

Appendix table 1-1

First-time kindergartners demonstrating specific mathematics skills and knowledge, by child and family characteristics: Fall 1998 and spring 1999

(Percent)

Child and family characteristic	Number and shape			Relative size			Ordinality and sequence			Add and subtract			Multiply and divide		
	Fall	Spring	Change	Fall	Spring	Change	Fall	Spring	Change	Fall	Spring	Change	Fall	Spring	Change
All students.....	93	99	6	57	87	30	21	56	36	4	18	14	—	2	2
Sex															
Male.....	92	99	6	55	86	31	22	56	34	4	19	14	1	3	2
Female.....	94	99	5	58	87	30	20	57	37	3	17	14	—	2	1
Race/ethnicity															
White, non-Hispanic.....	96	99	4	64	91	27	26	64	38	5	22	17	—	3	3
Black, non-Hispanic.....	89	98	9	41	76	35	9	37	28	1	8	7	—	—	—
Asian/Pacific Islander.....	97	100	3	68	92	24	32	68	36	9	28	19	1	6	5
Hispanic.....	90	99	9	43	81	38	12	46	33	2	12	10	—	1	1
Other.....	88	99	11	45	81	37	13	45	32	2	11	9	—	1	1
Mother's education															
<High school.....	83	97	14	31	72	41	6	32	26	1	6	6	—	1	1
High school diploma.....	91	99	8	48	83	35	14	49	35	2	13	11	—	1	1
Some college ^a	95	99	4	59	89	30	21	59	38	3	18	14	—	2	2
Bachelor's or higher degree....	99	100	1	76	95	19	38	75	37	9	31	23	1	5	4
Family risk factors ^b															
0.....	96	99	4	65	91	26	27	64	37	5	22	17	—	3	3
1.....	91	99	8	47	82	35	14	48	34	2	13	11	—	1	1
≥2.....	84	97	14	33	72	39	7	32	25	1	6	5	—	—	—

— = <0.5%

^aIncludes vocational and technical education.

^bIndex consists of family having received welfare assistance, non-English primary home language, single-parent family, and maternal education less than high school diploma or equivalent credential (e.g., General Educational Development certificate).

NOTES: Estimates based on first-time kindergartners assessed in English in both fall and spring (approximately 19% of Asian children and approximately 30% of Hispanic children not included in these estimates). Change calculated on unrounded numbers.

SOURCES: J. West, K. Denton, and L. Reaney, *The Kindergarten Year*; National Center for Education Statistics (NCES) 2001-023, table 4 (2000); and data from U.S. Department of Education, NCES, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), fall 1998 and spring 1999.

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Appendix table 1-2

Mean mathematics scores of fall 1998 first-time kindergartners, by time of assessment and child and family characteristics: Fall 1998 and spring 1999, 2000, and 2002

Child and family characteristic	Fall 1998 kindergarten	Spring 1999 kindergarten	Spring 2000 first grade	Spring 2002 third grade	Gain from fall 1998 to spring 2002
All students.....	22	32	55	85	63
Sex					
Male.....	22	32	56	86	65
Female.....	22	32	55	83	62
Race/ethnicity					
White, non-Hispanic.....	23	34	58	89	66
Black, non-Hispanic.....	18	26	47	73	55
Hispanic.....	19	29	52	82	63
Asian/Pacific Islander.....	23	34	56	88	65
Other, non-Hispanic.....	20	29	51	80	60
Family risk factors ^a					
0.....	24	34	59	89	65
1.....	20	29	51	81	61
≥2.....	17	25	47	74	57

^aIndex consists of family living below federal poverty level, non-English primary home language, single-parent family, and maternal education less than high school diploma or equivalent credential (e.g., General Educational Development certificate).

NOTES: Estimates reflect sample of children assessed in English in all assessment years. Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K) assessment was not administered in 2001 when most children were in second grade. Although most children in the sample were in third grade in spring 2002, 10% were in second grade, and about 1% were in other grades. Gain calculated on unrounded numbers.

SOURCES: A. Rathbun and J. West, *From Kindergarten Through Third Grade: Children's Beginning School Experiences*, National Center for Education Statistics (NCES) 2004-007, table A5 (2004); and data from U.S. Department of Education, NCES, ECLS-K, fall 1998, spring 1999, spring 2000, and spring 2002.

Appendix table 1-3
Fall 1998 first-time kindergartners demonstrating proficiency in specific mathematics skills and knowledge areas in spring of third grade, by child and family characteristics: Spring 2002
 (Percent)

Child and family characteristic	Ordinality and sequence	Add and subtract	Multiply and divide	Place value	Rate and measurement
All students.....	100	97	78	42	16
Sex					
Male.....	100	97	79	46	19
Female.....	100	97	77	38	12
Race/ethnicity					
White, non-Hispanic.....	100	98	84	50	19
Black, non-Hispanic.....	100	93	58	20	5
Asian/Pacific Islander.....	100	97	75	35	11
Hispanic.....	100	98	83	49	22
Other.....	100	95	70	34	11
Family risk factors ^a					
0.....	100	98	85	50	20
1.....	100	96	72	34	11
≥2.....	100	93	61	21	5

^aIndex consists of family living below the federal poverty level, non-English primary home language, single-parent family, and maternal education less than high school diploma or equivalent credential (e.g., General Educational Development certificate).

NOTES: Estimates reflect sample of children assessed in English in all assessment years. Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K) assessment not administered in 2001 when most children were in second grade. Although most children in the sample were in third grade in spring 2002, 10% were in second grade, and about 1% were in other grades.

SOURCES: A. Rathbun and J. West, *From Kindergarten Through Third Grade: Children's Beginning School Experiences*, National Center for Education Statistics (NCES) 2004-007, table A11 (2004); and data from U.S. Department of Education, NCES, ECLS-K, spring 2002.

Appendix table 1-4

Mean science scores of fall 1998 first-time kindergartners in spring of third grade, by child and family characteristics: Spring 2002

Child and family characteristic	Mean science score
All students.....	35
Sex	
Male.....	36
Female.....	34
Race/ethnicity	
White, non-Hispanic.....	37
Black, non-Hispanic.....	27
Hispanic.....	32
Asian/Pacific Islander.....	35
Other, non-Hispanic.....	32
Family risk factors ^a	
0.....	37
1.....	33
≥2.....	28

^aIndex consists of family living below federal poverty level, non-English primary home language, single-parent family, and maternal education less than high school diploma or equivalent credential (e.g., General Educational Development certificate).

NOTES: Estimates reflect sample of children assessed in English in all assessment years. Although most children in the sample were in third grade in spring 2002, 10% were in second grade, and about 1% were in other grades.

SOURCES: A. Rathbun and J. West, *From Kindergarten Through Third Grade: Children's Beginning School Experiences*, National Center for Education Statistics (NCES) 2004-007, table A7 (2004); and U.S. Department of Education, NCES, Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K), Longitudinal Kindergarten-First Grade Public-Use Data File and Third Grade Restricted-Use Data File, fall 1998, spring 1999, spring 2000, and spring 2002.

Appendix table 1-5

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**Average mathematics score of students in grades 4, 8, and 12, by student characteristics:
Selected years, 1990–2003**

Student characteristic	Accommodations not permitted				Accommodations permitted		
	1990	1992	1996	2000	1996	2000	2003
Grade 4	213	220	224	228	224	226	235
Sex							
Male	214	221	226	229	224	227	236
Female	213	219	222	226	223	224	233
Race/ethnicity							
White, non-Hispanic	220	227	231	235	232	234	243
Black, non-Hispanic	188	193	199	204	198	203	216
Hispanic	200	202	205	209	207	208	222
Asian/Pacific Islander ^a	225	231	226	NA	229	NA	246
American Indian/ Alaska Native	—	—	—	212	217	208	223
Free/reduced-price lunch ^b							
Eligible	NA	NA	207	210	207	208	222
Not eligible	NA	NA	231	236	232	235	244
Score percentile							
10th	171	177	182	186	182	184	197
25th	193	199	204	208	203	205	216
50th	214	221	226	230	225	227	236
75th	235	242	246	250	245	248	255
90th	253	259	262	266	262	265	270
Grade 8	263	268	272	275	270	273	278
Sex							
Male	263	268	272	277	271	274	278
Female	262	269	272	274	269	272	277
Race/ethnicity							
White, non-Hispanic	270	277	281	285	281	284	288
Black, non-Hispanic	237	237	242	246	240	244	252
Hispanic	246	249	251	253	251	253	259
Asian/Pacific Islander ^a	275	290	NA	278	NA	288	291
American Indian/ Alaska Native	—	—	—	255	—	259	263
Free/reduced-price lunch ^b							
Eligible	NA	NA	252	255	250	253	259
Not eligible	NA	NA	280	285	277	283	287
Score percentile							
10th	215	221	224	227	221	223	230
25th	239	243	248	252	245	249	254
50th	264	269	273	277	273	275	279
75th	288	294	298	301	297	300	303
90th	307	315	317	321	316	320	323

Appendix table 1-5

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**Average mathematics score of students in grades 4, 8, and 12, by student characteristics:
Selected years, 1990–2003**

Student characteristic	Accommodations not permitted				Accommodations permitted		
	1990	1992	1996	2000	1996	2000	2003
Grade 12 ^c	294	299	304	301	302	300	NA
Sex							
Male	297	301	305	303	303	302	NA
Female	291	298	303	299	300	299	NA
Race/ethnicity							
White, non-Hispanic	301	306	311	308	309	307	NA
Black, non-Hispanic	268	276	280	274	276	273	NA
Hispanic	276	284	287	283	284	281	NA
Asian/Pacific Islander	311	316	319	319	310	317	NA
American Indian/ Alaska Native	—	—	279	293	—	292	NA
Free/reduced-price lunch ^b							
Eligible	NA	NA	281	280	NA	NA	NA
Not eligible	NA	NA	307	305	NA	NA	NA
Score percentile							
10th	247	254	261	255	NA	NA	NA
25th	270	276	282	277	NA	NA	NA
50th	296	301	305	302	NA	NA	NA
75th	319	324	327	326	NA	NA	NA
90th	339	343	345	346	NA	NA	NA

— = sample size insufficient to permit reliable estimate; NA = not available

^aSpecial analyses raised concerns about accuracy and precision of national grade 8 Asian/Pacific Islander results in 1996 and grade 4 Asian/Pacific Islander results in 2000. Therefore, they are omitted from National Center for Education Statistics (NCES) reports and this report.

^bInformation on student's eligibility for free/reduced-price lunch first gathered in 1996.

^cGrade 12 was not assessed in 2003.

NOTES: Scores on 0–500 scale across grades. The National Assessment of Educational Progress (NAEP) is in the process of changing the way it includes students with disabilities and limited English proficiency in assessments. Before 1996, these students were not allowed to use testing accommodations (e.g., extended time, one-on-one testing, bilingual dictionary). In 1996 and 2000, the assessment was administered to split samples: accommodations not permitted and accommodations permitted. In 2003, the NAEP mathematics assessment completed the transition to an accommodations-permitted test. Includes students in both public and private schools.

SOURCES: U.S. Department of Education, NCES, *The Nation's Report Card: Mathematics Highlights 2003*, NCES 2004-451 (2003); *The Nation's Report Card: Mathematics 2000*, NCES 2001-517 (2001); and data from NCES, NAEP, 1990, 1992, 1996, 2000, and 2003 mathematics assessments.

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Appendix table 1-6

Students in grades 4, 8, and 12 scoring at or above proficient level in mathematics for their grade, by student characteristics: Selected years, 1990–2003

(Percent)

Student characteristic	Accommodations not permitted				Accommodations permitted		
	1990	1992	1996	2000	1996	2000	2003
Grade 4	13	18	21	26	21	24	32
Sex							
Male.....	13	19	24	28	22	26	35
Female.....	12	16	19	24	20	22	30
Race/ethnicity							
White, non-Hispanic	16	22	27	33	27	31	43
Black, non-Hispanic.....	1	2	4	5	3	5	10
Hispanic.....	5	6	7	9	7	7	16
Asian/Pacific Islander ^a	22	28	21	NA	27	NA	48
American Indian/ Alaska Native	—	—	—	11	10	8	17
Free/reduced-price lunch ^b							
Eligible	NA	NA	9	9	8	8	15
Not eligible	NA	NA	26	33	27	32	45
Grade 8	15	21	24	27	23	26	29
Sex							
Male.....	17	21	25	29	25	27	30
Female.....	14	21	23	25	22	24	27
Race/ethnicity							
White, non-Hispanic	18	26	30	34	30	34	37
Black, non-Hispanic.....	5	2	5	5	4	5	7
Hispanic.....	7	7	9	9	8	8	12
Asian/Pacific Islander ^a	29	43	NA	41	NA	41	43
American Indian/ Alaska Native	—	—	—	9	—	10	15
Free/reduced-price lunch ^b							
Eligible	NA	NA	8	10	8	9	12
Not eligible	NA	NA	30	35	28	34	37
Grade 12 ^c	12	15	16	17	16	16	NA
Sex							
Male.....	15	17	18	20	18	19	NA
Female.....	9	13	14	14	14	14	NA
Race/ethnicity							
White, non-Hispanic	14	18	20	20	20	20	NA
Black, non-Hispanic.....	2	2	4	3	3	2	NA
Hispanic.....	4	6	6	4	6	4	NA
Asian/Pacific Islander	23	30	33	34	23	32	NA
American Indian/ Alaska Native	—	—	3	10	—	9	NA
Free/reduced-price lunch ^b							
Eligible	NA	NA	4	4	NA	NA	NA
Not eligible	NA	NA	18	19	NA	NA	NA

— = sample size insufficient to permit reliable estimate; NA = not available

^aSpecial analyses raised concerns about accuracy and precision of national grade 8 Asian/Pacific Islander results in 1996 and grade 4 Asian/Pacific Islander results in 2000. Therefore, they are omitted from National Center for Education Statistics (NCES) reports and this report.

^bInformation on student's eligibility for free/reduced-price lunch first gathered in 1996.

^cGrade 12 was not assessed in 2003.

NOTES: The National Assessment of Educational Progress (NAEP) is in the process of changing the way it includes students with disabilities and limited English proficiency in assessments. Before 1996, these students were not allowed to use testing accommodations (e.g., extended time, one-on-one testing, bilingual dictionary). In 1996 and 2000, the assessment was administered to split samples: accommodations not permitted and accommodations permitted. In 2003, the NAEP mathematics assessment completed the transition to an accommodations-permitted test. Includes students in both public and private schools.

SOURCES: U.S. Department of Education, NCES, *The Nation's Report Card: Mathematics Highlights 2003*, NCES 2004-451 (2003); *The Nation's Report Card: Mathematics 2000*, NCES 2001-517 (2001); and data from NCES, NAEP, 1990, 1992, 1996, 2000, and 2003 mathematics assessments.

Appendix table 1-7

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Average science score of students in grades 4, 8, and 12, by student characteristics: 1996 and 2000

Student characteristic	1996	2000
Grade 4	150	150
Sex		
Male.....	151	153
Female.....	149	147
Race/ethnicity		
White, non-Hispanic	160	160
Black, non-Hispanic.....	124	124
Hispanic.....	128	129
Asian/Pacific Islander ^a	151	NA
American Indian/Alaska Native	144	140
Free/reduced-price lunch		
Eligible	133	130
Not eligible	159	159
Score percentile		
10th.....	105	105
25th	130	129
50th.....	153	153
75th.....	173	174
90th.....	190	191
Grade 8	150	151
Sex		
Male.....	151	154
Female.....	149	147
Race/ethnicity		
White, non-Hispanic	159	162
Black, non-Hispanic.....	121	122
Hispanic.....	129	128
Asian/Pacific Islander	152	156
American Indian/Alaska Native	148	134
Free/reduced-price lunch		
Eligible	133	128
Not eligible	156	160
Score percentile		
10th.....	104	103
25th	128	128
50th.....	153	154
75th.....	174	177
90th.....	192	195

Appendix table 1-7

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Average science score of students in grades 4, 8, and 12, by student characteristics: 1996 and 2000

Student characteristic	1996	2000
Grade 12	150	147
Sex		
Male.....	152	148
Female	148	145
Child's race/ethnicity		
White, non-Hispanic	159	154
Black, non-Hispanic.....	124	123
Hispanic	130	128
Asian/Pacific Islander	149	153
American Indian/Alaska Native	145	134
Free/reduced-price lunch		
Eligible	125	126
Not eligible	154	150
Score percentile		
10th	104	190
25th	128	171
50th	152	148
75th	174	125
90th	191	102

NA = not available

^aSpecial analyses raised concerns about accuracy and precision of grade 4 Asian/Pacific Islander results in 2000. Therefore, they are omitted from National Center for Education Statistics (NCES) reports and this report.

NOTES: Scores on 0–300 scale for each grade. The National Assessment of Educational Progress (NAEP) is in the process of changing the way it includes students with disabilities and limited English proficiency in assessments. Before 1996, these students were not allowed to use testing accommodations (e.g., extended time, one-on-one testing, bilingual dictionary). In 1996 and 2000, the assessment was administered to split samples: accommodations not permitted and accommodations permitted. The scores reported here are for the accommodations not permitted sample. See report listed below for scores for the accommodations permitted sample, which are very similar to scores for the accommodations not permitted sample. Includes students in both public and private schools.

SOURCES: U.S. Department of Education, NCES, *The Nation's Report Card: Science Highlights 2000*, NCES 2003-453 (2003); and data from NCES, NAEP, 1996 and 2000 science assessments.

Appendix table 1-8
Students in grades 4, 8, and 12 scoring at or above proficient level in science for their grade, by student characteristics: 1996 and 2000
 (Percent)

Student characteristic	1996	2000
Grade 4	29	29
Sex		
Male	31	33
Female	27	26
Race/ethnicity		
White, non-Hispanic	37	38
Black, non-Hispanic	7	7
Hispanic	9	11
Asian/Pacific Islander ^a	29	NA
American Indian/Alaska Native	26	19
Free/reduced-price lunch		
Eligible	13	11
Not eligible	36	38
Grade 8	29	32
Sex		
Male	31	36
Female	27	27
Race/ethnicity		
White, non-Hispanic	37	41
Black, non-Hispanic	5	7
Hispanic	11	12
Asian/Pacific Islander	30	37
American Indian/Alaska Native	24	14
Free/reduced-price lunch		
Eligible	14	12
Not eligible	34	40
Grade 12	21	18
Sex		
Male	25	21
Female	17	16
Race/ethnicity		
White, non-Hispanic	27	23
Black, non-Hispanic	4	3
Hispanic	7	7
Asian/Pacific Islander	22	26
American Indian/Alaska Native	10	9
Free/reduced-price lunch		
Eligible	7	6
Not eligible	23	20

NA = not available

^aSpecial analyses raised concerns about accuracy and precision of national grade 4 Asian/Pacific Islander results in 2000. Therefore, they are omitted from National Center for Education Statistics (NCES) reports and this report.

NOTES: The National Assessment of Educational Progress (NAEP) is in the process of changing the way it includes students with disabilities and limited English proficiency in assessments. Before 1996, these students were not allowed to use testing accommodations (e.g., extended time, one-on-one testing, bilingual dictionary). In 1996 and 2000, the assessment was administered to split samples: accommodations not permitted and accommodations permitted. See report listed below for scores for the accommodations permitted sample, which are very similar to scores for the accommodations not permitted sample. Includes students in both public and private schools.

SOURCES: U.S. Department of Education, NCES, *The Nation's Report Card: Science Highlights 2000*, NCES 2003-453 (2003); and data from NCES, NAEP, 1996 and 2000 science assessments.

Appendix table 1-9
Average mathematics score of fourth grade students, by country: 2003

Country	Score
International average	495
Singapore	594
Hong Kong, China	575
Japan	565
Chinese Taipei	564
Belgium	551
Netherlands	540
Latvia	536
Lithuania	534
Russian Federation	532
England	531
Hungary	529
United States	518
Cyprus	510
Moldova	504
Italy	503
Australia	499
New Zealand	493
Scotland	490
Slovenia	479
Armenia	456
Norway	451
Iran	389
Philippines	358
Morocco	347
Tunisia	339

Average higher than U.S. average

Average lower than U.S. average

SOURCES: P. Gonzales, J.C. Guzman, L. Partelow, E. Pahlke, L. Jocelyn, D. Kastberg, and T. Williams, *Highlights From the Trends in International Mathematics and Science Study (TIMSS) 2003*, U.S. Department of Education, National Center for Education Statistics, NCES 2005-005 table 2, (2004); and data from International Association for the Evaluation of Educational Achievement, *Trends in International Mathematics and Science Study (TIMSS)* (2003).

Appendix table 1-10
Average mathematics score of eighth grade students, by country: 2003

Country	Score
International average	466
Singapore	605
South Korea	589
Hong Kong, China	586
Chinese Taipei	585
Japan	570
Belgium	537
Netherlands	536
Estonia	531
Hungary	529
Malaysia	508
Latvia	508
Russian Federation	508
Slovak Republic	508
Australia	505
United States	504
Lithuania	502
Sweden	499
Scotland	498
Israel	496
New Zealand	494
Slovenia	493
Italy	484
Armenia	478
Serbia	477
Bulgaria	476
Romania	475
Norway	461
Moldova	460
Cyprus	459
Macedonia	435
Lebanon	433
Jordan	424
Iran	411
Indonesia	411
Tunisia	410
Egypt	406
Bahrain	401
Palestinian National Authority	390
Chile	387
Morocco	387
Philippines	378
Botswana	366
Saudi Arabia	332
Ghana	276
South Africa	264

Average higher than U.S. average

Average not measurably different from U.S. average

Average lower than U.S. average

SOURCES: P. Gonzales, J.C. Guzman, L. Partelow, E. Pahlke, L. Jocelyn, D. Kastberg, and T. Williams, *Highlights From the Trends in International Mathematics and Science Study (TIMSS) 2003*, U.S. Department of Education, National Center for Education Statistics, NCES 2005-005, table 3 (2004); and data from International Association for the Evaluation of Educational Achievement, *Trends in International Mathematics and Science Study (TIMSS)* (2003).

Appendix table 1-11
Average science score of fourth grade students, by country: 2003

Country	Score
International average	489
Singapore	565
Chinese Taipei	551
Japan	543
Hong Kong, China	542
England	540
United States	536
Latvia	532
Hungary	530
Russian Federation	526
Netherlands	525
Australia	521
New Zealand	520
Belgium	518
Italy	516
Lithuania	512
Scotland	502
Moldova	496
Slovenia	490
Cyprus	480
Norway	466
Armenia	437
Iran	414
Philippines	332
Tunisia	314
Morocco	304

Average higher than U.S. average

Average not measurably different from U.S. average

Average lower than U.S. average

SOURCES: P. Gonzales, J.C. Guzman, L. Partelow, E. Pahlke, L. Jocelyn, D. Kastberg, and T. Williams, *Highlights From the Trends in International Mathematics and Science Study (TIMSS) 2003*, U.S. Department of Education, National Center for Education Statistics, NCES 2005-005, table 8 (2004); and data from International Association for the Evaluation of Educational Achievement, *Trends in International Mathematics and Science Study (TIMSS)* (2003).

Appendix table 1-12
Average science score of eighth grade students, by country: 2003

Country	Score
International average	473
Singapore	578
Chinese Taipei	571
Souh Korea	558
Hong Kong, China	556
Estonia	552
Japan	552
Hungary	543
Netherlands	536
United States	527
Australia	527
Sweden	524
Slovenia	520
New Zealand	520
Lithuania	519
Slovak Republic	517
Belgium	516
Russian Federation	514
Latvia	512
Scotland	512
Malaysia	510
Norway	494
Italy	491
Israel	488
Bulgaria	479
Jordan	475
Moldova	472
Romania	470
Serbia	468
Armenia	461
Iran	453
Macedonia	449
Cyprus	441
Bahrain	438
Palestinian National Authority	435
Egypt	421
Indonesia	420
Chile	413
Tunisia	404
Saudi Arabia	398
Morocco	396
Lebanon	393
Philippines	377
Botswana	365
Ghana	255
South Africa	244
Average higher than U.S. average	
Average not measurably different from U.S. average	
Average lower than U.S. average	

SOURCES: P. Gonzales, J.C. Guzman, L. Partelow, E. Pahlke, L. Jocelyn, D. Kastberg, and T. Williams, *Highlights From the Trends in International Mathematics and Science Study (TIMSS) 2003*, U.S. Department of Education, National Center for Education Statistics, NCES 2005-005, table 9 (2004); and data from International Association for the Evaluation of Educational Achievement, *Trends in International Mathematics and Science Study (TIMSS)* (2003).

Appendix table 1-13
Average mathematics literacy score of 15-year-old students, by country: 2003

Country	Score
OECD countries.....	500
Finland	544
South Korea.....	542
Netherlands.....	538
Japan	534
Canada.....	532
Belgium.....	529
Switzerland	527
New Zealand	523
Australia.....	524
Czech Republic.....	516
Iceland	515
Denmark	514
France.....	511
Sweden	509
Austria.....	506
Germany.....	503
Ireland.....	503
Slovak Republic.....	498
Norway.....	495
Luxembourg	493
Poland	490
Hungary.....	490
Spain.....	485
United States.....	483
Portugal.....	466
Italy.....	466
Greece.....	445
Turkey	423
Mexico	385
Non-OECD countries	
Hong Kong, China	550
Liechtenstein.....	536
Macao-China	527
Latvia	483
Russian Federation	468
Serbia and Montenegro	437
Uruguay.....	422
Thailand	417
Indonesia.....	360
Tunisia.....	359

Average higher than U.S. average

Average not measurably different from U.S. average

Average lower than U.S. average

OECD = Organisation for Economic Co-operation and Development

SOURCES: M. Lemke, A. Sen, E. Pahlke, L. Partelow, D. Miller, T. Williams, D. Kastberg, and L. Jocelyn, *International Outcomes of Learning in Mathematics Literacy and Problem Solving: PISA 2003 Results From the U.S. Perspective: Highlights*, U.S. Department of Education, National Center for Education Statistics, NCES 2005-003, table 2 (2004); and data from OECD, Programme for International Student Assessment (PISA) (2003).

Appendix table 1-14
Average science literacy score of 15-year-old students, by country: 2003

Country	Score
OECD countries.....	500
Finland	548
Japan	548
South Korea.....	538
Australia	525
Netherlands.....	524
Czech Republic.....	523
New Zealand	521
Canada.....	519
Switzerland	513
France	511
Belgium.....	509
Sweden	506
Ireland.....	505
Hungary.....	503
Germany.....	502
Poland	498
Slovak Republic.....	495
Iceland	495
United States.....	491
Austria.....	491
Spain.....	487
Italy	487
Norway.....	484
Luxembourg.....	483
Greece.....	481
Denmark	475
Portugal.....	468
Turkey	434
Mexico	405
Non-OECD countries	
Hong Kong, China	540
Liechtenstein.....	525
Macao-China	525
Russian Federation	489
Latvia	489
Uruguay.....	438
Serbia and Montenegro	436
Thailand	429
Indonesia.....	395
Tunisia.....	385

Average higher than U.S. average

Average not measurably different from U.S. average

Average lower than U.S. average

OECD = Organisation for Economic Co-operation and Development

SOURCES: M. Lemke, A. Sen, E. Pahlke, L. Partelow, D. Miller, T. Williams, D. Kastberg, and L. Jocelyn, *International Outcomes of Learning in Mathematics Literacy and Problem Solving: PISA 2003 Results From the U.S. Perspective: Highlights*. U.S. Department of Education, Center for Education Statistics, NCES 2005-003, table B-17 (2004); and data from OECD, Programme for International Student Assessment (PISA) (2003).

Appendix table 1-15

High school graduates who attended schools offering advanced mathematics courses, by student and school characteristics: Selected years, 1990–2003

(Percent)

Class and characteristic	Trigonometry/ algebra III	Precalculus/ analysis	Statistics and probability	Calculus	
				Any calculus	AP/IB calculus
1990 graduates	83.4	73.5	24.1	79.2	NA
1994 graduates	78.3	76.9	34.8	84.9	NA
1998 graduates	70.6	80.7	35.5	85.9	64.2
2000 graduates					
Overall	68.0	86.7	50.9	92.6	76.7
Race/ethnicity					
White	68.7	85.8	48.5	91.9	73.3
Black	77.8	88.6	59.2	92.5	83.1
Hispanic	53.7	88.8	47.0	94.2	83.0
Asian/Pacific Islander	62.1	90.4	67.7	97.0	89.7
Other	80.6	84.8	63.5	95.3	81.2
School sector					
Public	67.8	85.8	52.2	93.4	76.9
Private	70.0	98.1	35.9	83.8	75.2
Community type					
Urban	68.4	91.0	60.6	97.9	86.7
Suburban	66.4	89.1	59.1	95.1	86.9
Rural	70.8	77.4	23.6	81.6	45.1
Size (enrollment)					
Small (1–599)	70.2	68.8	22.5	76.7	31.3
Medium (600–1,799)	65.4	91.7	49.3	94.0	82.1
Large ($\geq 1,800$)	71.5	88.6	72.0	100.0	95.3
Poverty rate ^a					
Very low	68.6	88.9	63.0	96.0	86.1
Low	66.5	85.8	53.6	92.3	74.3
Medium	64.3	84.0	40.2	92.2	74.5
High	61.4	83.4	47.6	83.2	69.5

NA = not available

AP = Advanced Placement; IB = International Baccalaureate

^aStudents eligible for national free/reduced-priced lunch program: very low = $\leq 5\%$, low = 6–25%, medium = 26–50%, and high = 51–100%.

NOTES: AP and IB courses coded separately in 1998 and 2000 but not in prior years. AP/IB calculus courses appear in two columns: alone in their specific column and along with other calculus courses in any-calculus column.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, 1990, 1994, 1998, and 2000 High School Transcript Studies.

Appendix table 1-16

High school graduates who attended schools offering advanced science courses, by student and school characteristics: Selected years, 1990–2003

(Percent)

Class and characteristic	Chemistry		Physics		Advanced biology		Chemistry, physics, and advanced biology	AP/IB environmental science
	Any chemistry	AP/IB chemistry	Any physics	AP/IB physics	Any advanced biology	AP/IB biology		
1990 graduates	99.1	NA	97.4	NA	93.0	NA	90.2	NA
1994 graduates	99.0	NA	97.0	NA	96.7	NA	93.3	NA
1998 graduates	98.0	39.4	94.6	27.3	95.5	46.3	90.6	NA
2000 graduates								
Overall.....	99.5	57.1	99.2	46.8	96.4	66.5	96.1	9.9
Race/ethnicity								
White	99.9	54.5	99.5	41.1	96.8	63.7	96.5	8.3
Black.....	99.6	58.6	99.6	58.0	97.4	70.5	97.4	12.1
Hispanic.....	97.4	62.6	97.4	55.2	92.9	73.6	92.9	12.3
Asian/Pacific Islander ...	98.5	77.3	98.5	67.6	95.7	74.4	95.7	17.3
Other.....	99.0	51.2	98.6	66.6	98.1	72.3	97.7	4.1
School sector								
Public.....	99.4	58.1	99.2	48.6	96.4	66.2	96.2	10.4
Private	100.0	45.2	99.2	26.0	96.2	70.7	95.4	3.4
Community type								
Urban.....	100.0	65.2	100.0	62.0	97.4	74.9	97.4	17.6
Suburban	98.9	65.9	98.8	51.4	96.0	74.8	95.8	9.5
Rural.....	100.0	30.3	99.2	21.1	96.1	40.4	95.3	2.5
Size (enrollment)								
Small (1–599)	96.9	26.8	95.5	9.0	89.8	32.4	88.4	0.0
Medium (600–1,799) ...	100.0	53.4	100.0	45.3	97.8	67.9	97.8	10.3
Large (≥1,800)	100.0	83.5	100.0	73.6	97.9	85.5	97.9	15.3
Poverty rate ^a								
Very low.....	100.0	75.8	99.7	61.4	98.8	83.8	98.5	9.3
Low.....	100.0	52.0	100.0	44.6	95.3	61.2	95.3	13.2
Medium.....	100.0	47.2	99.1	43.5	98.5	67.2	97.6	11.1
High.....	96.0	52.9	96.0	45.2	90.4	60.6	90.4	8.2

NA = not available

AP = Advanced Placement; IB = International Baccalaureate

^aStudents eligible for national free/reduced-priced lunch program: very low = ≤5%, low = 6–25%, medium = 26–50%, and high = 51–100%.

NOTE: AP and IB courses coded separately in 1998 and 2000 but not in prior years.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, 1990, 1994, 1998, and 2000 High School Transcript Studies.

Appendix table 1-17

High school graduates who completed advanced mathematics courses, by selected student and school characteristics: Selected years, 1990–2000

(Percent)

Class and characteristic	Trigonometry/ algebra III	Precalculus/ analysis	Statistics and probability	Calculus	
				Any calculus	AP/IB calculus
1990 graduates	20.7	13.6	1.0	7.2	NA
1994 graduates	24.0	17.4	2.1	10.2	NA
1998 graduates	20.8	23.1	3.7	11.9	6.4
2000 graduates					
Overall	19.6	26.7	5.7	12.6	8.4
Race/ethnicity					
White	20.8	28.2	6.1	13.5	8.9
Black	17.1	16.2	3.8	5.1	2.9
Hispanic	9.8	19.3	2.3	6.4	4.2
Asian/Pacific Islander	28.4	49.0	11.5	33.7	26.6
Other	16.9	26.3	11.8	12.4	7.1
Sex					
Male	17.9	25.4	5.8	13.3	9.2
Female	21.1	27.9	5.6	12.0	7.8
School sector					
Public	18.8	24.2	5.5	12.0	8.1
Private	27.6	53.8	7.9	18.3	12.4
Community type					
Urban	21.4	29.1	5.5	13.4	9.3
Suburban	18.9	30.0	7.0	13.9	9.8
Rural	18.9	17.7	3.3	9.2	4.7
Size (enrollment)					
Small (1–599)	22.0	23.8	5.2	11.9	4.0
Medium (600–1,799)	18.5	28.4	6.6	12.7	9.6
Large ($\geq 1,800$)	20.1	25.2	4.3	12.8	9.2
Poverty rate ^a					
Very low	23.9	38.7	9.3	18.0	12.2
Low	16.7	23.3	4.6	11.8	7.6
Medium	15.1	19.2	3.5	9.7	6.5
High	15.1	19.7	2.9	6.2	4.0

NA = not available

AP = Advanced Placement; IB = International Baccalaureate

^aStudents eligible for national free/reduced-priced lunch program: very low = $\leq 5\%$, low = 6–25%, medium = 26–50%, and high = 51–100%.

NOTES: AP and IB courses coded separately in 1998 and 2000 but not in prior years. AP/IB calculus courses appear in two columns: alone in their specific column and along with other calculus courses in any-calculus column.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, 1990, 1994, 1998, and 2000 High School Transcript Studies.

Appendix table 1-18

High school graduates who completed advanced science courses, by selected student and school characteristics: Selected years, 1990–2000

(Percent)

Class and characteristic	Chemistry		Physics		Advanced biology		Chemistry, physics, and advanced biology	AP/IB environmental science
	Any chemistry	AP/IB chemistry	Any physics	AP/IB physics	Any advanced biology	AP/IB biology		
1990 graduates	45.0	NA	21.5	NA	27.5	NA	7.4	NA
1994 graduates	50.4	NA	24.5	NA	34.8	NA	9.9	NA
1998 graduates	56.4	2.9	28.6	1.7	37.4	4.9	12.1	NA
2000 graduates								
Overall.....	62.7	3.2	33.4	2.4	36.3	6.6	11.7	0.7
Race/ethnicity								
White	63.0	2.9	34.6	2.3	38.4	6.4	12.5	0.7
Black.....	61.9	1.1	26.0	1.2	32.7	4.3	8.6	0.5
Hispanic.....	55.7	2.8	25.9	1.1	27.3	6.8	7.0	0.2
Asian/Pacific Islander ...	75.8	14.6	54.5	10.1	38.9	15.7	23.1	2.1
Other.....	63.3	0.9	32.9	2.1	32.2	5.3	8.6	0.0
Sex								
Male.....	58.1	3.1	35.6	3.1	31.5	5.2	11.1	0.6
Female.....	66.8	3.2	31.5	1.7	40.5	7.8	12.4	0.7
School sector								
Public.....	60.2	3.1	32.0	2.4	36.2	6.4	11.1	0.7
Private	89.3	3.2	48.5	2.7	36.8	8.5	18.4	0.0
Community type								
Urban.....	68.1	3.8	38.2	2.5	37.8	7.2	12.9	1.1
Suburban	65.0	3.6	33.5	2.8	36.5	6.8	12.9	0.7
Rural	52.4	1.7	28.4	1.4	34.4	5.6	8.2	0.0
Size (enrollment)								
Small (1–599)	60.3	2.0	36.0	0.8	37.7	4.8	10.5	0.0
Medium (600–1,799) ...	64.9	3.6	34.1	2.8	34.7	7.0	12.6	0.8
Large (≥1,800)	59.8	3.0	30.3	2.6	38.5	7.1	10.9	0.8
Poverty rate ^a								
Very low.....	74.6	5.9	47.0	4.7	38.3	9.7	17.4	0.8
Low.....	57.0	1.9	28.8	2.0	31.0	4.9	8.7	1.3
Medium.....	57.2	2.1	27.5	1.3	44.1	6.3	10.7	0.2
High.....	63.6	3.5	27.1	1.3	32.7	7.1	8.2	0.6

NA = not available

AP = Advanced Placement; IB = International Baccalaureate

^aStudents eligible for national free/reduced-priced lunch program: very low = ≤5%, low = 6–25%, medium = 26–50%, and high = 51–100%.

NOTES: AP and IB courses coded separately in 1998 and 2000 but not in prior years. AP/IB courses appear in two columns: alone in their specific column and along with other courses in “any” column.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, 1990, 1994, 1998, and 2000 High School Transcript Studies.

Appendix table 1-19

U.S. students who took mathematics and science Advanced Placement tests and percentage with passing scores, by sex and race/ethnicity: 1997 and 2004

Subject	Sex				Race/ethnicity							
	1997		2004		1997				2004			
	Male	Female	Male	Female	White	Black	Hispanic	Asian	White	Black	Hispanic	Asian
Students taking AP tests												
Mathematics												
Calculus AB	57,255	51,182	88,809	81,521	73,219	4,019	5,144	16,183	116,704	6,930	12,184	25,111
Calculus BC	14,022	8,327	29,567	19,765	13,032	394	630	6,027	31,069	1,024	2,232	12,127
Statistics	4,163	3,388	32,538	32,525	4,849	313	390	1,334	43,946	2,641	4,293	10,416
Science												
Biology	30,387	39,081	45,237	63,651	44,508	2,860	3,280	11,255	69,606	5,373	7,672	18,754
Chemistry	23,517	17,286	37,208	31,824	25,548	1,394	1,550	8,269	43,688	2,585	4,271	14,202
Computer science A	5,584	1,408	11,620	2,252	4,301	320	337	1,350	8,735	483	856	2,849
Computer science AB	3,841	526	5,291	628	2,798	65	124	934	3,737	101	225	1,453
Physics B	13,471	7,139	27,200	14,644	13,328	541	902	3,667	27,171	1,396	2,766	7,705
Physics C: electricity and magnetism	4,407	1,310	8,178	2,325	3,421	125	183	1,388	6,693	178	365	2,620
Physics C: mechanics	8,591	3,149	15,986	5,555	7,164	291	485	2,580	14,062	490	1,016	4,640
Passing scores^a (%)												
Mathematics												
Calculus AB	63.2	55.0	62.6	55.1	60.5	31.7	42.2	64.3	62.3	30.1	36.8	62.9
Calculus BC	81.1	75.2	81.0	77.1	79.8	59.6	70.3	78.7	80.6	58.1	62.1	81.7
Statistics	70.4	51.8	65.4	54.2	64.7	28.8	31.8	67.5	63.7	26.8	34.2	63.5
Science												
Biology	73.4	62.6	66.9	56.4	68.9	35.9	46.5	72.3	64.5	29.6	35.9	66.9
Chemistry	63.1	51.2	60.6	51.5	58.7	29.1	35.3	63.9	58.1	27.7	31.0	64.5
Computer science A	49.7	36.6	59.3	46.1	50.3	13.4	30.9	47.0	61.0	26.9	33.1	59.3
Computer science AB	71.6	72.2	63.4	62.1	72.7	52.3	52.4	72.7	64.1	39.6	43.6	65.9
Physics B	64.8	50.3	62.2	47.2	61.1	33.1	41.8	61.1	61.4	23.1	30.7	57.1
Physics C: electricity and magnetism	68.2	58.2	66.7	58.3	67.5	27.2	41.0	67.8	65.8	47.8	43.3	66.8
Physics C: mechanics	75.1	59.0	72.6	61.1	72.1	40.2	49.1	73.1	71.6	43.1	47.4	72.5

AP = Advanced Placement

^aMost U.S. colleges and universities grant college credit or advanced placement for scores of 3, 4, or 5 on Advanced Placement tests (on a scale of 1–5).

NOTES: Subjects with more than one AP course/test distinguished as follows: calculus AB and calculus BC are both yearlong courses and cover some of same material at similar level of depth. However, calculus BC extends to additional topics and aims to substitute for additional college course beyond course(s) calculus AB replaces. Computer science A includes subset of the topics addressed in computer science AB and covers some in less depth (e.g., algorithms, data structures, design, and abstraction). Physics B and physics C differ primarily in depth and level of mathematics required. Physics B rarely uses calculus but requires knowledge of algebra and trigonometry. Equivalent to 1-year terminal college course often taken by students majoring in fields such as life sciences, certain applied sciences, or premedicine. Physics C requires extensive use of calculus methods and is equivalent to college courses of up to 2 years' duration designed for students majoring in physical sciences or engineering. Students take one physics C exam, but components scored separately for electricity/magnetism and for mechanics.

SOURCE: *Advanced Placement Program National Summary Reports, 1997 and 2004*. Copyright 1997, 2004 by the College Board. Reproduced with permission. All rights reserved. www.collegeboard.com.

Appendix table 1-20

1992 12th graders who had earned bachelor's degree by 2000, by selected academic characteristics and current or most recent occupation: 2000

(Percent distribution)

Academic characteristic	K-12 teaching ^a	Nonteaching occupation											
		Total	Business/ management	Engineering/ architecture	Computer science	Medical professionals	Editors/ writers/ reporters/ performers	Human/ protective services or legal support	Research/ science/ technical	Administrative/ clerical	Mechanics/ laborers	Service industries	Military
All students.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
High school achievement levels													
Academic curriculum intensity ^{b,c}													
Low	4.5	2.0	1.9	0.0	1.2	1.8	1.7	3.3	0.7	6.2	2.4	0.0	0.0
Middle	64.7	53.0	53.8	33.8	48.7	48.9	59.5	56.5	50.0	50.3	74.5	54.3	47.5
High	30.8	45.0	44.3	66.2	50.1	49.3	38.9	40.2	49.3	43.5	23.1	45.7	52.5
Achievement test scores at 12th grade ^e													
Low	2.1	1.9	2.2	0.0	1.8	0.7	0.6	2.6	0.6	1.8	2.2	4.4	0.0
Middle	59.4	51.3	56.9	27.6	40.3	49.6	56.5	55.5	36.2	40.9	66.3	61.8	23.1
High	38.5	46.8	40.9	72.4	58.0	49.7	42.9	41.9	63.2	57.3	31.5	33.8	76.9
SAT/ACT composite scores ^c													
Did not take/missing	28.3	23.5	22.1	20.4	21.4	22.2	31.9	24.2	16.9	33.2	25.8	16.1	56.5
Low	8.5	3.9	4.2	0.6	7.7	1.2	2.9	5.2	0.7	2.5	6.3	5.2	1.6
Middle	45.8	45.7	49.4	31.7	41.4	50.4	43.0	46.0	36.1	38.6	52.3	57.3	18.1
High	17.4	26.8	24.3	47.3	29.4	26.2	22.2	24.6	46.2	25.8	15.6	21.5	23.8
Postsecondary selectivity ^d													
First postsecondary institution enrolled													
Nonselective	77.8	70.4	71.8	47.4	77.4	71.6	59.7	77.6	54.1	70.6	84.0	77.3	36.5
Selective	22.2	29.5	28.2	52.6	22.6	28.4	40.3	22.1	45.9	29.4	16.0	22.7	63.5
Bachelor's degree institution													
Nonselective	77.3	65.9	68.6	42.0	70.5	69.5	57.8	73.6	47.6	62.7	67.3	77.9	29.4
Selective	22.7	34.1	31.4	58.0	29.5	30.5	42.2	26.4	52.4	37.3	32.7	22.1	70.6

ACT = American College Test; SAT = Scholastic Aptitude Test

^aAbout 11% reported current or most recent occupation was teaching grades K-12.^bComposite index constructed based on following high school curriculum components: highest level of mathematics, total mathematics credits, total Advanced Placement courses, total English credits, total foreign language credits, total science credits, total core laboratory science credits, total social science credits, total computer science credits. See more information in C. Adelman, *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*. PPLI 1999-8021, U.S. Department of Education, Office of Educational Research and Improvement (1999).^cLow level includes bottom 20% of all students with valid data, middle level includes middle 60%, and high level includes top 20%.^dInstitutional selectivity has five values: highly selective, selective, non selective, open door, and not ratable. Variable based on selectivity developed by Cooperative Institutional Research Project at University of California-Los Angeles for its annual survey (since 1966) of entering freshmen. Highly selective and selective institutions combined into selective group; nonselective, open door, and not-ratable institutions combined into nonselective group. See C. Adelman, *Principal Indicators of Student Academic Histories in Postsecondary Education, 1972-2000*, U.S. Department of Education, Institute of Education Sciences (2004) for more information.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988, NELS:88/2000, fourth follow-up, Postsecondary Education Transcript Study (PETS), 2000.

Science and Engineering Indicators 2006

Appendix table 1-21

Public school grades 7–12 mathematics and science teachers with full certification in assigned teaching field: 1999–2000

(Percent)

State	Certification	State	Certification
Mathematics		Science	
United States	88	United States	88
Rhode Island	100	Idaho	100
West Virginia.....	100	Vermont.....	100
South Dakota.....	99	Wyoming	100
Arkansas	98	South Dakota.....	99
New Jersey	98	Indiana	98
North Dakota.....	98	Washington.....	98
Georgia	96	Iowa	97
Indiana	96	Montana	96
Minnesota	96	Florida	95
Nebraska.....	96	Georgia.....	95
Idaho.....	95	Maine	95
Montana.....	95	New Jersey	95
Nevada.....	95	North Dakota	95
Vermont.....	95	Oklahoma.....	95
Wisconsin.....	95	West Virginia.....	95
Kansas	94	Arkansas	94
Massachusetts	94	Delaware	94
Wyoming	94	Nevada	94
Alabama	93	Rhode Island.....	94
Washington	93	Minnesota	93
Illinois	92	Pennsylvania	93
Ohio	92	Utah	93
Oklahoma.....	92	Hawaii	92
Oregon.....	92	Nebraska.....	92
Utah	92	Wisconsin	92
Virginia	92	Illinois.....	91
Iowa	91	Kansas	91
South Carolina.....	90	Michigan	91
Kentucky	89	Alaska	90
Maryland.....	88	Texas	90
Missouri	88	Alabama	89
Pennsylvania	88	Mississippi	89
District of Columbia.....	87	Oregon	89
Maine.....	86	New Mexico.....	87
Mississippi	86	South Carolina	87
Tennessee	86	Virginia	87
Texas.....	86	Connecticut	86
New Hampshire.....	85	Tennessee	83
Florida.....	84	Colorado.....	82
Connecticut.....	83	Louisiana.....	82
Delaware.....	83	New York	82
New Mexico	83	Ohio	82
Michigan	82	Maryland	81
Arizona	81	New Hampshire	81
Colorado.....	81	North Carolina	81
New York.....	81	Arizona	80
Alaska	79	Massachusetts	80
Louisiana.....	78	California	79
California.....	77	Missouri	79
North Carolina	77	Kentucky	77
Hawaii	65	District of Columbia	NA

NA = not available

SOURCE: Council of Chief State School Officers, *State Indicators of Science and Mathematics Education: 2003* (2003).

Appendix table 1-22

Public school grades 7–12 mathematics and science teachers with undergraduate or graduate major or minor in assigned teaching field: 1999–2000

(Percent)

State	Major or minor	State	Major or minor
Mathematics		Science	
United States	71	United States	77
Arkansas	90	Minnesota	93
Minnesota	88	New Jersey	92
Delaware	87	Iowa	89
Rhode Island	87	New York	89
Alabama	86	Utah	89
North Dakota	86	Wisconsin	88
Ohio	86	Alaska	87
Wisconsin	86	Idaho	87
Wyoming	86	North Dakota	86
Nebraska	85	Connecticut	85
New Jersey	85	Indiana	85
Pennsylvania	85	Nevada	85
Indiana	81	Wyoming	85
South Carolina	80	Delaware	84
New York	79	Hawaii	84
Oklahoma	79	Illinois	84
District of Columbia	77	Nebraska	83
Missouri	77	Vermont	83
New Hampshire	77	Virginia	82
Hawaii	76	Alabama	81
Montana	76	California	81
South Dakota	75	Colorado	81
Michigan	74	Rhode Island	81
Kansas	73	Kentucky	79
Massachusetts	73	Kansas	78
West Virginia	73	Maryland	78
Illinois	72	Missouri	78
Iowa	72	New Hampshire	78
Maryland	71	Pennsylvania	78
Virginia	70	Massachusetts	77
Maine	69	Michigan	77
Washington	69	Montana	76
Texas	68	Ohio	75
Florida	66	Arkansas	74
Louisiana	66	South Carolina	74
Colorado	65	South Dakota	74
New Mexico	64	Washington	74
Utah	64	Oklahoma	73
Kentucky	62	West Virginia	73
Georgia	61	New Mexico	72
Idaho	61	Texas	69
Connecticut	60	Arizona	68
Mississippi	59	Georgia	68
Oregon	59	Maine	67
North Carolina	58	Oregon	67
Arizona	57	Florida	66
Alaska	56	Mississippi	66
California	56	Tennessee	57
Tennessee	56	North Carolina	50
Vermont	54	Louisiana	49
Nevada	48	District of Columbia	NA

NA = not available

NOTES: Mathematics teachers had undergraduate or graduate major or minor in mathematics or mathematics education. Science teachers had undergraduate or graduate major or minor in science or science education.

SOURCE: Council of Chief State School Officers, *State Indicators of Science and Mathematics Education: 2003* (2003).

Appendix table 1-23

Salary trends of public school K-12 and beginning teachers: Selected years, 1972-2002

(2002 constant dollars)

Year	All teachers	Beginning teachers
1972.....	41,769	29,504
1974.....	39,330	NA
1976.....	39,809	27,225
1978.....	39,200	NA
1980.....	35,150	23,267
1982.....	35,318	NA
1984.....	38,047	24,722
1986.....	41,462	NA
1988.....	42,688	28,372
1990.....	43,147	NA
1992.....	43,503	28,866
1994.....	43,414	29,046
1996.....	43,071	28,680
1998.....	43,441	29,255
2000.....	43,597	29,882
2002.....	44,367	30,719

NA = not available

SOURCE: F.H. Nelson and R. Drown, *Survey and Analysis of Teacher Salary Trends 2002*, American Federation of Teachers (2003).

Appendix table 1-24

Annual statutory salaries of public school teachers at beginning, after 15 years of experience, and at top of scale; salary per instructional hour after 15 years of experience; and ratio of salaries after 15 years of experience to gross domestic product per capita, by level of schooling and OECD country: 2002

(U.S. dollars)

OECD country	Primary education					Lower secondary education					Upper secondary education				
	Beginning	After 15 years	At top scale	Per instructional hour after 15 years	Ratio after 15 years/ GDP per capita	Beginning	After 15 years	At top scale	Per instructional hour after 15 years	Ratio after 15 years/ GDP per capita	Beginning	After 15 years	At top scale	Per instructional hour after 15 years	Ratio after 15 years/ GDP per capita
Mean	22,910	31,366	37,778	38	1.33	24,236	33,345	40,177	47	1.37	25,292	35,691	42,684	54	1.40
Australia	27,493	40,480	40,480	46	1.44	27,394	40,479	40,479	50	1.44	27,394	40,479	40,479	50	1.44
Austria	23,511	31,112	46,540	39	1.08	24,363	33,139	50,071	53	1.15	24,846	34,444	52,294	57	1.19
Belgium (Flemish)	25,731	34,913	41,652	42	1.26	25,731	36,032	43,927	50	1.30	31,924	46,076	55,383	68	1.66
Belgium (French)	24,319	33,334	40,106	47	1.20	24,713	34,874	42,717	48	1.26	30,793	44,854	54,100	68	1.62
Czech Republic	13,558	16,453	20,558	21	1.09	13,558	16,453	20,558	26	1.09	15,476	18,898	23,452	31	1.25
Denmark	31,745	35,809	35,809	56	1.23	31,745	35,809	35,809	56	1.23	30,384	43,063	46,096	77	1.47
England	25,403	39,350	39,350	NA	1.41	25,403	39,350	39,350	NA	1.41	25,403	39,350	39,350	NA	1.41
Finland	26,647	31,687	33,558	46	1.20	30,514	36,552	38,249	61	1.38	32,136	40,482	42,652	73	1.53
France	22,688	30,519	45,031	34	1.12	25,101	32,933	47,562	52	1.21	25,563	33,394	48,070	56	1.23
Germany	36,934	44,671	47,921	57	1.72	38,319	47,166	49,239	64	1.82	41,441	50,805	53,085	74	1.96
Greece	20,906	25,563	31,013	33	1.39	20,906	25,563	31,013	41	1.39	20,906	25,563	31,013	41	1.39
Hungary	7,585	10,412	14,104	13	0.75	7,585	10,412	14,104	17	0.75	8,790	12,851	16,798	21	0.93
Iceland	17,244	19,377	20,346	31	0.68	17,244	19,377	20,346	31	0.68	22,017	27,941	30,551	50	0.99
Ireland	22,980	38,066	43,137	42	1.17	23,767	38,066	43,137	52	1.17	23,767	38,066	43,137	52	1.17
Italy	22,915	27,726	33,575	37	1.08	24,710	30,220	36,906	49	1.18	24,710	31,074	38,604	51	1.22
Japan	23,493	44,345	56,579	72	1.65	23,493	44,345	56,579	86	1.65	23,493	44,372	58,286	99	1.65
Mexico	12,375	16,324	27,039	20	1.77	15,862	20,722	34,181	18	2.25	NA	NA	NA	NA	NA
Netherlands	28,003	35,307	40,406	38	1.22	29,050	38,697	44,388	44	1.33	29,326	51,444	58,913	59	1.77
New Zealand	18,109	35,034	35,034	36	1.61	18,109	35,034	35,034	36	1.61	18,109	35,034	35,034	37	1.61
Norway	26,637	30,533	32,695	43	0.86	26,637	30,533	32,695	48	0.86	26,637	30,533	32,695	61	0.86
Portugal	19,445	31,876	51,829	42	1.73	19,445	31,876	51,829	50	1.73	19,445	31,876	51,829	60	1.73
Scotland	27,789	40,619	40,619	43	1.45	27,789	40,619	40,619	46	1.45	27,789	40,619	40,619	46	1.45
Slovak Republic	5,134	6,611	9,786	9	0.54	5,134	6,611	9,786	10	0.54	5,134	6,611	9,786	11	0.54
South Korea	26,983	46,400	74,672	57	2.73	26,852	46,270	74,541	84	2.72	26,852	46,270	74,541	87	2.72
Spain	28,161	33,521	41,860	38	1.50	31,550	36,930	45,958	65	1.65	32,679	38,067	47,323	70	1.70
Sweden	23,059	27,359	30,162	NA	1.01	23,059	27,359	30,162	NA	1.01	24,544	29,315	31,711	NA	1.08
Switzerland	34,818	46,713	55,304	NA	1.53	41,045	55,431	64,544	NA	1.82	48,704	63,200	74,689	NA	2.08
Turkey	11,214	12,700	14,283	20	1.98	NA	NA	NA	NA	NA	10,273	11,759	13,342	21	1.84
United States	29,513	42,801	52,104	38	1.19	29,525	42,801	51,170	38	1.19	29,641	42,918	51,308	38	1.19

NA = not available

GDP = gross domestic product; OECD = Organisation for Economic Co-operation and Development

NOTES: Statutory salaries refer to salaries set by official pay scales. Converted to equivalent 2002 U.S. dollars using OECD purchasing power parities.

SOURCE: OECD, *Education at a Glance: OECD Indicators 2004* (2004).

Appendix table 1-25

Public school teacher stayers, movers, and leavers who agreed with various statements about their current or former schools: 2000–2001

(Percent)

Statement	Mathematics and science teachers			Other teachers		
	Stayers	Leavers	Movers	Stayers	Leavers	Movers
Satisfaction with salary, benefits, job, and teaching						
<i>I was satisfied with my salary.....</i>	48.3	40.0	38.2	39.7	46.8*	42.4
<i>The school or district offered satisfactory benefits.....</i>	60.6	76.7*	66.4	65.6	69.6	63.8
<i>I was satisfied with the level of job security at the school.....</i>	90.1	80.0	73.8*	82.1	79.4	71.8*
<i>In thinking of all the factors that influenced my satisfaction with teaching in current or last year's school, I was satisfied.....</i>	82.2	63.7*	NA	77.4	62.4*	NA
<i>In thinking of all the factors that influenced my satisfaction with teaching in general, overall, I was satisfied.....</i>	73.6	66.6*	76.1	72.4	70.7	73.5
School safety, climate, and resources						
<i>The school was located in a safe neighborhood.....</i>	88.7	91.4	75.5*	82.0	78.3	73.1*
<i>I felt safe at the school.....</i>	91.5	90.3	76.3*	86.2	85.5	77.6*
<i>The school emphasized academic success.....</i>	84.4	81.0	71.6*	87.5	88.4	75.9*
<i>I received little support from parents.....</i>	35.2	33.0	46.2	36.9	35.0	44.2*
<i>The school received little support from the community.....</i>	24.7	30.0	43.6*	27.3	28.1	37.3*
<i>The professional caliber of the faculty at the school was high.....</i>	89.0	79.9	69.9*	82.9	76.5*	60.1*
<i>The school administrators' behavior toward the staff was supportive and encouraging.....</i>	73.8	60.4	48.6*	68.3	66.3	51.8*
<i>Student behavior was a problem.....</i>	37.2	47.2	57.7	46.6	47.3	56.3*
<i>Resources and materials/equipment for my classroom(s) were sufficiently available.....</i>	62.8	67.2	65.1	62.2	64.5	52.1*
<i>Computers and other technology for my classroom(s) were sufficiently available.....</i>	62.5	38.7*	55.4	56.2	55.2	46.2*
Teaching and instruction						
<i>The procedures for teacher performance evaluation were satisfactory.....</i>	68.3	54.6	68.1	66.6	58.7*	57.5*
<i>I was satisfied with the grade(s) I was assigned to teach.....</i>	94.1	92.0	87.6	91.2	87.3*	81.8*
<i>I was satisfied with the subject(s) I was assigned to teach.....</i>	95.3	92.1	86.7*	93.1	91.4	87.3*
<i>Some of the classes or sections I taught were too large.....</i>	57.4	55.0	55.3	49.0	55.6*	51.3
<i>There was not enough uninterrupted class time available for instruction.....</i>	29.5	23.6	42.8*	37.7	40.1	38.7
Teacher autonomy and professional development						
<i>I was satisfied with the amount of autonomy and control I had over my own classroom.....</i>	91.6	78.2*	73.4*	88.1	83.4*	76.9*
<i>I was pleased with the opportunities for professional development offered to teachers at the school.....</i>	61.0	40.6*	58.4	57.5	58.5	52.4

*p = .05, statistically significant difference between movers and stayers and between leavers and stayers; NA = not available

SOURCES: U.S. Department of Education, National Center for Education Statistics, 1999–2000 School and Staffing Survey; and 2000–01 Teacher Follow-up Survey.

Appendix table 1-26

Student access to and use of computers and Internet at home, and use of both information technology resources at school, by student and family characteristics: 2003

(Percent)

Student and family characteristic	Computer access at home	Computer use at home	Internet access at home	Internet use at home	Computer use at school	Internet use at school
Total	76.6	69.1	67.0	47.4	87.2	46.6
School sector						
Public.....	75.2	67.6	65.3	46.3	87.4	46.7
Private.....	88.6	82.5	82.4	57.0	85.2	46.2
Student grade level						
Elementary (K-6).....	74.1	64.2	64.0	34.5	83.6	33.5
Secondary (7-12).....	79.3	74.5	70.4	61.5	91.1	61.0
Sex						
Male.....	76.2	68.4	66.8	46.4	87.2	45.6
Female.....	77.0	69.9	67.3	48.4	87.2	47.7
Race/ethnicity						
White.....	87.1	80.2	79.5	58.0	89.2	52.9
Black.....	55.3	47.4	42.9	28.4	85.2	38.6
Hispanic.....	57.3	49.2	44.0	27.9	83.3	33.1
Asian/Pacific Islander.....	85.7	75.2	75.0	48.5	81.1	42.7
Other.....	76.7	69.2	65.9	45.8	88.3	48.3
Family income ^a						
Low.....	47.7	39.9	31.8	20.9	83.5	33.5
Middle.....	76.0	68.1	65.6	44.9	86.9	46.0
High.....	94.4	88.3	90.4	68.1	89.8	55.6
Parental education						
No high school completion.....	42.8	35.1	26.8	17.3	80.4	29.2
High school or GED ^b	64.8	56.6	52.8	35.9	86.6	43.0
Some college.....	81.8	73.7	71.2	50.4	88.6	48.4
Bachelor's or higher degree.....	92.6	86.5	88.1	63.9	89.1	54.0

GED = General Educational Development certificate

^aLow income includes families in lowest 20% income distribution, middle income includes middle 60%, and high income includes highest 20%.^bGEDs awarded when applicants pass a set of tests and treated as equivalent to high school diplomas for most purposes.

SOURCE: U.S. Census Bureau, Current Population Survey 2003 (October), School Enrollment and Computer Use Supplement File.

Appendix table 1-27

Third grade students' frequency of accessing Internet and using computers (from teacher reports), by school and teacher characteristics: 2002

(Percent)

School and teacher characteristic	Access Internet			Use computers for other purposes		
	<1 time/week	1-2 times/week	At least 3 times/week	<1 time/week	1-2 times/week	At least 3 times/week
Total	57.8	20.1	22.2	19.7	23.8	56.5
School						
Sector						
Public.....	55.4	20.6	24.0	17.5	23.5	59.1
Private	74.3	16.4	9.4	35.7	26.2	38.1
Community type						
Central city.....	59.5	19.5	20.9	23.2	22.0	54.7
Suburban	56.8	19.7	23.5	19.0	25.7	55.3
Rural.....	57.5	22.1	20.4	16.6	23.4	60.0
Minority enrollment (%)						
<10.....	62.3	20.0	17.7	19.0	24.8	56.2
10-39.9.....	56.3	18.8	24.9	17.5	23.3	59.2
≥40.....	55.0	21.3	23.7	21.9	23.6	54.5
Teacher						
Teaching experience (years)						
≤3.....	58.9	22.0	19.1	23.4	26.4	50.2
4-9.....	57.0	19.3	23.7	22.6	24.2	53.2
≥10.....	58.0	19.8	22.2	17.8	23.0	59.3
Age (years)						
<30.....	60.1	21.4	18.5	22.4	29.2	48.4
30-39.....	52.5	24.3	23.2	19.1	20.9	60.0
40-49.....	57.5	16.7	25.8	20.9	20.7	58.4
≥50.....	60.3	19.1	20.6	18.0	24.9	57.1
Teachers' agreement with statements						
<i>I am adequately prepared to use computers for instruction</i>						
Strongly agree	37.5	24.3	38.1	10.8	17.3	71.9
Agree.....	55.4	20.8	23.8	15.5	23.2	61.3
No opinion	68.3	19.3	12.4	27.3	29.3	43.4
Disagree	71.7	15.9	12.4	30.1	26.7	43.2
<i>I am able to get sufficient support to solve computer problems</i>						
Strongly agree	46.5	22.4	31.1	12.9	20.0	67.1
Agree.....	57.8	20.9	21.3	18.0	24.0	58.0
No opinion	63.9	17.8	18.3	26.1	26.6	47.3
Disagree	64.1	17.9	17.9	25.0	25.4	49.6

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Fall 1998 Kindergartners in Spring 2002.

Appendix table 1-28

Among students with access, those who used computers at home or accessed Internet anywhere for specific tasks, and frequency of Internet use, by student and family characteristics: 2003

(Percent)

Student and family characteristic	Use home computer			Use Internet					Frequency of Internet use		
	Schoolwork	Playing games	E-mail	School assignments	Online course	Purchases	News/sports/weather	Radio/TV/movies	≥1 time/day	≥1 time/week, not daily	<1 time/week
Overall.....	73.6	82.7	48.7	79.6	2.1	13.6	36.9	21.6	42.4	41.1	16.5
School sector											
Public.....	73.7	82.6	48.7	79.8	2.0	13.3	36.8	21.4	42.0	41.4	16.6
Private.....	72.1	83.4	49.0	77.7	2.3	16.4	38.5	23.0	45.8	38.8	15.5
Student grade level											
Elementary (K-6).....	55.4	87.2	26.6	64.0	0.9	5.5	21.4	12.8	27.3	47.7	24.9
Secondary (7-12).....	90.7	78.5	69.7	90.6	2.8	19.4	48.0	27.8	53.1	36.4	10.5
Sex											
Male.....	72.0	84.8	45.4	78.3	2.2	15.6	40.5	21.8	41.7	41.4	17.0
Female.....	75.1	80.5	52.1	80.8	1.9	11.6	33.3	21.3	43.2	40.8	16.0
Race/ethnicity											
White.....	73.3	84.4	52.6	80.2	1.9	15.8	39.2	21.2	44.1	40.4	15.4
Black.....	77.5	82.3	40.2	79.7	2.1	6.4	31.5	24.7	35.3	43.3	21.4
Hispanic.....	72.5	78.1	36.1	75.3	2.8	8.5	30.9	21.5	40.1	42.6	17.2
Asian/Pacific Islander.....	72.4	72.7	47.1	84.0	2.9	16.7	39.6	20.9	47.3	38.7	14.0
Other.....	71.2	80.8	44.7	78.5	0.9	12.3	30.9	18.4	36.3	43.8	19.9
Family income ^a											
Low.....	69.6	80.9	34.8	75.9	2.0	7.4	27.5	18.5	33.9	45.7	20.3
Middle.....	72.4	81.8	46.4	78.3	2.1	11.7	35.0	20.5	41.4	41.2	17.3
High.....	76.6	84.8	56.4	83.1	2.0	19.2	43.5	24.4	47.0	39.3	13.7
Parental education											
No high school completion.....	69.1	77.4	32.0	75.0	3.4	4.7	26.5	17.5	36.5	44.0	19.5
High school or GED ^b	72.6	81.5	44.9	78.3	2.1	9.4	30.9	19.6	38.9	43.2	17.9
Some college.....	73.5	83.6	48.1	79.7	1.8	13.1	35.9	22.1	41.4	42.0	16.6
Bachelor's/higher degree.....	74.8	83.5	53.4	81.2	2.0	17.9	42.9	23.0	46.3	38.7	15.0

GED = General Educational Development certificate

^aLow income includes families in lowest 20% income distribution, middle income includes middle 60%, and high income includes highest 20%.^bGEDs awarded when applicants pass a set of tests and treated as equivalent to high school diplomas for most purposes.

SOURCE: U.S. Census Bureau, Current Population Survey 2003 (October), School Enrollment and Computer Use Supplement File.

Appendix table 1-29

Teachers' familiarity with computers, percentage who spent >32 hours on IT-related training, and percentage who had training that mentioned or focused on various IT-related topics, by teacher characteristics: 2000–01

(Percent)

Teacher characteristic	<i>I am reasonably familiar and comfortable with using computers</i>				Spent >32 hours IT training	Mechanics of IT use		Integrating IT with instruction		Internet use		Creating multimedia presentations	
	Disagree	Neither	Somewhat agree	Strongly agree		Mentioned	Central topic	Mentioned	Central topic	Mentioned	Central topic	Mentioned	Central topic
Overall	18.7	5.9	40.4	35.0	7.2	25.0	26.8	24.3	27.5	24.5	24.9	20.4	13.3
School sector													
Public	18.3	5.7	40.9	35.1	7.7	25.9	28.1	25.4	28.6	25.3	26.1	21.1	13.9
Private	22.2	7.0	36.7	34.2	4.3	18.2	17.5	16.4	19.3	18.6	16.0	15.6	9.2
Main teaching field													
Elementary	16.9	6.1	48.5	28.5	6.9	24.6	26.0	25.0	27.0	24.5	23.0	20.4	12.1
Math/science	13.5	3.3	30.7	52.5	10.8	33.0	23.6	23.3	27.1	24.4	26.6	21.2	12.8
Other	21.0	6.2	36.9	35.9	6.8	23.7	27.9	24.1	27.9	24.5	25.8	20.2	14.2
Teaching experience (years)													
≤3	16.0	4.6	34.0	45.4	7.7	23.6	25.4	22.9	24.9	23.5	21.6	17.7	12.6
4–9	11.9	2.9	41.3	43.9	5.0	23.6	22.7	21.4	26.5	20.7	24.8	19.8	11.0
≥10	22.0	7.3	41.2	29.5	8.1	25.7	28.7	25.7	28.3	26.2	25.5	21.1	14.4
Public school teachers													
Main teaching field													
Elementary	16.0	6.1	49.0	28.8	7.5	25.4	27.5	26.3	27.9	25.9	23.7	21.3	12.6
Math/science	12.9	2.9	30.9	53.2	11.1	36.0	24.2	25.1	27.6	25.5	28.1	22.8	12.7
Other	20.6	6.0	37.5	35.8	7.1	24.5	29.2	24.9	29.3	24.9	27.3	20.6	14.9
Teaching experience (years)													
≤3	16.8	3.9	34.7	44.5	8.4	24.2	27.9	24.1	27.4	24.7	23.2	19.0	13.2
4–9	11.2	2.7	41.6	44.5	5.1	25.6	23.4	22.5	27.8	21.5	26.3	20.5	11.4
≥10	21.3	7.3	41.8	29.7	8.5	26.3	30.0	26.8	29.2	26.9	26.6	21.6	15.0

IT = information technology

SOURCES: U.S. Department of Education, National Center for Education Statistics, 1999–2000 School and Staffing Survey; and 2000–01 Teacher Follow-up Survey.

Science and Engineering Indicators 2006

Appendix table 1-30

Third grade teacher assessments of their preparation to use computers for instruction and of their school's technical support, by school and teacher characteristics: 2002

(Percent)

School and teacher characteristic	<i>I am adequately prepared to use computers for instruction</i>				<i>I am able to get sufficient support to solve computer problems</i>			
	Strongly agree	Agree	No opinion	Disagree	Strongly agree	Agree	No opinion	Disagree
All teachers.....	17.0	45.3	17.8	19.9	18.9	45.8	14.9	20.4
School								
Sector								
Public.....	17.8	46.2	16.8	19.3	18.9	45.5	14.3	21.3
Private.....	12.0	39.4	24.3	24.3	18.8	47.5	19.3	14.4
Community type								
Central city.....	17.7	44.7	17.8	19.8	19.5	44.0	15.6	21.0
Suburban.....	16.8	44.8	18.5	19.9	19.7	44.9	14.9	20.4
Rural.....	16.0	46.5	17.3	20.2	16.2	48.6	14.4	20.7
Minority enrollment (%)								
<10.....	16.2	43.4	18.7	21.6	19.5	45.2	15.5	19.8
10–39.9.....	15.1	47.1	18.9	18.9	17.6	47.3	15.3	19.9
≥40.....	19.4	45.5	16.3	18.8	19.6	45.5	14.1	20.8
Teacher								
Teaching experience (years)								
≤3.....	19.1	45.7	15.6	19.5	22.3	41.3	14.6	21.7
4–9.....	19.0	45.4	18.7	16.8	19.3	43.6	17.3	19.8
≥10.....	15.8	45.2	17.8	21.2	17.9	47.8	14.0	20.3
Age (years)								
<30.....	19.9	45.0	17.7	17.3	22.1	42.4	13.7	21.8
30–39.....	19.3	47.9	16.0	16.8	18.7	45.4	16.3	19.7
40–49.....	16.6	43.5	18.2	21.7	17.4	48.3	15.4	18.9
≥50.....	14.5	44.8	18.4	22.3	18.8	45.5	14.2	21.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Fall 1998 Kindergartners in Spring 2002.

Science and Engineering Indicators 2006

Appendix table 1-31

High school graduates enrolled in college October after completing high school, by sex, race/ethnicity, family income, and institution type: 1973–2003

(Percent)

Year	Total	Sex		Race/ethnicity			Family income ^a			Institution type	
		Male	Female	White	Black	Hispanic	Low	Middle	High	4-year	2-year
1973.....	46.6	50.0	43.4	47.8	32.5	54.1	20.3	40.9	64.4	31.7	14.9
1974.....	47.6	49.4	45.9	47.2	47.2	46.9	NA	NA	NA	32.4	15.2
1975.....	50.7	52.6	49.0	51.1	41.7	58.0	31.2	46.2	64.5	32.6	18.2
1976.....	48.8	47.2	50.3	48.8	44.4	52.7	39.1	40.5	63.0	33.3	15.6
1977.....	50.6	52.1	49.3	50.8	49.5	50.8	27.7	44.2	66.3	33.1	17.5
1978.....	50.1	51.1	49.3	50.5	46.4	42.0	31.4	44.3	64.0	33.1	17.0
1979.....	49.3	50.4	48.4	49.9	46.7	45.0	30.5	43.2	63.2	31.8	17.5
1980.....	49.3	46.7	51.8	49.8	42.7	52.3	32.5	42.5	65.2	29.9	19.4
1981.....	53.9	54.8	53.1	54.9	42.7	52.1	33.6	49.2	67.6	33.5	20.5
1982.....	50.6	49.1	52.0	52.7	35.8	43.2	32.8	41.7	70.9	31.5	19.1
1983.....	52.7	51.9	53.4	55.1	38.2	54.2	34.6	45.2	70.3	33.5	19.2
1984.....	55.2	56.0	54.5	59.0	39.8	44.3	34.5	48.4	74.0	35.8	19.4
1985.....	57.7	58.6	56.8	60.1	42.2	51.0	40.2	50.6	74.6	38.1	19.6
1986.....	53.8	55.8	51.9	56.8	36.9	44.0	33.9	48.5	71.1	34.5	19.3
1987.....	56.8	58.3	55.3	58.6	52.2	33.5	36.9	50.0	73.8	37.9	18.9
1988.....	58.9	57.1	60.7	61.1	44.4	57.1	42.5	54.7	72.8	37.1	21.9
1989.....	59.6	57.6	61.6	60.7	53.4	55.1	48.1	55.4	70.7	38.9	20.7
1990.....	60.1	58.0	62.2	63.0	46.8	42.7	46.7	54.4	76.6	40.0	20.1
1991.....	62.5	57.9	67.1	65.4	46.4	57.2	39.5	58.4	78.2	37.7	24.9
1992.....	61.9	60.0	63.8	64.3	48.2	55.0	40.9	57.0	79.0	38.9	23.0
1993.....	62.6	59.9	65.2	62.9	55.6	62.2	50.4	56.9	79.3	39.8	22.8
1994.....	61.9	60.6	63.2	64.5	50.8	49.1	43.3	57.8	77.9	40.9	21.1
1995.....	61.9	62.6	61.3	64.3	51.2	53.7	34.2	56.1	83.5	40.4	21.5
1996.....	65.0	60.1	69.7	67.4	56.0	50.8	48.6	62.7	78.0	41.9	23.1
1997.....	67.0	63.6	70.3	68.2	58.5	65.6	57.0	60.7	82.2	44.3	22.8
1998.....	65.6	62.4	69.1	68.5	61.9	47.4	46.4	64.7	77.5	41.3	24.4
1999.....	62.9	61.4	64.4	66.3	58.9	42.3	49.4	59.4	76.1	41.9	21.0
2000.....	63.3	59.9	66.2	65.7	54.9	52.9	49.7	59.5	76.9	42.0	21.4
2001.....	61.7	59.7	63.6	64.2	54.6	51.7	43.8	56.3	79.9	42.0	19.7
2002.....	65.2	62.1	68.3	68.9	59.4	53.3	56.4	60.7	78.2	43.5	21.7
2003.....	63.9	61.2	66.5	66.2	57.5	58.6	52.8	57.6	80.1	42.5	21.5

NA = not available

^aLow income includes families in lowest 20% income distribution, middle income includes middle 60%, and high income includes highest 20%.

NOTE: Includes students ages 16–24 years completing high school in survey year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *The Condition of Education 2005*, NCES 2005-094.

Appendix table 1-32

First-time entry rates into postsecondary (tertiary) education for selected OECD countries, by program type and sex: 1998 and 2001

Country	1998						2001					
	Tertiary type A			Tertiary type B			Tertiary type A			Tertiary type B		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Average.....	40	37	43	19	16	22	47	41	51	15	13	16
Australia.....	53	45	61	NA	NA	NA	65	58	72	NA	NA	NA
Austria.....	28	25	31	8	7	9	34	31	37	NA	NA	NA
Belgium.....	28	28	28	27	22	33	32	32	33	36	29	43
Czech Republic.....	22	26	18	13	10	17	30	26	35	7	5	10
Denmark.....	30	29	32	32	23	42	44	33	56	9	12	7
Finland.....	58	49	67	12	9	15	72	62	83	na	na	na
France.....	NA	NA	NA	NA	NA	NA	37	30	43	22	22	21
Germany.....	28	28	28	14	10	17	32	32	33	14	10	19
Hungary.....	45	41	49	NA	NA	NA	56	50	63	3	3	4
Iceland.....	38	29	48	16	13	19	61	43	80	10	11	9
Ireland.....	28	27	30	25	23	26	38	33	43	18	18	19
Italy.....	42	37	47	1	1	1	44	38	50	1	1	2
Japan.....	36	45	27	33	22	45	41	48	33	31	22	41
Mexico.....	21	22	21	NA	NA	NA	26	26	25	2	2	1
Netherlands.....	52	50	54	1	1	1	54	51	58	2	1	2
New Zealand.....	68	56	79	36	28	44	76	62	89	41	34	47
Norway.....	56	45	68	6	6	6	62	48	76	6	7	5
Poland.....	NA	NA	NA	NA	NA	NA	67	NA	NA	1	0	1
Slovak Republic.....	NA	NA	NA	NA	NA	NA	40	40	39	3	2	5
South Korea.....	43	48	37	46	49	43	49	52	45	55	56	54
Spain.....	41	36	46	9	9	9	48	42	54	19	19	19
Sweden.....	59	50	69	NA	NA	NA	69	55	84	6	6	6
Switzerland.....	NA	NA	NA	NA	NA	NA	33	37	29	13	15	12
Turkey.....	20	25	15	11	12	10	20	23	18	10	11	9
United Kingdom.....	48	45	51	27	25	30	45	41	49	29	25	33
United States.....	44	40	48	14	13	15	42	36	49	13	12	15

NA = not available; na = not applicable

OECD = Organisation for Economic Co-operation and Development

NOTES: Tertiary type A programs provide education that is largely theoretical and is intended to provide sufficient qualifications for gaining entry into advanced research programs and professions with high-skill requirements. Entry into these programs normally requires successful completion of upper secondary education (i.e., high school); admission is competitive in most cases. Minimum cumulative theoretical duration at this level is 3 years of full-time enrollment. Tertiary type B programs are typically shorter than tertiary type A programs and focus on practical, technical, or occupational skills for direct entry into labor market, although they may cover some theoretical foundations in respective programs. They have minimum duration of 2 years of full-time enrollment at tertiary level. OECD calculates entry rates by dividing number of first-time entrants of specific age in each type of tertiary program by total population in corresponding age group and then adding results for each single year of age. Entry rates for tertiary type A and B programs cannot be combined to obtain total tertiary-level entry rate because entrants into both types of programs would be counted twice.

SOURCES: OECD, *Education at a Glance: OECD Indicators 2000* (2000); and *Education at a Glance: OECD Indicators 2003* (2003).