

2011 Trends in International Mathematics & Science Study (TIMSS) Summary Results

Embargoed until 4 am on December 12, 2012

2011 TIMSS Mathematics & Science Results Released

Trend in International Mathematics and Science Study (TIMSS)

Mathematics

- Colorado's math average is 518
- Ten countries/education systems scored better than Colorado: Korea, Rep., *Massachusetts-USA*, Singapore, *Minnesota-USA*, *Chinese Taipei-CHN*, Russian Federation, *Hong Kong-CHN*, *North Carolina-USA*, Japan, *Quebec-CAN*
- Nine countries/education systems scored the same as Colorado
- Thirty-six countries/education systems scored lower than Colorado
 - The United States had a score of 509 which is lower than Colorado
- Colorado is one of 16 systems that had higher percentages of 8th-graders reaching *Advanced* in math than the United States. Colorado had 8 percent v. the U.S. had 7 percent.
- Colorado scored significantly higher than TIMSS math average (500) for males, females, whites and Asians, the same for blacks and lower for Hispanics
 - Males = 520
 - Females = 516
 - Whites = 544
 - Asians = 545
 - Blacks = 487
 - Hispanics = 480
- Colorado scored higher than the United States for Whites, Blacks and multiracial but lower for Hispanics and Asians

	Colorado Scores	U.S. scores
Whites	544	530
Blacks	487	465
Hispanics	480	485
Multiracial	522	513
Asians	480	485



- Colorado scored higher than TIMSS average (500) for students in schools with 49% or less free/reduced lunch (FRL) but lower for those in schools with 75% or more free/reduced lunch
 - 0 to 9% = 507
 - 10 to 24 % = 547
 - 25 to 49 % = 534
 - 50 to 74% = 491
 - 75 % plus = 460

Science

- Colorado's science average is 542
- Six countries/education systems scored better than Colorado: Singapore, Korea, Rep., *Massachusetts-USA*, Japan, *Chinese Taipei-CHN*, Finland
- Ten countries/education systems scored the same as Colorado
- Thirty-nine countries/education systems scored lower than Colorado
 - The United States had a score of 525 which is lower than Colorado
- Colorado's average science score (542) is in the top 3rd of all education systems
- Colorado is one of 18 systems that had higher percentages of grade 8 reaching *Advanced* in science than the United States. Colorado had 14 percent v. the U.S. had 10 percent.
- Colorado scored higher than TIMSS science average (500) for males, females, whites, Asians, and multiracial and significantly the same for blacks and Hispanics
 - Males = 548
 - Females = 537
 - Whites = 572
 - Asians = 549
 - Multiracial = 552
 - Blacks = 507
 - Hispanics = 499
- Colorado scored higher than the United States for Whites, Blacks, Hispanics, and multiracial but lower for Asians.

	Colorado Scores	U.S. scores
Whites	572	553
Blacks	507	470
Hispanics	499	493
Multiracial	552	534
Asians	549	556

- Colorado scored higher than TIMSS average (500) for students in schools with 49% or less free/reduced lunch (FRL) and significantly the same for those in schools with 50% or more free/reduced lunch
 - 0 to 9% = 534
 - 10 to 24 % = 568
 - 25 to 49 % = 560
 - 50 to 74% = 514
 - 75 % plus = 486

Noteworthy Grade 8 2011 TIMSS Math Results

- Colorado is one of 16 systems that had higher percentages of 8th-graders reaching the *Advanced* TIMSS international math benchmark than the U.S. in math
- Thirty-six countries/education systems scored lower than Colorado in math
- Colorado scored higher than the TIMSS math average for males, females, Whites, Asians and multiracial but lower for Blacks and Hispanics

Noteworthy Grade 8 2011 TIMSS Science Results

- Colorado's average science score (542) is in the top 3rd of all education systems
- Colorado is one of 18 systems that had higher percentages of 8th-graders reaching the *Advanced* TIMSS international science benchmark than the U.S.
- Thirty-nine countries/education systems scored lower than Colorado in science
- Colorado scored higher than the TIMSS science average for students in schools with 74% or less FRL but lower for those in schools with 75% or more FRL

Next Tests

TIMSS is scheduled to be given again in 2015. It is not known at this time if Colorado will participate as an education system to be compared with countries.

The next NAEP Math tests will be given in grades 4 and 8 in 2013 with the results being released late fall of 2013. The next NAEP Science Results will be given in grades 4 and 8 in 2015 with the results being released late fall of 2015.

Background

- Developed by the TIMSS & PIRLS International Study Center at Boston College, under contract to the International Association for the Evaluation of Educational Achievement (IEA)
- Colorado was one of eight states selected to participate in the 2011 Trends in International Mathematics and Science Study (TIMSS) testing that was paid for by the National Center for Education Statistics (NCES) under the U.S. Department of Education (Florida also participated but paid with their own funds)
- Colorado students are being compared with the performance of students in 55 countries/education systems
- Given to 8th graders in 38 countries and 18 education systems (nine of the systems are in the U.S.: Alabama, California, Colorado, Connecticut, Florida, Indiana, Massachusetts, Minnesota, North Carolina)



- Worldwide: 9,304 schools to 279,000 students
- Colorado: 53 schools to 2,167 students for international comparison
- Colorado: 10 schools to 500 students for U. S. sample
- Administered in CO April 4 – May 27, 2011
 - Two math classes at each school
 - Two blocks of math & two blocks of science for each student
 - 90 minutes of items followed by a student questionnaire

Scoring

- Average Scale Score is reported 0 -1000
 - Advanced = 625
 - High = 550
 - Intermediate = 475
 - Low = 400
- TIMSS Average is 500
- Test items are multiple choice and constructed response

