

Minnesota student performance relative to international peers in mathematics and science, by subject, grade level, and selected student characteristics: 2007

Minnesota was one of two states (Massachusetts being the other) that participated in the most recently released Trends in International Mathematics and Science Study (TIMSS) in 2007.

The following analysis used the International Data Explorer, a web-based data tool on the NCES website which allows users to produce their own statistical analyses online, to compare the results of Minnesota students with those of their peers around the world in mathematics and science at grades 4 and 8. Results are presented for average scores and percentage of students reaching the highest TIMSS international benchmark (the Advanced International Benchmark) for all students, as well as for the following subgroups of students: boys, girls, language minority students, and immigrant students. For more information about this analysis, see About This Analysis.

Results:

In mathematics at grade 4, five education systems (Hong Kong-China, Singapore, Chinese Taipei, Massachusetts, and Japan) had higher average scores than Minnesota and three (Kazakhstan, Russian Fed., and England-UK) had average scores not measurably different from Minnesota. Three education systems (Singapore, Hong Kong-China, and Chinese Taipei) had higher percentages of fourth-graders reaching the Advanced International Benchmark than Minnesota. Among other grade 4 mathematics results:

-Grade 4 mathematics average scores and percentages of students reaching the Advanced International Benchmark were higher for language minority and immigrant students in Kazakhstan than in Minnesota, though the results for all students were not measurably different for Kazakhstan and Minnesota.

In mathematics at grade 8, six education systems (Chinese Taipei, Rep. of Korea, Singapore, Hong Kong-China, Japan, and Massachusetts) had higher average scores than Minnesota; the same set of education systems also had higher percentages of students reaching the Advanced International Benchmark than Minnesota. Among other grade 8 mathematics results:

-The average mathematics score of Minnesota 8th-grade immigrant students was higher than in all education systems except Singapore, Hong Kong-China, and three Canadian provinces (British Columbia, Ontario, and Quebec).

In science at grade 4, two education systems (Singapore and Massachusetts) had higher average scores than Minnesota students and eight education systems (Chinese Taipei, Hong Kong-China, Japan, Russian Fed., Alberta-Ca., Latvia, England-UK, and the United States as a whole) had average scores that were not measurably different from Minnesota. Singapore was the only education system with a higher percentage of students reaching the Advanced International Benchmark than Minnesota. Among other grade 4 science results:

-In addition to Singapore and Massachusetts, six other education systems (Hong Kong-China, Kazakhstan, Ontario-Ca., Br. Columbia-Ca., Alberta-Ca., and Chinese Taipei) had higher average science scores for 4th-grade immigrant students.



In science at grade 8, five education systems (Singapore, Chinese Taipei, Massachusetts, Japan, and Rep. of Korea) had higher average scores than Minnesota; the same set of education systems, in addition to England-UK, had higher percentages of 8th-graders reaching the Advanced International Benchmark than Minnesota. Among other grade 8 science results:

-Among 8th-grade immigrant students, eight education systems (Singapore, Br. Columbia-Ca., Ontario-Ca., Hong Kong-China, Russian Fed., England-UK, Dubai-UAE, and Czech Rep.) had higher average scores than Minnesota.

About This Analysis

This analysis compares the TIMSS performance of Minnesota students in grades 4 and 8 with the performance of the United States as a whole, other countries and sub-national or non-national education systems that participated in TIMSS 2007, as well as the TIMSS Scale Average.

Comparisons are made on average scores in mathematics and science at grades 4 and 8 and on the percentage reaching the TIMSS Advanced International Benchmark. Those students reaching the Advanced International Benchmark achieved a TIMSS score of 625 or higher.

Comparisons are made for all students, boys, girls, language minority students (students who reported they spoke the language of the test at home "sometimes" or "never," as opposed to those students who reported speaking the test language at home "always" or "almost always"), and immigrant students (students who reported they were born outside of the country).

The TIMSS Scale Average is the mean score of participating countries in the first round of TIMSS (1995). TIMSS anchored its scale average in its first round in order to facilitate comparisons over time.

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About the Data Sources

The Trends in International Mathematics and Science Study (TIMSS) is an international comparative study of the mathematics and science achievement of fourth- and eighth-grade students. For more information on TIMSS, please visit: <http://nces.ed.gov/TIMSS>.

Education systems participating in TIMSS 2007 included:

Grade 4: Alberta-Ca., Algeria, Armenia, Australia, Austria, Br. Columbia-Ca., Chinese Taipei, Colombia, Czech Rep., Denmark, Dubai-UAE, El Salvador, England-UK, Georgia, Germany, Hong Kong-China, Hungary, Islamic Rep. of Iran, Italy, Japan, Kazakhstan, Kuwait, Latvia, Lithuania, Massachusetts-USA, Minnesota-USA, Morocco, Netherlands, New Zealand, Norway, Ontario-Ca., Qatar, Quebec-Ca., Russian Fed., Scotland-UK, Singapore, Slovak Rep., Slovenia, Sweden, Tunisia, Ukraine, USA, Yemen

Grade 8: Algeria, Armenia, Australia, Bahrain, Basque Co.-Sp., Bosnia and Herzegovina, Botswana, Br. Columbia-Ca., Bulgaria, Chinese Taipei, Colombia, Cyprus, Czech Rep., Dubai-UAE, Egypt, El Salvador, England-UK, Georgia, Ghana, Hong Kong-China, Hungary, Indonesia, Islamic Rep. of Iran, Israel, Italy, Japan, Jordan, Rep. of Korea, Kuwait, Lebanon, Lithuania, Malaysia, Malta, Massachusetts-USA, Minnesota-USA, Morocco, Norway, Oman, Ontario-Ca., Palestinian Nat'l Auth., Qatar, Quebec-Ca., Romania, Russian Fed., Saudi Arabia, Scotland-UK, Serbia, Singapore, Slovenia, Sweden, Syrian Arab Rep., Thailand, Tunisia, Turkey, Ukraine, USA

Minnesota student performance in grade 4 mathematics relative to international peers, by selected characteristics: 2007

All students	Students who speak the test language at home			
	Boys (50%)	Girls (50%)	sometimes or never (11%) ¹	Students not born in the country (15%) ¹
Minnesota average scores				
554	557	551	494	492

Education systems higher than Minnesota				
Hong Kong-Ch., Singapore, Ch. Taipei, Massachusetts-USA, Japan	Hong Kong-Ch., Singapore, Ch. Taipei, Massachusetts-USA	Hong Kong-Ch., Singapore, Ch. Taipei, Japan, Massachusetts-USA	Singapore, Hong Kong-Ch., Kazakhstan, Ch. Taipei	Singapore, Hong Kong-Ch., Kazakhstan, Ch. Taipei, Massachusetts-USA

Education systems not measurably different from Minnesota				
Kazakhstan, Russian Fed., England-UK	Japan, Kazakhstan	Kazakhstan, Russian Fed., England-UK, Latvia	Massachusetts-USA, Russian Fed., Latvia, Netherlands, Quebec-Ca., Lithuania, Ontario-Ca., Br. Columbia-Ca., Alberta-Ca., England-UK, USA, Australia, Germany, Armenia, Italy, Ukraine, Denmark, Slovenia, Austria, Sweden	Netherlands, Armenia, Russian Fed., Ontario-Ca., Br. Columbia-Ca., Alberta-Ca., Denmark, Quebec-Ca., England-UK, Australia, Germany, Latvia, Italy, USA, Sweden, New Zealand

Education systems lower than Minnesota				
Latvia, Netherlands, Lithuania, USA, Germany, Denmark, Quebec-Ca., Australia, Ontario-Ca., Hungary, Italy, Austria, Alberta-Ca., Br. Columbia-Ca., Sweden, Slovenia, Armenia, Slovak Rep., Scotland-UK, New Zealand, Czech Rep., Norway, Ukraine, Dubai-UAE, Georgia, Islamic Rep. of Iran, Algeria, Colombia, Morocco, El Salvador, Tunisia, Kuwait, Qatar, Yemen	England-UK, Russian Fed., Netherlands, Latvia, USA, Germany, Lithuania, Denmark, Quebec-Ca., Australia, Ontario-Ca., Italy, Austria, Hungary, Alberta-Ca., Br. Columbia-Ca., Sweden, Slovenia, Slovak Rep., Scotland-UK, Armenia, New Zealand, Czech Rep., Norway, Ukraine, Dubai-UAE, Georgia, Islamic Rep. of Iran, Algeria, Colombia, Morocco, El Salvador, Tunisia, Kuwait, Qatar, Yemen	Netherlands, Lithuania, USA, Denmark, Germany, Quebec-Ca., Australia, Ontario-Ca., Hungary, Armenia, Br. Columbia-Ca., Alberta-Ca., Sweden, Slovenia, Italy, Austria, Slovak Rep., New Zealand, Scotland-UK, Czech Rep., Norway, Ukraine, Dubai-UAE, Georgia, Islamic Rep. of Iran, Algeria, Colombia, Morocco, Tunisia, Kuwait, El Salvador, Qatar, Yemen	Czech Rep., Scotland-UK, New Zealand, Slovak Rep., Norway, Dubai-UAE, Hungary, Georgia, Algeria, Islamic Rep. of Iran, Morocco, Tunisia, Kuwait, Colombia, El Salvador, Qatar, Yemen	Austria, Slovenia, Lithuania, Dubai-UAE, Norway, Czech Rep., Scotland-UK, Hungary, Ukraine, Slovak Rep., Islamic Rep. of Iran, Georgia, Algeria, Colombia, Morocco, El Salvador, Tunisia, Kuwait, Qatar, Yemen

Percentage of Minnesota students reaching the Advanced International Benchmark				
18%	20%	17%	6%	6%

Education systems higher than Minnesota				
Singapore, Hong Kong-Ch., Ch. Taipei	Hong Kong-Ch., Singapore, Ch. Taipei	Singapore, Hong Kong-Ch.	Singapore, Hong Kong-Ch., Kazakhstan, Ch. Taipei	Singapore, Hong Kong-Ch., Kazakhstan

Education systems not measurably different from Minnesota				
Japan, Massachusetts-USA, Kazakhstan, England-UK, Russian Fed.	Massachusetts-USA, Japan, Kazakhstan, England-UK, Russian Fed.	Ch. Taipei, Japan, Kazakhstan, Massachusetts-USA, Russian Fed., England-UK	Russian Fed., Australia, Armenia, Massachusetts-USA, England-UK, Lithuania, Latvia, Italy, Br. Columbia-Ca., Quebec-Ca., Ontario-Ca., New Zealand, Netherlands, USA, Alberta-Ca., Germany, Hungary, Ukraine, Slovak Rep., Denmark, Sweden, Czech Rep.	Armenia, Massachusetts-USA, Ch. Taipei, Australia, England-UK, Br. Columbia-Ca., New Zealand, Russian Fed., Italy, Latvia, Ontario-Ca., USA, Alberta-Ca., Quebec-Ca., Dubai-UAE, Netherlands, Denmark, Hungary, Lithuania, Germany, Slovak Rep., Sweden, Norway

Education systems lower than Minnesota				
Latvia, USA, Lithuania, Hungary, Australia, Armenia, Denmark, Netherlands, Germany, Italy, Quebec-Ca., New Zealand, Slovak Rep., Br. Columbia-Ca., Ontario-Ca., Scotland-UK, Alberta-Ca., Slovenia, Austria, Sweden, Ukraine, Czech Rep., Dubai-UAE, Norway, Georgia, Algeria, Colombia, El Salvador, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Tunisia, Yemen	USA, Latvia, Lithuania, Australia, Hungary, Denmark, Netherlands, Armenia, Germany, Italy, Quebec-Ca., New Zealand, Slovak Rep., Scotland-UK, Ontario-Ca., Br. Columbia-Ca., Slovenia, Alberta-Ca., Austria, Sweden, Czech Rep., Ukraine, Norway, Dubai-UAE, Georgia, Colombia, Algeria, El Salvador, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Tunisia, Yemen	Latvia, Armenia, Lithuania, USA, Hungary, Australia, Denmark, Netherlands, Germany, Quebec-Ca., Italy, New Zealand, Slovak Rep., Br. Columbia-Ca., Ontario-Ca., Scotland-UK, Alberta-Ca., Slovenia, Austria, Ukraine, Sweden, Dubai-UAE, Norway, Georgia, Czech Rep., Algeria, Colombia, El Salvador, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Tunisia, Yemen	Dubai-UAE, Austria, Norway, Georgia, Scotland-UK, Slovenia, Algeria, Colombia, El Salvador, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Tunisia, Yemen	Ukraine, Scotland-UK, Austria, Czech Rep., Algeria, Colombia, El Salvador, Georgia, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Slovenia, Tunisia, Yemen

¹ Scores were not reported for Japan, as reporting standards were not met. NOTE: The TIMSS scale average score is 500 with a standard deviation of 100. In the table, countries' education systems are in order of their respective scores. Countries' education systems participating in TIMSS 2007 at grade 4 include Alberta-Ca., Algeria, Armenia, Australia, Austria, Br. Columbia-Ca., Ch. Taipei, Colombia, Czech Rep., Denmark, Dubai-UAE, El Salvador, England-UK, Georgia, Germany, Hong Kong-Ch., Hungary, Islamic Rep. of Iran, Italy, Japan, Kazakhstan, Kuwait, Latvia, Lithuania, Massachusetts-USA, Minnesota-USA, Morocco, Netherlands, New Zealand, Norway, Ontario-Ca., Qatar, Quebec-Ca., Russian Fed., Scotland-UK, Singapore, Slovak Rep., Slovenia, Sweden, Tunisia, Ukraine, USA, Yemen. SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007.

Minnesota student performance in grade 8 mathematics relative to international peers, by selected characteristics: 2007

All students	Students who speak the test language at home sometimes or never (5%) ¹			Students not born in the country (7%) ²
	Boys (48%)	Girls (52%)		
Minnesota average scores				
532	535	531	488	486
Education systems higher than Minnesota				
Ch. Taipei, Rep. of Korea, Singapore, Hong Kong-Ch., Japan, Massachusetts-USA	Rep. of Korea, Ch. Taipei, Singapore, Japan, Hong Kong-Ch., Massachusetts-USA	Singapore, Ch. Taipei, Rep. of Korea, Hong Kong-Ch., Japan, Massachusetts-USA	Singapore, Rep. of Korea, Ch. Taipei, Br. Columbia-Ca., Quebec-Ca.	Singapore, Hong Kong-Ch., Br. Columbia-Ca., Ontario-Ca., Quebec-Ca.
Education systems not measurably different from Minnesota				
Quebec-Ca.	Quebec-Ca.	Quebec-Ca.	England-UK, Ontario-Ca., Japan, Hong Kong-Ch., Basque Co.-Sp., Russian Fed., Massachusetts-USA, Malaysia, Lithuania, Czech Rep., Armenia, Australia, Malta, USA, Ukraine, Dubai-UAE, Slovenia, Sweden	Armenia, Russian Fed., Australia, Massachusetts-USA, Ch. Taipei, England-UK, Dubai-UAE, Czech Rep., USA, Hungary
Education systems lower than Minnesota				
Ontario-Ca., Hungary, England-UK, Russian Fed., Br. Columbia-Ca., USA, Lithuania, Czech Rep., Slovenia, Armenia, Basque Co.-Sp., Australia, Sweden, Malta, Scotland-UK, Serbia, Italy, Malaysia, Norway, Cyprus, Bulgaria, Israel, Ukraine, Romania, Dubai-UAE, Bosnia and Herzegovina, Lebanon, Thailand, Turkey, Jordan, Tunisia, Georgia, Islamic Rep. of Iran, Bahrain, Indonesia, Syrian Arab Republic, Egypt, Algeria, Morocco, Colombia, Oman, Palestinian Nat'l Auth., Botswana, Kuwait, El Salvador, Saudi Arabia, Ghana, Qatar	Ontario-Ca., Hungary, England-UK, Br. Columbia-Ca., USA, Russian Fed., Australia, Slovenia, Czech Rep., Lithuania, Basque Co.-Sp., Armenia, Sweden, Scotland-UK, Malta, Serbia, Italy, Malaysia, Norway, Israel, Dubai-UAE, Ukraine, Bulgaria, Lebanon, Bosnia and Herzegovina, Cyprus, Romania, Turkey, Tunisia, Thailand, Jordan, Georgia, Syrian Arab Republic, Islamic Rep. of Iran, Colombia, Indonesia, Algeria, Morocco, Egypt, Bahrain, Botswana, El Salvador, Palestinian Nat'l Auth., Oman, Kuwait, Ghana, Saudi Arabia, Qatar	Hungary, Russian Fed., Ontario-Ca., England-UK, Lithuania, USA, Br. Columbia-Ca., Czech Rep., Armenia, Slovenia, Basque Co.-Sp., Sweden, Serbia, Australia, Malta, Scotland-UK, Malaysia, Italy, Cyprus, Norway, Bulgaria, Romania, Ukraine, Israel, Dubai-UAE, Bosnia and Herzegovina, Thailand, Lebanon, Jordan, Turkey, Bahrain, Georgia, Tunisia, Islamic Rep. of Iran, Indonesia, Oman, Egypt, Syrian Arab Republic, Palestinian Nat'l Auth., Algeria, Morocco, Botswana, Colombia, Kuwait, Saudi Arabia, El Salvador, Qatar, Ghana	Scotland-UK, Lebanon, Israel, Norway, Bosnia and Herzegovina, Cyprus, Tunisia, Serbia, Jordan, Thailand, Romania, Bahrain, Bulgaria, Egypt, Indonesia, Georgia, Morocco, Algeria, Syrian Arab Republic, Oman, Islamic Rep. of Iran, Turkey, Palestinian Nat'l Auth., Botswana, Kuwait, Colombia, Saudi Arabia, Ghana, Qatar, El Salvador	Sweden, Serbia, Bosnia and Herzegovina, Italy, Scotland-UK, Basque Co.-Sp., Slovenia, Lithuania, Norway, Israel, Malta, Malaysia, Cyprus, Lebanon, Bulgaria, Tunisia, Turkey, Ukraine, Jordan, Romania, Bahrain, Georgia, Syrian Arab Republic, Egypt, Indonesia, Botswana, Palestinian Nat'l Auth., Kuwait, Morocco, Colombia, Oman, Saudi Arabia, El Salvador, Qatar, Ghana
Percentage of Minnesota students reaching the Advanced International Benchmark				
8%	9%	7%	2%	5%
Education systems higher than Minnesota				
Ch. Taipei, Rep. of Korea, Singapore, Hong Kong-Ch., Japan, Massachusetts-USA	Ch. Taipei, Rep. of Korea, Singapore, Hong Kong-Ch., Japan, Massachusetts-USA	Ch. Taipei, Singapore, Rep. of Korea, Hong Kong-Ch., Japan, Massachusetts-USA	Singapore, Ch. Taipei, Rep. of Korea, Japan, Hong Kong-Ch.	Singapore, Hong Kong-Ch., Ch. Taipei, Br. Columbia-Ca., Ontario-Ca.
Education systems not measurably different from Minnesota				
Hungary, England-UK, Russian Fed., Quebec-Ca., Lithuania, USA, Australia, Ontario-Ca., Armenia, Czech Rep., Turkey, Serbia, Br. Columbia-Ca.	Hungary, England-UK, Quebec-Ca., Russian Fed., Australia, Ontario-Ca., USA, Lithuania, Br. Columbia-Ca., Malta, Czech Rep., Serbia, Armenia, Turkey, Slovenia, Israel	Hungary, Russian Fed., Quebec-Ca., England-UK, Lithuania, Armenia, Czech Rep., USA, Turkey, Serbia, Australia	England-UK, Australia, Ontario-Ca., Quebec-Ca., Br. Columbia-Ca., Massachusetts-USA, Armenia, Lithuania, Malaysia, Malta, Russian Fed., Czech Rep., Ukraine, Dubai-UAE, USA, Scotland-UK, Basque Co.-Sp., Israel, Jordan, Cyprus, Sweden, Bulgaria, Romania, Serbia, Turkey, Slovenia, Egypt, Lebanon, Thailand, Bahrain, Algeria, Bosnia and Herzegovina, Colombia, Botswana, El Salvador, Georgia, Ghana, Indonesia, Islamic Rep. of Iran, Kuwait, Morocco, Norway, Oman, Palestinian Nat'l Auth., Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia	Armenia, England-UK, Australia, Quebec-Ca., Massachusetts-USA, Dubai-UAE, Hungary, Turkey, Russian Fed., Malta, USA, Lithuania, Scotland-UK, Israel, Czech Rep., Serbia, Sweden, Bosnia and Herzegovina, Slovenia, Jordan, Cyprus, Basque Co.-Sp., Bulgaria, Italy, Lebanon, Ukraine, Bahrain, Botswana, Colombia, Egypt, El Salvador, Georgia, Ghana, Indonesia, Kuwait, Malaysia, Morocco, Norway, Oman, Palestinian Nat'l Auth., Qatar, Romania, Saudi Arabia, Syrian Arab Republic, Tunisia
Education systems lower than Minnesota				
Malta, Bulgaria, Slovenia, Israel, Romania, Scotland-UK, Dubai-UAE, Thailand, Ukraine, Italy, Malaysia, Cyprus, Sweden, Basque Co.-Sp., Jordan, Bosnia and Herzegovina, Islamic Rep. of Iran, Lebanon, Georgia, Egypt, Algeria, Bahrain, Botswana, Colombia, El Salvador, Ghana, Indonesia, Kuwait, Morocco, Norway, Oman, Palestinian Nat'l Auth., Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia	Scotland-UK, Bulgaria, Dubai-UAE, Romania, Ukraine, Basque Co.-Sp., Italy, Thailand, Sweden, Cyprus, Malaysia, Bosnia and Herzegovina, Jordan, Lebanon, Islamic Rep. of Iran, Georgia, Colombia, Egypt, Algeria, Bahrain, Botswana, El Salvador, Ghana, Indonesia, Kuwait, Morocco, Norway, Oman, Palestinian Nat'l Auth., Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia	Romania, Ontario-Ca., Bulgaria, Br. Columbia-Ca., Malta, Slovenia, Dubai-UAE, Scotland-UK, Thailand, Israel, Malaysia, Cyprus, Ukraine, Italy, Sweden, Jordan, Basque Co.-Sp., Bosnia and Herzegovina, Islamic Rep. of Iran, Egypt, Georgia, Palestinian Nat'l Auth., Lebanon, Algeria, Bahrain, Botswana, Colombia, El Salvador, Ghana, Indonesia, Kuwait, Morocco, Norway, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia	†	†

† Not applicable. No countries in this category.

¹ Scores were not reported for Hungary and Italy, as reporting standards were not met.

² Scores were not reported for Algeria, Islamic Rep. of Iran, Japan, Rep. of Korea, and Thailand, as reporting standards were not met.

NOTE: The TIMSS scale average score is 500 with a standard deviation of 100. In the table, countries' education systems are in order of their respective scores. Countries' education systems participating in TIMSS 2007 at grade 8 include Algeria, Armenia, Australia, Bahrain, Basque Co.-Sp., Bosnia and Herzegovina, Br. Columbia-Ca., Botswana, Bulgaria, Ch. Taipei, Colombia, Cyprus, Czech Rep., Dubai-UAE, Egypt, El Salvador, England-UK, Georgia, Ghana, Hong Kong-Ch., Hungary, Indonesia, Islamic Rep. of Iran, Israel, Italy, Japan, Jordan, Rep. of Korea, Kuwait, Lebanon, Lithuania, Malaysia, Malta, Massachusetts-USA, Minnesota-USA, Morocco, Norway, Oman, Ontario-Ca., Palestinian Nat'l Auth., Qatar, Quebec-Ca., Romania, Russian Fed., Saudi Arabia, Scotland-UK, Serbia, Singapore, Slovenia, Sweden, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, USA.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007.

Minnesota student performance in grade 4 science relative to international peers, by selected characteristics: 2007

All students	Boys (50%)	Girls (50%)	Students who speak the test language at home	
			sometimes or never (11%) ¹	Students not born in the country (15%) ¹
Minnesota average scores				
551	554	549	485	477
Education systems higher than Minnesota				
Singapore, Massachusetts-USA	Singapore, Massachusetts-USA	Singapore, Massachusetts-USA	Singapore, Kazakhstan, Hong Kong-Ch., Ch. Taipei	Singapore, Hong Kong-Ch., Massachusetts-USA, Kazakhstan, Ontario-Ca., Br. Columbia-Ca., Alberta-Ca., Ch. Taipei
Education systems not measurably different from Minnesota				
Ch. Taipei, Hong Kong-Ch., Japan, Russian Fed., Alberta-Ca., Latvia, England-UK, USA	Ch. Taipei, Hong Kong-Ch., Japan, Alberta-Ca., Russian Fed., Italy, USA, England-UK, Ontario-Ca.	Ch. Taipei, Hong Kong-Ch., Japan, Russian Fed., Latvia, England-UK, Alberta-Ca., Br. Columbia-Ca., USA, Hungary, Kazakhstan	Massachusetts-USA, Russian Fed., Ontario-Ca., Latvia, Alberta-Ca., Br. Columbia-Ca., Lithuania, Quebec-Ca., Netherlands, Italy, England-UK, Ukraine, Armenia, Czech Rep., Australia, USA, Slovenia, Hungary, Sweden, Slovak Rep., Austria, Scotland-UK, Germany, New Zealand, Denmark	Russian Fed., Italy, Armenia, Australia, England-UK, Netherlands, Quebec-Ca., Denmark, Sweden, USA, Latvia, New Zealand, Austria, Germany, Dubai-UAE, Slovenia, Czech Rep., Hungary, Lithuania, Slovak Rep., Islamic Rep. of Iran
Education systems lower than Minnesota				
Br. Columbia-Ca., Hungary, Ontario-Ca., Italy, Kazakhstan, Germany, Australia, Slovak Rep., Austria, Sweden, Netherlands, Slovenia, Quebec-Ca., Denmark, Czech Rep., Lithuania, New Zealand, Scotland-UK, Armenia, Norway, Ukraine, Dubai-UAE, Islamic Rep. of Iran, Georgia, Colombia, El Salvador, Algeria, Kuwait, Tunisia, Morocco, Qatar, Yemen	Latvia, Hungary, Br. Columbia-Ca., Germany, Kazakhstan, Austria, Slovak Rep., Australia, Netherlands, Sweden, Denmark, Slovenia, Czech Rep., Quebec-Ca., Lithuania, New Zealand, Scotland-UK, Norway, Armenia, Ukraine, Dubai-UAE, Islamic Rep. of Iran, Georgia, Colombia, El Salvador, Algeria, Kuwait, Tunisia, Morocco, Qatar, Yemen	Ontario-Ca., Italy, Sweden, Australia, Slovak Rep., Germany, Austria, Slovenia, Netherlands, Lithuania, Quebec-Ca., Denmark, Czech Rep., New Zealand, Scotland-UK, Armenia, Norway, Ukraine, Dubai-UAE, Islamic Rep. of Iran, Georgia, Colombia, El Salvador, Kuwait, Algeria, Tunisia, Qatar, Morocco, Yemen	Dubai-UAE, Norway, Islamic Rep. of Iran, Georgia, Colombia, Kuwait, Algeria, El Salvador, Tunisia, Morocco, Qatar, Yemen	Scotland-UK, Norway, Ukraine, Colombia, Georgia, El Salvador, Algeria, Kuwait, Tunisia, Qatar, Morocco, Yemen
Percentage of Minnesota students reaching the Advanced International Benchmark				
17%	18%	16%	5%	4%
Education systems higher than Minnesota				
Singapore	Singapore	Singapore	Singapore	Singapore, Armenia, Hong Kong-Ch.
Education systems not measurably different from Minnesota				
Massachusetts-USA, Ch. Taipei, Columbia-Ca., Australia, Latvia, Denmark, Slovenia, Quebec-Ca., Dubai-UAE, Scotland-UK, Netherlands, Lithuania, Ukraine, Islamic Rep. of Iran, Colombia, Norway, Georgia, Algeria, El Salvador, Kuwait, Morocco, Qatar, Tunisia, Yemen	Massachusetts-USA, Ch. Taipei, Russian Fed., USA, Hong Kong-Ch., Italy, Hungary, England-UK, Alberta-Ca., Ontario-Ca.	Massachusetts-USA, Ch. Taipei, Russian Fed., England-UK, USA, Armenia, Hong Kong-Ch., Hungary, Japan, Italy, Alberta-Ca., Ontario-Ca.	Kazakhstan, Armenia, Russian Fed., Ontario-Ca., Ch. Taipei, Italy, Br. Columbia-Ca., Massachusetts-USA, Hong Kong-Ch., Alberta-Ca., Australia, Latvia, England-UK, USA, Slovak Rep., Hungary, New Zealand, Quebec-Ca., Lithuania, Ukraine, Dubai-UAE, Czech Rep., Germany, Sweden, Netherlands, Slovenia, Austria, Denmark, Norway, Islamic Rep. of Iran, Morocco, Scotland-UK	Massachusetts-USA, Br. Columbia-Ca., Ontario-Ca., Australia, Russian Fed., England-UK, Alberta-Ca., New Zealand, Ch. Taipei, Italy, Kazakhstan, Dubai-UAE, USA, Sweden, Slovak Rep., Hungary, Latvia, Czech Rep., Denmark, Quebec-Ca., Austria, Islamic Rep. of Iran, Germany, Slovenia, Lithuania, Netherlands, Scotland-UK, Ukraine, Norway, Algeria, Colombia, El Salvador, Georgia, Kuwait, Morocco, Qatar, Tunisia, Yemen
Education systems lower than Minnesota				
Italy, Japan, Alberta-Ca., Armenia, Ontario-Ca., Slovak Rep., Br. Columbia-Ca., Australia, Latvia, Germany, Kazakhstan, Austria, Sweden, New Zealand, Czech Rep., Denmark, Slovenia, Quebec-Ca., Dubai-UAE, Scotland-UK, Netherlands, Lithuania, Ukraine, Islamic Rep. of Iran, Colombia, Norway, Georgia, Algeria, El Salvador, Kuwait, Morocco, Qatar, Tunisia, Yemen	Japan, Australia, Slovak Rep., Germany, Austria, Armenia, Br. Columbia-Ca., Latvia, Kazakhstan, New Zealand, Czech Rep., Sweden, Denmark, Slovenia, Quebec-Ca., Scotland-UK, Netherlands, Dubai-UAE, Lithuania, Ukraine, Islamic Rep. of Iran, Colombia, Norway, Georgia, El Salvador, Algeria, Kuwait, Morocco, Qatar, Tunisia, Yemen	Br. Columbia-Ca., Latvia, Slovak Rep., Kazakhstan, Australia, Sweden, Germany, New Zealand, Austria, Denmark, Slovenia, Czech Rep., Dubai-UAE, Quebec-Ca., Lithuania, Scotland-UK, Netherlands, Ukraine, Islamic Rep. of Iran, Norway, Algeria, Colombia, El Salvador, Georgia, Kuwait, Morocco, Qatar, Tunisia, Yemen	Algeria, Colombia, El Salvador, Georgia, Kuwait, Qatar, Tunisia, Yemen	†

† Not applicable. No countries in this category.

¹ Scores were not reported for Japan, as reporting standards were not met.

NOTE: The TIMSS scale average score is 500 with a standard deviation of 100. In the table, countries' education systems are in order of their respective scores. Countries' education systems participating in TIMSS 2007 at grade 4 include Alberta-Ca., Algeria, Armenia, Australia, Austria, Br. Columbia-Ca., Ch. Taipei, Colombia, Czech Rep., Denmark, Dubai-UAE, El Salvador, England-UK, Georgia, Germany, Hong Kong-Ch., Hungary, Islamic Rep. of Iran, Italy, Japan, Kazakhstan, Kuwait, Latvia, Lithuania, Massachusetts-USA, Minnesota-USA, Morocco, Netherlands, New Zealand, Norway, Ontario-Ca., Qatar, Quebec-Ca., Russian Fed., Scotland-UK, Singapore, Slovak Rep., Slovenia, Sweden, Tunisia, Ukraine, USA, Yemen.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007.

Minnesota student performance in grade 8 science relative to international peers, by selected characteristics: 2007

All students	Students who speak the test language at home sometimes or never (5%) ¹			Students not born in the country (7%) ²
	Boys (48%)	Girls (52%)		
Minnesota average scores				
539	542	535	467	478
Education systems higher than Minnesota				
Singapore, Ch. Taipei, Massachusetts-USA, Japan, Rep. of Korea	Singapore, Ch. Taipei, Massachusetts-USA, Rep. of Korea, Japan	Singapore, Ch. Taipei, Japan, Massachusetts-USA, Rep. of Korea	Singapore, England-UK, Czech Rep., Ch. Taipei, Br. Columbia-Ca., Rep. of Korea, Japan	Singapore, Br. Columbia-Ca., Ontario-Ca., Hong Kong-Ch., Russian Fed., England-UK, Dubai-UAE, Czech Rep.
Education systems not measurably different from Minnesota				
England-UK, Hungary, Czech Rep., Slovenia, Hong Kong-Ch., Russian Fed.	England-UK, Hungary, Czech Rep., Slovenia, Russian Fed., Ontario-Ca., Br. Columbia-Ca., Hong Kong-Ch.	England-UK, Slovenia, Czech Rep., Hungary, Hong Kong-Ch., Russian Fed.	Russian Fed., Ontario-Ca., Basque Co.-Sp., Massachusetts-USA, Lithuania, Quebec-Ca., Slovenia, Ukraine, Dubai-UAE, Australia, USA, Hong Kong-Ch., Jordan, Bahrain, Sweden, Malaysia, Israel, Tunisia, Armenia, Scotland-UK, Malta, Syrian Arab Republic, Bosnia and Herzegovina, Thailand	Australia, Armenia, Massachusetts-USA, Quebec-Ca., Hungary, Slovenia, Ch. Taipei, USA, Sweden, Bosnia and Herzegovina, Italy, Lithuania, Scotland-UK, Basque Co.-Sp., Norway
Education systems lower than Minnesota				
Ontario-Ca., Br. Columbia-Ca., USA, Lithuania, Australia, Sweden, Quebec-Ca., Basque Co.-Sp., Scotland-UK, Italy, Dubai-UAE, Armenia, Norway, Ukraine, Jordan, Malaysia, Thailand, Serbia, Bulgaria, Israel, Bahrain, Bosnia and Herzegovina, Romania, Islamic Rep. of Iran, Malta, Turkey, Syrian Arab Republic, Cyprus, Tunisia, Indonesia, Oman, Georgia, Kuwait, Colombia, Lebanon, Egypt, Algeria, Palestinian Nat'l Auth., Saudi Arabia, Morocco, El Salvador, Botswana, Qatar, Ghana	USA, Australia, Lithuania, Quebec-Ca., Sweden, Basque Co.-Sp., Italy, Scotland-UK, Ukraine, Norway, Armenia, Dubai-UAE, Serbia, Bosnia and Herzegovina, Malaysia, Jordan, Bulgaria, Israel, Thailand, Malta, Romania, Syrian Arab Republic, Tunisia, Islamic Rep. of Iran, Turkey, Cyprus, Bahrain, Colombia, Indonesia, Lebanon, Georgia, Algeria, Morocco, Egypt, El Salvador, Kuwait, Oman, Palestinian Nat'l Auth., Saudi Arabia, Botswana, Ghana, Qatar	Br. Columbia-Ca., Ontario-Ca., Lithuania, USA, Sweden, Australia, Quebec-Ca., Jordan, Bahrain, Dubai-UAE, Scotland-UK, Armenia, Italy, Basque Co.-Sp., Norway, Ukraine, Thailand, Bulgaria, Malaysia, Israel, Serbia, Romania, Islamic Rep. of Iran, Bosnia and Herzegovina, Cyprus, Turkey, Malta, Oman, Syrian Arab Republic, Kuwait, Tunisia, Georgia, Indonesia, Saudi Arabia, Palestinian Nat'l Auth., Egypt, Lebanon, Algeria, Morocco, Colombia, El Salvador, Botswana, Qatar, Ghana	Oman, Norway, Indonesia, Islamic Rep. of Iran, Kuwait, Cyprus, Egypt, Bulgaria, Romania, Lebanon, Serbia, Morocco, Algeria, Saudi Arabia, Palestinian Nat'l Auth., Georgia, Turkey, Colombia, Botswana, El Salvador, Ghana, Qatar	Israel, Serbia, Bahrain, Jordan, Turkey, Cyprus, Bulgaria, Tunisia, Ukraine, Syrian Arab Republic, Malta, Romania, Malaysia, Lebanon, Kuwait, Indonesia, Georgia, Egypt, Oman, Saudi Arabia, Palestinian Nat'l Auth., Colombia, Morocco, El Salvador, Botswana, Qatar, Ghana
Percentage of Minnesota students reaching the Advanced International Benchmark				
11%	12%	9%	1%	5%
Education systems higher than Minnesota				
Singapore, Ch. Taipei, Massachusetts-USA, Japan, England-UK, Rep. of Korea	Singapore, Ch. Taipei, Massachusetts-USA, Rep. of Korea, Japan	Singapore, Ch. Taipei, Massachusetts-USA, Japan, England-UK, Rep. of Korea	Singapore, England-UK, Ch. Taipei, Massachusetts-USA, Ontario-Ca., Rep. of Korea, Malaysia, Malta	Singapore, Armenia, England-UK
Education systems not measurably different from Minnesota				
Hungary, Czech Rep., Slovenia, Russian Fed., Hong Kong-Ch., USA, Armenia, Australia, Lithuania, Ontario-Ca., Br. Columbia-Ca.	England-UK, Hungary, Czech Rep., Slovenia, Russian Fed., Hong Kong-Ch., USA, Australia, Ontario-Ca., Lithuania, Br. Columbia-Ca., Armenia, Dubai-UAE	Czech Rep., Hungary, Slovenia, Russian Fed., Armenia, Hong Kong-Ch., USA, Lithuania, Jordan, Dubai-UAE, Sweden, Ontario-Ca., Australia, Bulgaria	Australia, Japan, Russian Fed., Czech Rep., Br. Columbia-Ca., Quebec-Ca., Israel, Armenia, Jordan, Dubai-UAE, Lithuania, Hong Kong-Ch., Sweden, Ukraine, Basque Co.-Sp., Scotland-UK, USA, Slovenia, Bahrain, Romania, Palestinian Nat'l Auth., Bosnia and Herzegovina, Bulgaria, Thailand, Lebanon, Oman, Egypt, Islamic Rep. of Iran, Turkey, Algeria, Botswana, Colombia, Cyprus, El Salvador, Georgia, Ghana, Indonesia, Kuwait, Morocco, Norway, Qatar, Saudi Arabia, Serbia, Syrian Arab Republic, Tunisia	Australia, Hungary, Br. Columbia-Ca., Dubai-UAE, Ontario-Ca., Massachusetts-USA, Ch. Taipei, Hong Kong-Ch., Russian Fed., Slovenia, Scotland-UK, Czech Rep., Malta, USA, Quebec-Ca., Turkey, Lithuania, Sweden, Jordan, Bahrain, Israel, Italy, Bosnia and Herzegovina, Bulgaria, Basque Co.-Sp., Palestinian Nat'l Auth., Oman, Norway, Cyprus, Ukraine, Serbia, Romania, Lebanon, Botswana, Colombia, Egypt, El Salvador, Georgia, Ghana, Indonesia, Kuwait, Malaysia, Morocco, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia
Education systems lower than Minnesota				
Sweden, Dubai-UAE, Jordan, Malta, Bulgaria, Scotland-UK, Israel, Quebec-Ca., Italy, Turkey, Ukraine, Thailand, Malaysia, Basque Co.-Sp., Islamic Rep. of Iran, Bahrain, Serbia, Romania, Norway, Bosnia and Herzegovina, Cyprus, Palestinian Nat'l Auth., Lebanon, Syrian Arab Republic, Egypt, Oman, Colombia, Algeria, Botswana, El Salvador, Georgia, Ghana, Indonesia, Kuwait, Morocco, Qatar, Saudi Arabia, Tunisia	Sweden, Malta, Scotland-UK, Quebec-Ca., Israel, Bulgaria, Ukraine, Italy, Basque Co.-Sp., Turkey, Jordan, Malaysia, Thailand, Serbia, Norway, Romania, Islamic Rep. of Iran, Bosnia and Herzegovina, Bahrain, Cyprus, Lebanon, Colombia, Syrian Arab Republic, Palestinian Nat'l Auth., Egypt, Algeria, Botswana, El Salvador, Georgia, Ghana, Indonesia, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, Tunisia	Br. Columbia-Ca., Malta, Israel, Scotland-UK, Thailand, Bahrain, Italy, Turkey, Malaysia, Islamic Rep. of Iran, Ukraine, Quebec-Ca., Serbia, Romania, Palestinian Nat'l Auth., Basque Co.-Sp., Norway, Cyprus, Bosnia and Herzegovina, Lebanon, Oman, Egypt, Kuwait, Syrian Arab Republic, Algeria, Botswana, Colombia, El Salvador, Georgia, Ghana, Indonesia, Morocco, Qatar, Saudi Arabia, Tunisia	†	†

† Not applicable. No countries in this category.

¹ Scores were not reported for Hungary and Italy, as reporting standards were not met.

² Scores were not reported for Algeria, Islamic Rep. of Iran, Japan, Rep. of Korea, and Thailand, as reporting standards were not met.

NOTE: The TIMSS scale average score is 500 with a standard deviation of 100. In the table, countries' education systems are in order of their respective scores. Countries' education systems participating in TIMSS 2007 at grade 8 include Algeria, Armenia, Australia, Bahrain, Basque Co.-Sp., Bosnia and Herzegovina, Br. Columbia-Ca., Botswana, Bulgaria, Ch. Taipei, Colombia, Cyprus, Czech Rep., Dubai-UAE, Egypt, El Salvador, England-UK, Georgia, Ghana, Hong Kong-Ch., Hungary, Indonesia, Islamic Rep. of Iran, Israel, Italy, Japan, Jordan, Rep. of Korea, Kuwait, Lebanon, Lithuania, Malaysia, Malta, Massachusetts-USA, Minnesota-USA, Morocco, Norway, Oman, Ontario-Ca., Palestinian Nat'l Auth., Qatar, Quebec-Ca., Romania, Russian Fed., Saudi Arabia, Scotland-UK, Serbia, Singapore, Slovenia, Sweden, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, USA.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2007.