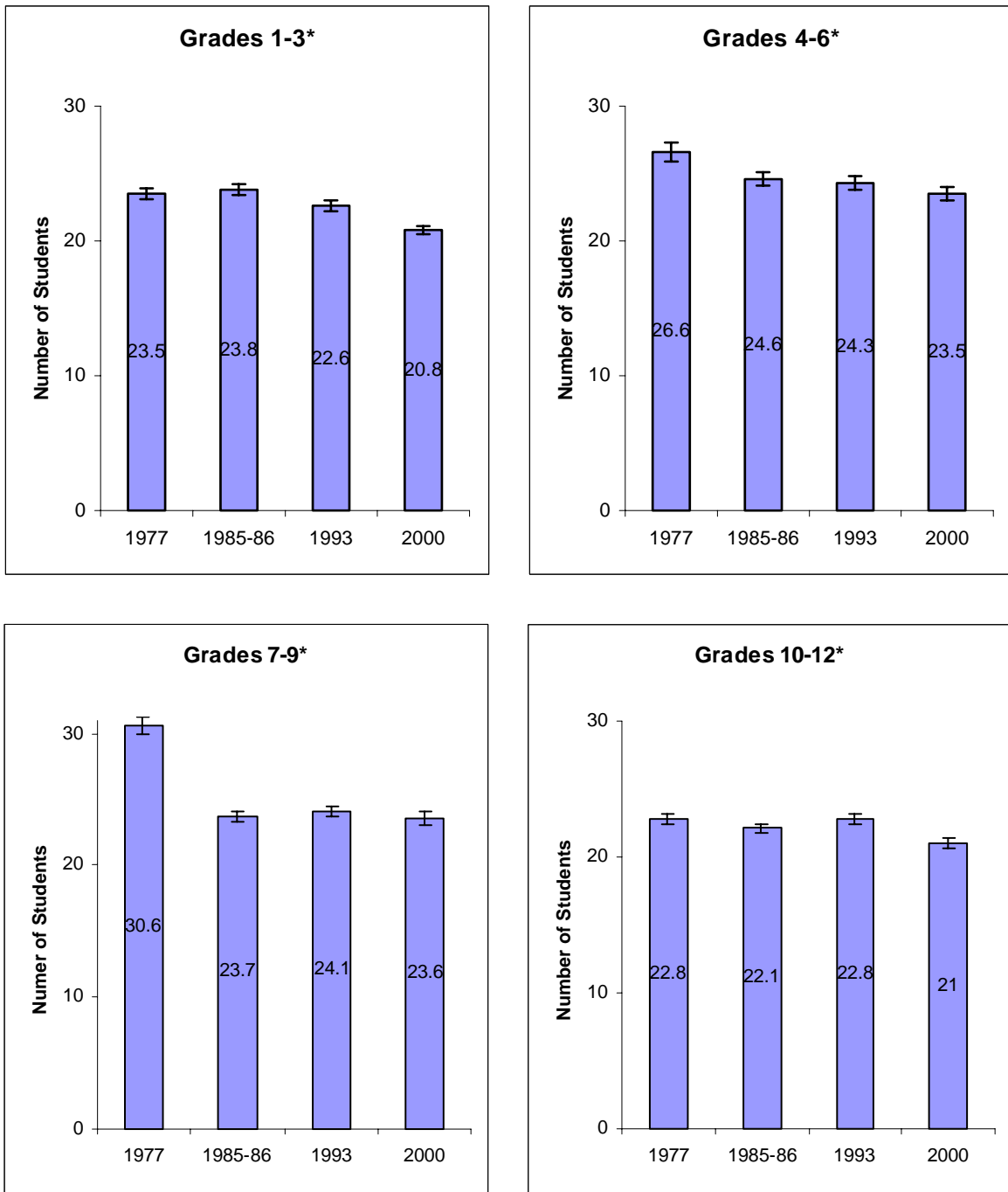
As can be seen in Table 3.8, trend data also show that a smaller percentage of grade 9–12 science classes had students assigned to them by ability level in 2000. There was no change in the use of this practice in science at the other grade levels, or in mathematics, where ability grouping continues to be more prevalent than in science.

Table 3.8
Students Assigned to Science and Mathematics
Classes by Ability Level, by Grade Range: 1993 and 2000

	Percent of Classes			
	1993		2000	
Science				
Grades 1–4	6	(2.6)	6	(1.3)
Grades 5–8	15	(1.7)	14	(1.5)
Grades 9–12	50	(2.5)	40*	(2.3)
Mathematics				
Grades 1–4	14	(2.3)	11	(1.9)
Grades 5–8	46	(2.5)	46	(2.2)
Grades 9–12	66	(1.8)	65	(2.0)

* $p < 0.05$

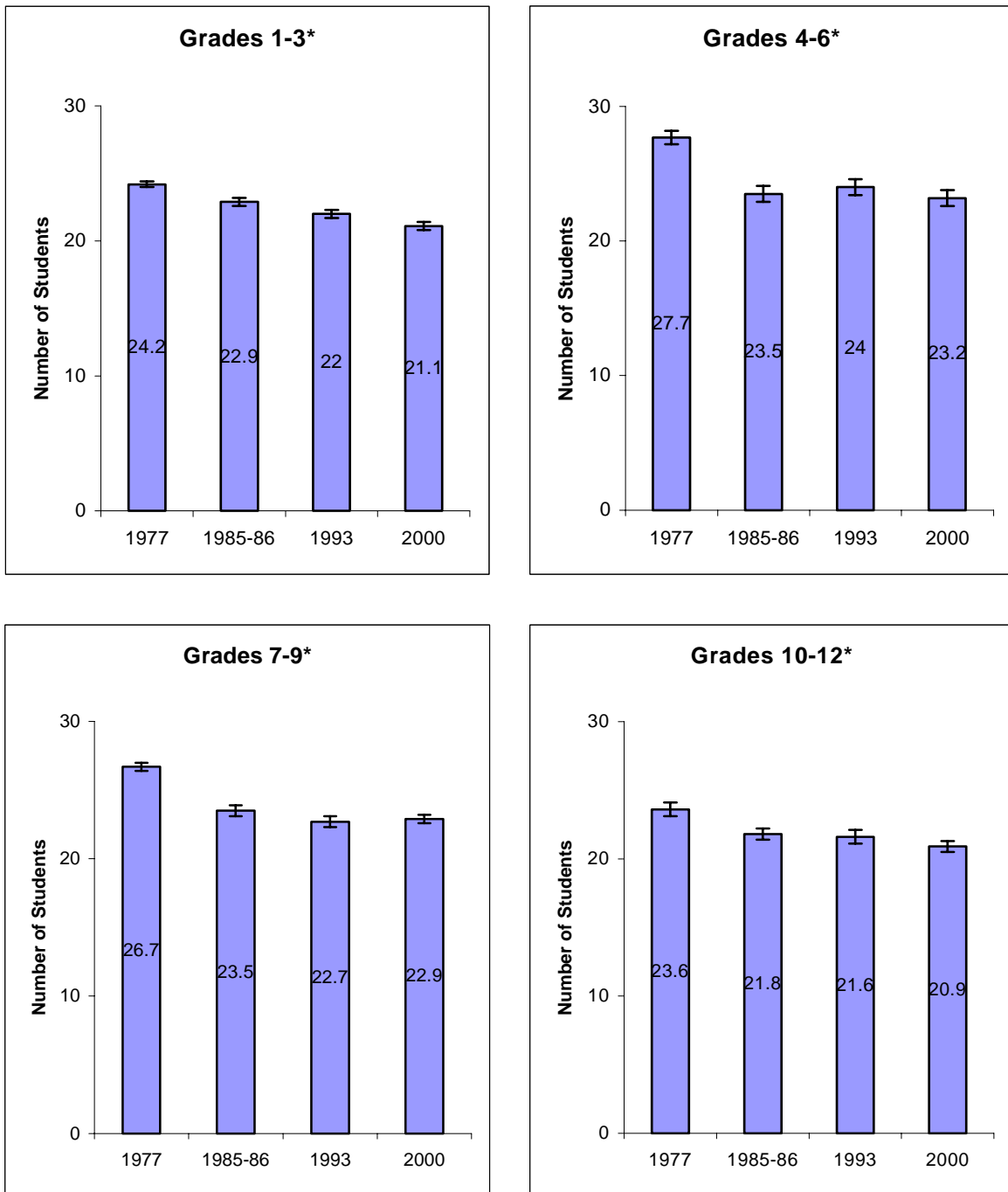
Average Number of Students in Science Classes



* Grades 1-3: 2000 ≠ 1993, 2000 ≠ 1977; Grades 4-6: 2000 ≠ 1977; Grades 7-9: 2000 ≠ 1977; Grades 10-12: 2000 ≠ 1993, 2000 ≠ 1977, $p < 0.05$

Figure 3.5

Average Number of Students in Mathematics Classes



* Grades 1-3: 2000 ≠ 1993, 2000 ≠ 1977; Grades 4-6: 2000 ≠ 1977; Grades 7-9: 2000 ≠ 1977; Grades 10-12: 2000 ≠ 1977, $p < 0.05$

Figure 3.6

Regardless of whether students were assigned to their class by ability level, teachers were asked to indicate the ability make-up of the randomly selected class. Table 3.9 shows that in science, the ability distribution of science classes has not changed much between 1993 and 2000. There are some significant differences in mathematics, but no clear pattern emerged.

Table 3.9
Ability Grouping in Science
Classes, by Grade Range: 1993 and 2000

	Percent of Classes			
	1993		2000	
Grades 1–4				
Fairly homogeneous and low in ability	6	(1.8)	6	(1.8)
Fairly homogeneous and average in ability	24	(2.2)	28	(2.5)
Fairly homogeneous and high in ability	4	(1.1)	5	(1.4)
Heterogeneous, with a mixture of two or more ability levels	66	(2.6)	61	(2.8)
Grades 5–8				
Fairly homogeneous and low in ability	4	(0.5)	8*	(1.4)
Fairly homogeneous and average in ability	26	(2.2)	23	(2.3)
Fairly homogeneous and high in ability	12	(1.9)	11	(1.4)
Heterogeneous, with a mixture of two or more ability levels	58	(2.4)	58	(2.3)
Grades 9–12				
Fairly homogeneous and low in ability	10	(1.7)	7	(0.9)
Fairly homogeneous and average in ability	26	(1.9)	29	(2.1)
Fairly homogeneous and high in ability	27	(3.0)	27	(2.1)
Heterogeneous, with a mixture of two or more ability levels	37	(1.5)	37	(2.0)

* $p < 0.05$

Table 3.10
Ability Grouping in Mathematics
Classes, by Grade Range: 1993 and 2000

	Percent of Classes			
	1993		2000	
Grades 1–4				
Fairly homogeneous and low in ability	6	(0.9)	5	(1.2)
Fairly homogeneous and average in ability	24	(2.1)	20	(2.1)
Fairly homogeneous and high in ability	7	(1.7)	5	(1.1)
Heterogeneous, with a mixture of two or more ability levels	63	(2.6)	70*	(2.4)
Grades 5–8				
Fairly homogeneous and low in ability	8	(1.1)	12*	(1.4)
Fairly homogeneous and average in ability	25	(2.7)	26	(2.1)
Fairly homogeneous and high in ability	22	(2.5)	18	(2.1)
Heterogeneous, with a mixture of two or more ability levels	46	(2.3)	44	(2.4)
Grades 9–12				
Fairly homogeneous and low in ability	11	(1.3)	17*	(1.3)
Fairly homogeneous and average in ability	34	(1.5)	31	(1.6)
Fairly homogeneous and high in ability	24	(2.4)	26	(1.8)
Heterogeneous, with a mixture of two or more ability levels	32	(2.0)	26*	(1.9)

* $p < 0.05$

Tables 3.11 and 3.12 show ability grouping in selected high school science and mathematics courses. The data indicate that there have been no statistically significant changes in the use of ability grouping in these courses between 1993 and 2000.

Table 3.11
Ability Grouping in Selected High School
Science Courses, by Courses: 1993 and 2000

	Percent of Classes			
	1993		2000	
1st Year Biology				
Low Ability	12	(3.7)	9	(1.8)
Average Ability	33	(3.8)	34	(4.5)
High Ability	16	(2.7)	17	(2.5)
Heterogeneous	39	(5.8)	41	(3.9)
1st Year Chemistry				
Low Ability	3	(1.2)	3	(0.9)
Average Ability	35	(3.7)	30	(3.7)
High Ability	36	(5.0)	33	(3.9)
Heterogeneous	26	(3.3)	35	(4.2)
1st Year Physics				
Low Ability	1	(0.9)	1	(0.4)
Average Ability	23	(4.1)	20	(4.5)
High Ability	50	(6.8)	46	(6.2)
Heterogeneous	26	(5.0)	33	(6.7)

Table 3.12
Ability Grouping in Selected High School
Mathematics Courses, by Courses: 1993 and 2000

	Percent of Classes			
	1993		2000	
Geometry/Integrated Math 2				
Low Ability	5	(2.0)	7	(1.9)
Average Ability	37	(4.6)	36	(3.7)
High Ability	20	(2.7)	25	(3.8)
Heterogeneous	39	(4.2)	32	(4.5)
Algebra 2/Integrated Math 3				
Low Ability	4	(1.2)	4	(1.5)
Average Ability	33	(3.8)	33	(3.7)
High Ability	35	(7.5)	29	(3.7)
Heterogeneous	28	(5.6)	34	(3.8)
Algebra 3/Integrated Math 4/Calculus				
Low Ability	1	(0.5)	2	(1.1)
Average Ability	15	(2.6)	18	(3.8)
High Ability	62	(3.3)	59	(6.7)
Heterogeneous	23	(3.7)	20	(7.3)

Teachers were also asked if the randomly selected science/mathematics class included students who were formally classified as learning disabled, limited English proficient (LEP), mentally handicapped, or physically handicapped. As can be seen in Tables 3.13 and 3.14, in both science and mathematics there have been increases in the percentage of grade 1–4 classes including LEP students. While only a few of the changes are statistically significant, there does appear to be a trend towards greater inclusion of special needs students in science and mathematics classes.

Table 3.13
Science Classes with One or More Students with
Particular Special Needs, by Grade Range: 1993 and 2000

	Percent of Classes			
	1993		2000	
Grades 1–4				
Learning Disabled	53	(3.2)	56	(2.7)
Limited English Proficiency	22	(2.3)	36*	(3.0)
Mentally Handicapped	9	(1.4)	9	(1.5)
Physically Handicapped	4	(0.8)	7	(1.5)
Grades 5–8				
Learning Disabled	54	(3.3)	63*	(2.6)
Limited English Proficiency	18	(2.0)	22	(2.3)
Mentally Handicapped	7	(1.2)	9	(1.5)
Physically Handicapped	6	(1.3)	7	(1.3)
Grades 9–12				
Learning Disabled	31	(2.7)	37	(2.2)
Limited English Proficiency	14	(1.3)	17	(1.5)
Mentally Handicapped	2	(0.3)	3	(0.8)
Physically Handicapped	5	(1.0)	4	(0.7)

* p < 0.05

Table 3.14
Mathematics Classes with One or More Students with
Particular Special Needs, by Grade Range: 1993 and 2000

	Percent of Classes			
	1993		2000	
Grades 1–4				
Learning Disabled	52	(2.6)	52	(2.6)
Limited English Proficiency	20	(2.1)	33*	(3.0)
Mentally Handicapped	5	(0.6)	7	(1.3)
Physically Handicapped	6	(1.1)	6	(1.1)
Grades 5–8				
Learning Disabled	40	(2.6)	47	(2.6)
Limited English Proficiency	16	(2.1)	20	(1.7)
Mentally Handicapped	2	(0.6)	2	(0.5)
Physically Handicapped	4	(1.4)	4	(0.9)
Grades 9–12				
Learning Disabled	24	(1.4)	31*	(1.8)
Limited English Proficiency	15	(1.4)	16	(1.3)
Mentally Handicapped	1	(0.2)	2	(0.5)
Physically Handicapped	2	(0.4)	4*	(0.6)

* p < 0.05

Tables 3.15 and 3.16 show the percentage of science and mathematics classes with LEP students by region and by community type. In both science and mathematics, there have been sizable increases in the percentage of classes containing LEP students in the south and west, reflecting recent immigration patterns.

Table 3.15
Science Classes with One or More Limited English Proficiency Students, by Region and Community Type: 1993 and 2000

	Percent of Classes			
	1993		2000	
Region				
Midwest	11	(1.8)	17	(2.8)
Northeast	17	(2.5)	17	(3.7)
South	13	(1.9)	24*	(2.3)
West	33	(3.3)	49*	(4.0)
Community Type				
Urban	28	(2.9)	32	(2.8)
Suburban	22	(2.1)	28	(2.4)
Rural	6	(1.4)	13	(3.3)

* p < 0.05

Table 3.16
Mathematics Classes with One or More Limited English Proficiency Students, by Region and Community Type: 1993 and 2000

	Percent of Classes			
	1993		2000	
Region				
Midwest	8	(1.7)	13*	(1.9)
Northeast	14	(2.5)	14	(2.5)
South	12	(0.8)	23*	(2.7)
West	34	(2.5)	45*	(3.8)
Community Type				
Urban	21	(2.9)	33*	(2.5)
Suburban	21	(1.6)	23	(2.3)
Rural	9	(1.6)	11	(2.1)

* p < 0.05

Although the percentage of females in science courses remained the same in all grade ranges from 1993 to 2000, there has been an increase in the percentage of non-Asian minority students in grades 9–12, particularly in chemistry and physics courses. (See Table 3.17.) The increase in non-Asian minority enrollment is also evident in mathematics in grades 9–12, in Algebra 1, Geometry, and Algebra 2 courses. (See Table 3.18.)

Table 3.17
Female and Non-Asian Minority Students in Science
Classes, by Grade Range and Courses: 1993 and 2000

	Percent of Students							
	Female			Non-Asian Minority				
	1993		2000		1993		2000	
Grades								
Grades 1–4	48	(0.6)	49	(0.5)	26	(2.4)	32	(3.1)
Grades 5–8	50	(0.7)	50	(0.7)	24	(2.1)	29	(2.3)
Grades 9–12	50	(1.1)	52	(0.6)	18	(1.2)	25*	(1.6)
Grades 9–12 Courses								
1st Year Biology	52	(1.7)	52	(1.0)	22	(2.9)	25	(2.1)
1st Year Chemistry	53	(1.8)	56	(1.3)	12	(1.7)	21*	(2.4)
1st Year Physics	42	(2.9)	46	(1.9)	11	(2.1)	19*	(3.5)

* $p < 0.05$

Table 3.18
Female and Non-Asian Minority Students in Mathematics
Classes, by Grade Range and Courses: 1993 and 2000

	Percent of Students							
	Female			Non-Asian Minority				
	1993		2000		1993		2000	
Grades								
Grades 1–4	50	(0.4)	49	(0.6)	24	(2.0)	31*	(2.8)
Grades 5–8	49	(0.7)	50	(0.7)	25	(2.7)	28	(2.3)
Grades 9–12	50	(0.7)	52*	(0.6)	19	(1.0)	26*	(1.5)
Grades 9–12 Courses								
Review/Informal Mathematics	45	(1.6)	46	(2.6)	34	(2.9)	41	(4.8)
Algebra 1	50	(1.3)	53	(1.5)	20	(2.4)	36*	(2.9)
Geometry/Mathematics 2	53	(1.5)	54	(1.2)	13	(1.3)	21*	(2.4)
Algebra 2/Mathematics 3	53	(2.1)	54	(1.3)	13	(1.9)	23*	(2.3)
Advanced Mathematics	49	(1.6)	52	(1.2)	8	(1.3)	12	(1.7)

* $p < 0.05$