

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

Massachusetts was one of two states (Minnesota 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 Massachusetts 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, two education systems (Hong Kong-China and Singapore) had average scores higher than Massachusetts; they also had higher percentages of students reaching the Advanced International Benchmark. Two education systems (Chinese Taipei and Japan) had average scores not measurably different from Massachusetts; the same two, in addition to Kazakhstan and Minnesota, had percentages of students reaching the Advanced International Benchmark not measurably different from Massachusetts. Among other grade 4 mathematics results:

*-The grade 4 mathematics average score for language minority students was higher in Kazakhstan than in Massachusetts, though Kazakhstan's overall average was lower than in Massachusetts.*

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

*-The grade 8 mathematics average scores for language minority students and immigrant students were higher in British Columbia-Ca. than in Massachusetts, though British Columbia's overall average was lower than in Massachusetts.*

In science at grade 4, Singapore was the only education system with a higher average score or with a higher percentage of students reaching the Advanced International Benchmark than Massachusetts (Singapore was higher on both measures). Among other grade 4 science results:

*-In addition to Singapore, only Kazakhstan had a higher average score than Massachusetts among language minority students and only Hong Kong-China had a higher average score among immigrant students.*



In science at grade 8, no countries had measurably higher average scores than Massachusetts. Singapore, Chinese Taipei, Japan, and the Republic of Korea had average scores not measurably different from Massachusetts. Among other grade 8 science results:

*-Singapore and Chinese Taipei had higher percentages of 8th-graders reaching the Advanced International Benchmark in science than Massachusetts.*

### About This Analysis

This analysis compares the TIMSS performance of Massachusetts 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, and 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

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

All students	Boys (49%)	Girls (51%)	Students who speak the test language at home	Students not born in the country (11%) <sup>1</sup>
			sometimes or never (7%) <sup>1</sup>	
<b>Massachusetts average scores</b>				
572	578	567	530	535
<b>Education systems higher than Massachusetts</b>				
Hong Kong-Ch., Singapore	Hong Kong-Ch., Singapore	Hong Kong-Ch., Singapore	Singapore, Hong Kong-Ch., Kazakhstan	Singapore, Hong Kong-Ch.
<b>Education systems not measurably different from Massachusetts</b>				
Ch. Taipei, Japan	Ch. Taipei, Japan	Ch. Taipei, Japan, Kazakhstan	Ch. Taipei, Russian Fed., Latvia, Netherlands, Quebec-Ca., Lithuania, Minnesota-USA	Kazakhstan, Ch. Taipei
<b>Education systems lower than Massachusetts</b>				
Minnesota-USA, Kazakhstan, Russian Fed., England-UK, 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	Minnesota-USA, Kazakhstan, 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	Minnesota-USA, Russian Fed., England-UK, Latvia, 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	Ontario-Ca., Br. Columbia-Ca., Alberta-Ca., England-UK, USA, Australia, Germany, Armenia, Italy, Ukraine, Denmark, Slovenia, Austria, Sweden, 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	Netherlands, Armenia, Russian Fed., Ontario-Ca., Minnesota-USA, Br. Columbia-Ca., Alberta-Ca., Denmark, Quebec-Ca., England-UK, Australia, Germany, Latvia, Italy, USA, Sweden, New Zealand, 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
<b>Percentage of Massachusetts students reaching the Advanced International Benchmark</b>				
22%	25%	20%	8%	12%
<b>Education systems higher than Massachusetts</b>				
Singapore, Hong Kong-Ch.	Hong Kong-Ch., Singapore	Singapore, Hong Kong-Ch.	Singapore, Hong Kong-Ch.	Singapore, Hong Kong-Ch.
<b>Education systems not measurably different from Massachusetts</b>				
Ch. Taipei, Japan, Kazakhstan, Minnesota-USA	Ch. Taipei, Japan, Minnesota-USA, Kazakhstan	Ch. Taipei, Japan, Kazakhstan, Minnesota-USA, Russian Fed., England-UK	Kazakhstan, Russian Fed., Ch. Taipei, Australia, Armenia, England-UK, Lithuania, Latvia, Italy, Br. Columbia-Ca., Minnesota-USA, Quebec-Ca., Ontario-Ca., New Zealand, Netherlands, USA, Alberta-Ca., Germany, Hungary, Ukraine, Slovak Rep., Denmark, Sweden, Dubai-UAE, Austria, Czech Rep., Norway, Georgia, Scotland-UK, Slovenia, Algeria, Columbia, El Salvador, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Tunisia, Yemen	Kazakhstan, Armenia, Ch. Taipei, Australia, Minnesota-USA, 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
<b>Education systems lower than Massachusetts</b>				
England-UK, Russian Fed., 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	England-UK, Russian Fed., 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	†	Norway, Ukraine, Scotland-UK, Austria, Czech Rep., Algeria, Colombia, El Salvador, Georgia, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Slovenia, Tunisia, Yemen

† Not applicable. No countries in this category.

<sup>1</sup> 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, 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, 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.

**Massachusetts student performance in grade 8 mathematics 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 (8%) <sup>1</sup>	Students not born in the country (9%) <sup>2</sup>
			494	497
<b>Massachusetts average scores</b>				
547	550	544	494	497
<b>Education systems higher than Massachusetts</b>				
Ch. Taipei, Rep. of Korea, Singapore, Hong Kong-Ch., Japan	Rep. of Korea, Ch. Taipei, Singapore, Japan, Hong Kong-Ch.	Singapore, Ch. Taipei, Rep. of Korea, Hong Kong-Ch., Japan	Singapore, Rep. of Korea, Ch. Taipei, Br. Columbia-Ca., Quebec-Ca.	Singapore, Hong Kong-Ch., Br. Columbia-Ca., Ontario-Ca.
<b>Education systems not measurably different from Massachusetts</b>				
†	†	†	England-UK, Ontario-Ca., Japan, Hong Kong-Ch., Basque Co.-Sp., Russian Fed., Malaysia, Minnesota-USA, Lithuania, Czech Rep., Armenia, Australia, Malta	Quebec-Ca., Armenia, Russian Fed., Australia, Ch. Taipei, England-UK, Dubai-UAE, Czech Rep., Minnesota-USA, Hungary
<b>Education systems lower than Massachusetts</b>				
Minnesota-USA, Quebec-Ca., 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 Rep., Egypt, Algeria, Morocco, Colombia, Oman, Palestinian Nat'l Auth., Botswana, Kuwait, El Salvador, Saudi Arabia, Ghana, Qatar	Minnesota-USA, Quebec-Ca., Ontario-Ca., Hungary, England, 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 Rep., Islamic Rep. of Iran, Colombia, Indonesia, Algeria, Morocco, Egypt, Bahrain, Botswana, El Salvador, Palestinian Nat'l Auth., Oman, Kuwait, Ghana, Saudi Arabia, Qatar	Minnesota-USA, Quebec-Ca., 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 Rep., Palestinian Nat'l Auth., Algeria, Morocco, Botswana, Colombia, Kuwait, Saudi Arabia, El Salvador, Qatar, Ghana	USA, Ukraine, Dubai-UAE, Slovenia, Sweden, Scotland-UK, Lebanon, Israel, Norway, Bosnia and Herzegovina, Cyprus, Tunisia, Serbia, Jordan, Thailand, Romania, Bahrain, Bulgaria, Egypt, Indonesia, Georgia, Morocco, Algeria, Syrian Arab Rep., Oman, Islamic Rep. of Iran, Turkey, Palestinian Nat'l Auth., Botswana, Kuwait, Colombia, Saudi Arabia, Ghana, Qatar, El Salvador	USA, 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 Rep., Egypt, Indonesia, Botswana, Palestinian Nat'l Auth., Kuwait, Morocco, Colombia, Oman, Saudi Arabia, El Salvador, Qatar, Ghana
<b>Percentage of Massachusetts students reaching the Advanced International Benchmark</b>				
16%	17%	15%	6%	7%
<b>Education systems higher than Massachusetts</b>				
Ch. Taipei, Rep. of Korea, Singapore, Hong Kong-Ch., Japan	Ch. Taipei, Rep. of Korea, Singapore, Hong Kong-Ch., Japan	Ch. Taipei, Singapore, Rep. of Korea, Hong Kong-Ch., Japan	Singapore, Ch. Taipei, Rep. of Korea, Hong Kong-Ch.	Singapore, Hong Kong-Ch., Ch. Taipei
<b>Education systems not measurably different from Massachusetts</b>				
†	†	†	Japan, England-UK, Australia, Ontario-Ca., Quebec-Ca., Br. Columbia-Ca., Armenia, Lithuania, Malaysia, Malta, Russian Fed., Czech Rep., Ukraine, Dubai-UAE, USA, Minnesota-USA, Scotland-UK, Basque Co.-Sp., Israel, Jordan, Cyprus, Sweden, Bulgaria	Br. Columbia-Ca., Ontario-Ca., Armenia, England-UK, Australia, Quebec-Ca., Dubai-UAE, Hungary, Turkey, Russian Fed., Minnesota-USA, Malta, USA, Lithuania, Scotland-UK, Israel, Czech Rep.
<b>Education systems lower than Massachusetts</b>				
Hungary, England-UK, Russian Fed., Quebec-Ca., Minnesota-USA, Lithuania, USA, Australia, Ontario-Ca., Armenia, Czech Rep., Turkey, Serbia, Br. Columbia-Ca., 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 Rep., Tunisia	Hungary, England-UK, Quebec-Ca., Russian Fed., Minnesota-USA, Australia, Ontario-Ca., USA, Lithuania, Br. Columbia-Ca., Malta, Czech Rep., Serbia, Armenia, Turkey, Slovenia, Israel, 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 Rep., Tunisia	Hungary, Russian Fed., Minnesota-USA, Quebec-Ca., England-UK, Lithuania, Armenia, Czech Rep., USA, Turkey, Serbia, Romania, Ontario-Ca., Bulgaria, Br. Columbia-Ca., Australia, 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, Colombia, El Salvador, Ghana, Indonesia, Kuwait, Morocco, Norway, Oman, Palestinian Nat'l Auth., Qatar, Saudi Arabia, Syrian Arab Rep., Tunisia	Romania, Serbia, Bulgaria, Turkey, Slovenia, Egypt, Lebanon, Thailand, Bahrain, Algeria, Bosnia and Herzegovina, Botswana, Colombia, El Salvador, Georgia, Ghana, Indonesia, Islamic Rep. of Iran, Kuwait, Morocco, Norway, Oman, Palestinian Nat'l Auth., Qatar, Saudi Arabia, Syrian Arab Rep., Tunisia	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 Rep., Tunisia

† Not applicable. No countries in this category.

<sup>1</sup> Scores were not reported for Hungary and Italy, as reporting standards were not met.

<sup>2</sup> 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, Georgia, Ghana, Hong Kong-Ch., Hungary, Indonesia, Islamic Rep. of Iran, Israel, Italy, Japan, Jordan, Rep. of 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, 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.

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

All students	Students who speak the test language at home			Students not born in the country (11%) <sup>1</sup>
	Boys (49%)	Girls (51%)	sometimes or never (7%) <sup>1</sup>	
<b>Massachusetts average scores</b>				
571	576	566	516	521
<b>Education systems higher than Massachusetts</b>				
Singapore	†	Singapore	Singapore, Kazakhstan	Singapore, Hong Kong-Ch.
<b>Education systems not measurably different from Massachusetts</b>				
†	Singapore	†	Hong Kong-Ch., Ch. Taipei, Russian Fed., Ontario-Ca., Latvia, Alberta-Ca., Br. Columbia-Ca., Lithuania, Quebec-Ca., Netherlands, Italy, England-UK, Minnesota-USA, Armenia	Kazakhstan, Ontario-Ca., Br. Columbia-Ca., Alberta-Ca., Ch. Taipei, Russian Fed., Italy, Armenia
<b>Education systems lower than Massachusetts</b>				
Ch. Taipei, Hong Kong-Ch., Minnesota-USA, Japan, Russian Fed., Alberta-Ca., Latvia, England-UK, USA, 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	Ch. Taipei, Hong Kong-Ch., Minnesota-USA, Japan, Alberta-Ca., Russian Fed., Italy, USA, England-UK, Ontario-Ca., 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	Ch. Taipei, Hong Kong-Ch., Minnesota-USA, Japan, Russian Fed., Latvia, England-UK, Alberta-Ca., Br. Columbia-Ca., USA, Hungary, Kazakhstan, 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	Ukraine, Czech Rep., Australia, USA, Slovenia, Hungary, Sweden, Slovak Rep., Austria, Scotland-UK, Germany, New Zealand, Denmark, Dubai-UAE, Norway, Islamic Rep. of Iran, Georgia, Colombia, Kuwait, Algeria, El Salvador, Tunisia, Morocco, Qatar, Yemen	Australia, England-UK, Netherlands, Quebec-Ca., Denmark, Sweden, Minnesota-USA, USA, Latvia, New Zealand, Austria, Germany, Dubai-UAE, Slovenia, Czech Rep., Hungary, Lithuania, Slovak Rep., Islamic Rep. of Iran, Scotland-UK, Norway, Ukraine, Colombia, Georgia, El Salvador, Algeria, Kuwait, Tunisia, Qatar, Morocco, Yemen
<b>Percentage of Massachusetts students reaching the Advanced International Benchmark</b>				
22%	25%	19%	7%	9%
<b>Education systems higher than Massachusetts</b>				
Singapore	Singapore	Singapore	Singapore	Singapore
<b>Education systems not measurably different from Massachusetts</b>				
Ch. Taipei, Minnesota-USA	Ch. Taipei, Minnesota-USA	Ch. Taipei, Minnesota-USA, Russian Fed., England-UK, Armenia	Kazakhstan, Armenia, Russian Fed., Ontario-Ca., Ch. Taipei, Italy, Br. Columbia-Ca., Hong Kong-Ch., Alberta-Ca., Australia, Minnesota-USA, Latvia, England-UK, USA, Slovak Rep., Hungary, New Zealand, Quebec-Ca., Lithuania, Ukraine, Dubai-UAE, Czech Rep., Germany, Sweden, Netherlands, Slovenia, Austria, Denmark, Norway, Algeria, Colombia, El Salvador, Georgia, Islamic Rep. of Iran, Kuwait, Morocco, Qatar, Scotland-UK, Tunisia, Yemen	Armenia, Hong Kong-Ch., Br. Columbia-Ca., Ontario-Ca., Australia, Russian Fed., England-UK, Alberta-Ca., New Zealand, Ch. Taipei, Italy, Kazakhstan, Dubai-UAE, Minnesota-USA, USA, Sweden, Slovak Republic, Hungary, Latvia, Czech Rep., Denmark, Quebec-Ca., Austria, Islamic Rep. of Iran, Germany, Slovenia, Lithuania, Netherlands, Scotland-UK
<b>Education systems lower than Massachusetts</b>				
Russian Fed., USA, England-UK, Hong Kong-Ch., Hungary, 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, Norway, Georgia, Colombia, El Salvador, Kuwait, Morocco, Qatar, Tunisia, Yemen	Russian Fed., USA, Hong Kong-Ch., Italy, Hungary, England-UK, Alberta-Ca., Ontario-Ca., 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	USA, Hong Kong-Ch., Hungary, Japan, Italy, Alberta-Ca., Br. Columbia-Ca., Ontario-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	†	Ukraine, Norway, Algeria, Colombia, El Salvador, Georgia, Kuwait, Morocco, Qatar, Tunisia, Yemen

† Not applicable. No countries in this category.

<sup>1</sup> 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, 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, 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.

**Massachusetts student performance in grade 8 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 (8%) <sup>1</sup>		Students not born in the country (9%) <sup>2</sup>
<b>Massachusetts average scores</b>					
556	561	551	497		495
<b>Education systems higher than Massachusetts</b>					
†	†	Singapore	Singapore		Singapore, Br. Columbia-Ca., Ontario-Ca., Hong Kong-Ch.
<b>Education systems not measurably different from Massachusetts</b>					
Singapore, Ch. Taipei, Japan, Rep. of Korea	Singapore, Ch. Taipei, Rep. of Korea, Japan	Ch. Taipei, Japan, Rep. of Korea, England-UK	England-UK, Czech Rep., Ch. Taipei, Br. Columbia-Ca., Rep. of Korea, Japan, Russian Fed., Ontario-Ca., Basque Co.-Sp., Lithuania, Quebec-Ca., Slovenia, Ukraine, Dubai-UAE, Australia, Hong Kong-Ch., Minnesota-USA		Russian Fed., England-UK, Dubai-UAE, Czech Rep., Australia, Armenia, Quebec-Ca., Hungary, Slovenia, Minnesota-USA, Ch. Taipei
<b>Education systems lower than Massachusetts</b>					
England-UK, Hungary, Czech Rep., Minnesota-USA, Slovenia, Hong Kong-Ch., Russian Fed., 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 Rep., Cyprus, Tunisia, Indonesia, Oman, Georgia, Kuwait, Colombia, Lebanon, Egypt, Algeria, Palestinian Nat'l Auth., Saudi Arabia, Morocco, El Salvador, Botswana, Qatar, Ghana	England-UK, Hungary, Czech Rep., Minnesota-USA, Slovenia, Russian Fed., Ontario-Ca., Br. Columbia-Ca., Hong Kong-Ch., 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 Rep., 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	Slovenia, Minnesota-USA, Czech Rep., Hungary, Hong Kong-Ch., Russian Fed., 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 Rep., Kuwait, Tunisia, Georgia, Indonesia, Saudi Arabia, Palestinian Nat'l Auth., Egypt, Lebanon, Algeria, Morocco, Colombia, El Salvador, Botswana, Qatar, Ghana	USA, Jordan, Bahrain, Sweden, Malaysia, Israel, Tunisia, Armenia, Scotland-UK, Malta, Syrian Arab Rep., Bosnia and Herzegovina, Thailand, 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		USA, Sweden, Bosnia and Herzegovina, Italy, Lithuania, Scotland-UK, Basque Co.-Sp., Norway, Israel, Serbia, Bahrain, Jordan, Turkey, Cyprus, Bulgaria, Tunisia, Ukraine, Syrian Arab Rep., Malta, Romania, Malaysia, Lebanon, Kuwait, Indonesia, Georgia, Egypt, Oman, Saudi Arabia, Palestinian Nat'l Auth., Colombia, Morocco, El Salvador, Botswana, Qatar, Ghana
<b>Percentage of Massachusetts students reaching the Advanced International Benchmark</b>					
20%	22%	17%	10%		8%
<b>Education systems higher than Massachusetts</b>					
Singapore, Ch. Taipei	Singapore, Ch. Taipei	Singapore	Singapore		Singapore
<b>Education systems not measurably different from Massachusetts</b>					
Japan, England-UK, Rep. of Korea	Rep. of Korea, England-UK, Japan	Ch. Taipei, Japan, England-UK, Rep. of Korea	England-UK, Ch. Taipei, Ontario-Ca., Rep. of Korea, Japan, Russian Fed., Czech Rep., Malaysia, Br. Columbia-Ca., Quebec-Ca., Israel, Armenia, Jordan, Dubai-UAE, Malta, Lithuania, Hong Kong-Ch., Sweden, Ukraine, Basque Co.-Sp., Romania		Armenia, England-UK, Australia, Hungary, Br. Columbia-Ca., Dubai-UAE, Ontario-Ca., Ch. Taipei, Hong Kong-Ch., Russian Fed., Slovenia, Minnesota-USA, Scotland-UK, Czech Rep., Malta, USA, Quebec-Ca., Turkey, Lithuania, Sweden, Jordan, Bahrain
<b>Education systems lower than Massachusetts</b>					
Hungary, Czech Rep., Slovenia, Russian Fed., Minnesota-USA, Hong Kong-Ch., USA, Armenia, Australia, Lithuania, Ontario-Ca., Br. Columbia-Ca., Sweden, Dubai-UAE, Jordan, Malta, Bulgaria, Scotland-UK, Israel, Quebec-Ca., Italy, Turkey, Ukraine, Thailand, Malaysia, Basque Co.-Sp., Turkey, Jordan, Malaysia, Islamic Rep. of Iran, Bahrain, Serbia, Romania, Norway, Bosnia and Herzegovina, Cyprus, Palestinian Nat'l Auth., Lebanon, Syrian Arab Rep., Egypt, Oman, Colombia, Tunisia, Indonesia, Georgia, Kuwait, Algeria, Saudi Arabia, Morocco, El Salvador, Botswana, Qatar, Ghana	Hungary, Czech Rep., Minnesota-USA, Slovenia, Russian Fed., Hong Kong-Ch., USA, Australia, Ontario-Ca., Lithuania, Br. Columbia-Ca., Armenia, Sweden, Dubai-UAE, 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 Rep., Palestinian Nat'l Auth., Egypt, Tunisia, Indonesia, Georgia, Algeria, Morocco, El Salvador, Kuwait, Oman, Saudi Arabia, Botswana, Ghana, Qatar	Czech Rep., Hungary, Slovenia, Russian Fed., Minnesota-USA, Armenia, Hong Kong-Ch., USA, Lithuania, Jordan, Dubai-UAE, Sweden, Ontario-Ca., Australia, Br. Columbia-Ca., Bulgaria, 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 Rep., Tunisia, Georgia, Indonesia, Saudi Arabia, Algeria, Morocco, Colombia, El Salvador, Botswana, Qatar, Ghana	Scotland-UK, USA, Slovenia, Bahrain, Minnesota-USA, Palestinian Nat'l Auth., Bosnia and Herzegovina, Bulgaria, Thailand, Lebanon, Oman, Egypt, Islamic Rep. of Iran, Turkey, Tunisia, Syrian Arab Rep., Norway, Indonesia, Kuwait, Cyprus, Serbia, Morocco, Algeria, Saudi Arabia, Georgia, Colombia, Botswana, El Salvador, Ghana, Qatar		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 Rep., Tunisia

† Not applicable. No countries in this category.

<sup>1</sup> Scores were not reported for Hungary and Italy, as reporting standards were not met.

<sup>2</sup> 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, 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, 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.