TIMMS 2011 Selected Data Relevant to US and CT (CT was an 8th Grade Benchmark)

Exhibit 1.1: Distribution of Mathematics Achievement

TIMSS 2011 Mathematics 4th Grade

Country	Average Scale Score
[2] Singapore	606 (3.2) ▲
Korea, Rep. of	605 (1.9) ▲
[2] Hong Kong SAR	602 (3.4) ▲
Chinese Taipei	591 (2.0) ▲
Japan	585 (1.7) ▲
† Northern Ireland	562 (2.9) ▲
Belgium (Flemish)	549 (1.9) ▲
Finland	545 (2.3) ▲
England	542 (3.5) ▲
Russian Federation	542 (3.7) ▲
[2] United States	541 (1.8) ▲
† Netherlands	540 (1.7) ▲
[2] Denmark	537 (2.6) ▲
[1 2] Lithuania	534 (2.4) ▲
Portugal	532 (3.4) ▲
Germany	528 (2.2) ▲
Ireland	527 (2.6) ▲
[2] Serbia	516 (3.0) ▲
Australia	516 (2.9) ▲
Hungary	515 (3.4) ▲
Slovenia	513 (2.2) ▲
Czech Republic	511 (2.4) ▲
Austria	508 (2.6) ▲
Italy	508 (2.6) ▲
Slovak Republic	507 (3.8)
Sweden	504 (2.0)
[2] Kazakhstan	501 (4.5)
TIMSS Scale Centerpoint	500

Mathematics Achievement Distribution

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Exhibit 1.2: Distribution of Mathematics Achievement

TIMSS 2011 Mathematics 8th Grade

Country	Average Scale Score
Korea, Rep. of	613 (2.9) ▲
[2] Singapore	611 (3.8) ▲
Chinese Taipei	609 (3.2) ▲
Hong Kong SAR	586 (3.8) ▲
Japan	570 (2.6) ▲
[2] Russian Federation	539 (3.6) ▲
[3] Israel	516 (4.1) ▲
Finland	514 (2.5) ▲
[2] United States	509 (2.6) ▲
‡ England	507 (5.5)
Hungary	505 (3.5)
Australia	505 (5.1)
Slovenia	505 (2.2) ▲
[1] Lithuania	502 (2.5)
TIMSS Scale Centerpoint	500

Mathematics Achievement Distribution

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Exhibit 1.2: Distribution of Mathematics Achievement (Continued)

TIMSS 2011 Mathematics 8th Grade

Country	Average Scale Score
Benchmarking Participants	
[1 2] Massachusetts, US	561 (5.3) ▲
[1] Minnesota, US	545 (4.6) ▲
[1 3] North Carolina, US	537 (6.8) ▲
Quebec, Canada	532 (2.3) ▲
[1 2] Indiana, US	522 (5.1) ▲
[1] Colorado, US	518 (4.9) ▲
[1 2] Connecticut, US	518 (4.8) ▲
[1 2] Florida, US	513 (6.4) ▲
[2] Ontario, Canada	512 (2.5) ▲
[2] Alberta, Canada	505 (2.6)
[1 2] California, US	493 (4.9)
Dubai, UAE	478 (2.1) ▼
[1] Alabama, US	466 (5.9) ▼
Abu Dhabi, UAE	449 (3.7) ▼

Mathematics Achievement Distribution

100 200 300 400 500 600 700 800

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

▲ Country average significantly higher than the centerpoint of the TIMSS 8th grade scale

▼ Country average significantly lower than the centerpoint of the TIMSS 8th grade scale

Percentiles of Performance
5th 25th 75th 95th
95% Confidence Interval for Average (±2SE)

Exhibit 1.5: Trends in Mathematics Achievement (Continued)

TIMSS 2011 Mathematics 4th Grade

Instructions: Read across the row to determine if the performance in the row year is significantly higher (▲) or significantly lower (▼) than the performance in the column year.

Country	Average Scale Score	Differences Between Years			Mathematics Achievement Distribution
		2007	2003	1995	
United States					
2 2011	541 (1.8)	12 ▲	22 ▲	23 ▲	
2 1 2007	529 (2.4)		11 ▲	11 ▲	
1 2003	518 (2.4)			0	
1995	518 (2.9)				

Exhibit 1.6: Trends in Mathematics Achievement (Continued)

TIMSS 2011 Mathematics 8th Grade

Instructions: Read across the row to determine if the performance in the row year is significantly higher (▲) or significantly lower (▼) than the performance in the column year.

Country	Average Scale Score	Differences Between Years				Mathematics Achievement Distribution
		2007	2003	1999	1995	
United States						
2 2011	509 (2.6)	1	5	8	17 ▲	
2 1 2007	508 (2.8)		4	7	16 ▲	
1 2003	504 (3.3)			3	12 ▲	
1999	502 (4.0)				9	
1 1995	492 (4.7)					
Benchmarking Participants						
Connecticut, US						
1 2011	518 (4.8)			5		
1999	512 (9.1)					

▲ Country average significantly higher than the centerpoint of the TIMSS 8th grade scale

▼ Country average significantly lower than the centerpoint of the TIMSS 8th grade scale

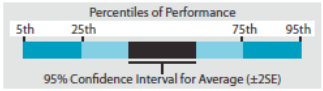


Exhibit 1.7: Trends in Mathematics Achievement – 1995 Through 2011*

TIMSS 2011 Mathematics 4th Grade

Includes only 2011 participants with comparable long term trend data beginning in 1995, ordered by most to least improvement in average achievement. Exhibit 1.5 provides details including statistical significance.

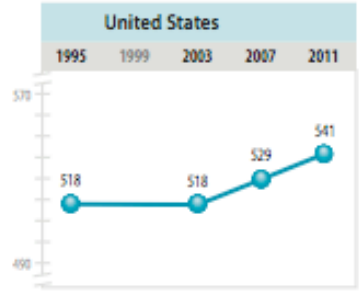
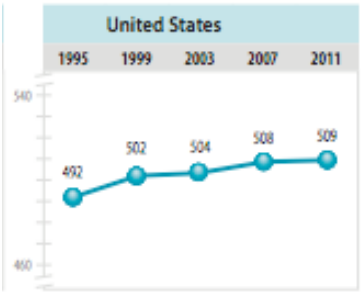


Exhibit 1.8: Trends in Mathematics Achievement – 1995 Through 2011

TIMSS 2011 Mathematics 8th Grade

Includes only 2011 participants with comparable long term trend data beginning in either 1995 or 1999, ordered by most to least improvement in average achievement. Exhibit 1.6 provides details including statistical significance.



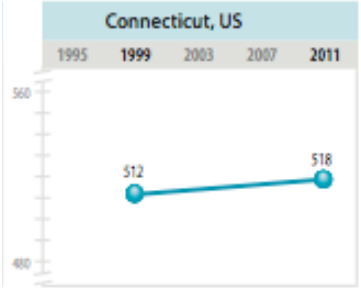


Exhibit 1.12: Trends in Mathematics Achievement by Gender[3] (Continued)

TIMSS 2011 Mathematics 4th Grade

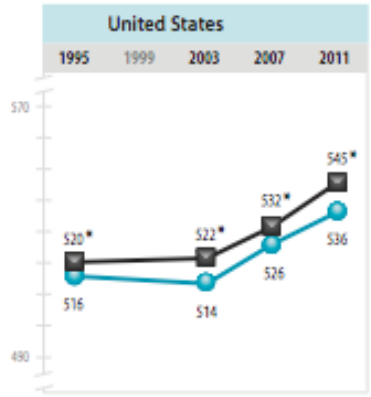


Exhibit 1.13: Trends in Mathematics Achievement by Gender (Continued)

TIMSS 2011 Mathematics 8th Grade