

Distribution Dec. 4, 2024 (Wed), 08:30

Publication (Online) Dec. 4, 2024 (Wed), 18:00
(Print) Dec. 4, 2024 (Wed), 18:00

Trends in International Mathematics and Science Study (TIMSS) 2023 Results Announced

- Korean fourth graders ranked 3rd in math, and 2nd in science among 58 countries surveyed, while eighth-graders ranked 3rd in math and 4th in science among 44 countries surveyed.
- Their overall attitudes toward math and science have improved, including interest and confidence.

The International Association for the Evaluation of Educational Achievement officially released the results of the Trends in International Mathematics and Science Study (TIMSS) 2023 on December 4, 2024.

The Trends in International Mathematics and Science Study, TIMSS, is an assessment of mathematics and science achievement among fourth-grade and eighth-grade students in elementary and middle school, with a goal of comparing results and trends internationally and understanding their relationship to educational contextual variables.

The assessment has been conducted in four-year cycles since 1995. In the 2023 cycle, 12,016 schools and 359,098 students from 59* countries (and six regions) participated at the primary school level, and 8,786 schools and 297,262 students from 44 countries (and three regions) participated at the secondary school level. In Korea, 8,612 students from 332 schools participated (4,355 students from 156 elementary schools and 4,257 students from 176 middle schools).

< Key Findings in Korea >

Korean fourth-grade students ranked 3rd in math (594 points) and 2nd in

science (583 points) among 58 countries*, and Korean eighth-grade students ranked 3rd in math (596 points) and 4th in science (545 points) among 44 countries, maintaining the same ranking as the previous cycle.

*Participating countries that do not meet international comparison conditions (e.g. low sample size) are excluded from the international report results tables.

< Korea's TIMSS 2023 Results >

Country	Fourth-graders				Eighth-graders			
	Math		Science		Math		Science	
	Score	Ranking (No. of countries surveyed)	Score	Ranking (No. of countries surveyed)	Score	Ranking (No. of countries surveyed)	Score	Ranking (No. of countries surveyed)
Korea	594	3(58)	583	2(58)	596	3(44)	545	4(44)
International average	503		494		478		478	

* TIMSS 2019 does not produce international average scores, so average scores are not directly comparable.

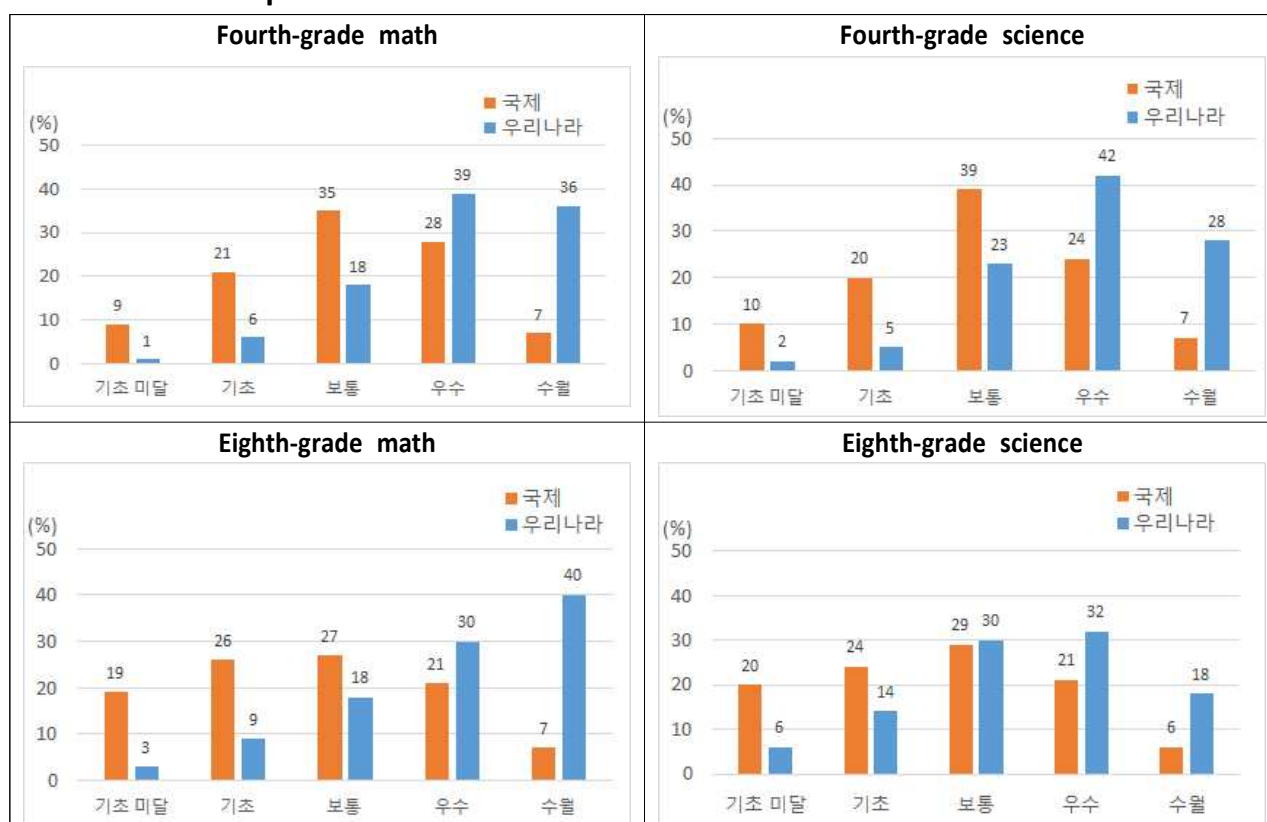
Boys' mean scores were higher than girls' in both math and science at both the fourth-grade and eighth-grade levels, with a larger difference observed at the fourth-grade level than at the eighth-grade level.

*Gender score difference (boys to girls): Fourth-grade math (17 points), science (15 points), eighth-grade math (6 points), science (5 points)

When looking at the proportion of students by achievement level, Korea is above the international average* for the proportion of students scoring at or above the Proficient level in math and science at both the fourth-level and eighth-level, and below the international average for the proportion of students scoring at or below the Basic level, while the international distribution had the highest proportion of students at the Proficient level, Korea had the highest proportion of students at the Advanced or Higher level.

* The most centered value when values are listed in order of size

< Comparison of Korean and International Achievement Levels >



Meanwhile, key findings from a companion survey aimed at identifying educational contextual variables related to math and science achievement include:

Korean fourth-grade students' interest in math and science remained stable compared to the previous cycle, but their confidence increased. Eighth-grade students' interest, confidence, and perceived value of math and science all increased compared to 2019. However, the proportion of Korean students using the internet for school work in math or science was lower than the international average, and student perceptions of teachers' instruction clarity* were higher than the international average for both math and science.

※ **Fourth-graders'** interest in math (8.9→8.9), confidence in math (9.2→9.7); interest in science (9.5→9.5), confidence in science (9.1→9.8)

Eighth-graders' interest in math (9.0→9.5), confidence in math (9.5→9.6), perceived value (8.5→8.9); interest in science (8.7→9.3), confidence in science (8.9→9.0), perceived value (9.1→9.4)

* Students' perception of teachers' ability to clearly explain and help them understand instructional content

< Implications of 2023 Results >

Korean students continued to perform at the top international performance levels in math and science, as in previous cycles. Their defining attitudes (interest, confidence, and perceived value) were maintained or improved compared to previous cycles.

Based on these results, the Ministry of Education will continue to promote policies such as customized education using AI digital textbooks, expanding fun and inquiry-based classes linked to knowledge, and strengthening student-led inquiry activities that foster thinking and problem-solving skills, in order to maintain top achievement levels and continue to improve their attitudes towards math and science.

Contact Point	Responsible Public Education Policy Bureau	Director	Yoo Huiseung	(044-203-6730)
	Basic Academic Skills and Career Education Division	Deputy Director	Yang Jong-hun	(044-203-6742)
	KICE	Head	Si Kija	(043-931-0372)
	International Academic Achievement Evaluation	Deputy Head	Seo Minhui	(043-931-0314)