TIMSS 2023 STUDY

South Africa has been participating in the Trends in International Mathematics and Science Study (TIMSS) since 1995.

GRADE 9 SAMPLE

SCHOOLS

EC

33

KZN

33

FS

30

GT

45

wc

LP

33

Grade 9 learners from 300 schools were sampled

NC

30

MF 31

NW

31

GRADE 5 PERFORMANCE In 2023 TIMSS Grade 5 learners achieved scores of 362 in Mathematics and 308 in Science showing marginal declines from TIMSS 2019.

2019

The 2023 TIMSS was conducted by the Department of Basic Education with

technical support from the International Association for the Evaluation of Educational Assessment (IEA), assessing Mathematics and Science performance

in Grades 5 and 9.

Grade 5 learners from

303

schools

the 2023 study

outh Africa Grade 5 and 9

400

9380 9300 360

300

303 schools took part in

GRADE 5

₩Ħ

LEARNING GAINS

- South Africa in Mathematics Grade 9, with a score of 397, outperformed Jordan (388), Palestine (383), Brazil (378), Morocco (378) and Côte d'Ivoire (263).
- In Grade 9 Science, South Africa scored 362, surpassing other African
- countries, Morocco's 327, and Côte d'Ivoire's 183. The Grade 9 Mathematics score increased from 389 in 2019 to 397 in 2023,
- reflecting an improvement in performance over the four years and a decade of upward trend since 2011 The presence of a small but significant group of learners achieving at the
- Advanced and High benchmark levels serves as a testament to the existence of effective educational practices and strategies within the system.
- Despite the challenges of school closures, reduced instructional time, and remote learning, Grade 9 Science scores remained relatively stable, contrary to expectations of a significant decline. This stability reflects the resilience of the education system, driven by the dedication of teachers, the resourcefulness of schools, and strong community support.

LEARNING GAPS

- Socioeconomic Status (SES): Learners from higher SES backgrounds (home and school) outperform those from lower SES backgrounds by a significant margin. Language of Learning and Teaching (LOLT): Learners who frequently use the LOLT at home perform significantly better. Gender Disparities: Girls outperformed boys in both mathematics and science,

- School Resources: Learners in well-resourced schools perform better. Teacher Training and Practices: Teaching practices and teacher support vary across provinces which directly influence learning outcomes. Equity in Resource Distribution: Disparities in resource allocation across

RECOMMENDATIONS

- Effective implementation of Assessment for Learning (AfL): AfL can be used by teachers to effectively diagnose, support and remediate learning in their classrooms
- Support for Underperforming Provinces: Prioritise underperforming provinces by providing additional teacher training, learning materials, and infrastructural
- Professional Development Programs: Enhance professional development
- initiatives focusing on proficiency levels designed for mathematics and science. Learners not taught in the Mother Tongue: Provide bilingual learning materials and teacher training to better support learners for whom English or Afrikaans is not their home language.
- Gender Disparity Interventions: Develop targeted programs to boost boys' interest and confidence in STEM subjects.

About TIMSS

The Trends in International Mathematics and Science Study (TIMSS) is an assessment of the mathematics and science knowledge of fourth and eighth grade learners around the world. In South Africa, the assessment is conducted among grade 5 and grade 9 learners in public and independent schools.

The International Association for the Evaluation of Educational Achievement (IEA) developed TIMSS to allow participating nations to monitor their educational achievements, and how they change over time, as well as compare learners' educational achievement across borders in the key subjects of mathematics and science.

In addition to achievement data. TIMSS collects contextual information about the home. school and classroom to explain learner achievements, and this provides reliable information for reporting on the strategic outcomes of the Department.

South Africa's participation in international benchmark studies is managed by the National Assessment directorate, which is located in the Branch dealing with Curriculum Policy, Support and Monitoring.





Reading Nation is a Leading Nation

5%

14%

43%







2015

Grade 5 Mathematics

Globally, 59 countries and 6 benchmarking entities took part in the Grade 4 assessment, while 44 countries and 3 benchmarking entities participated at the Grade 8 level. Among African nations, only Côte d'Ivoire, Morocco, and South Africa were involved in TIMSS 2023. South Africa was the best performing country among African participants.

GRADE 5 PERFORMANCE

Maths	Benchmark	Science	Math
2%	Advanced Benchmark (625)	2%	1%
7%	High Benchmark (550)	6%	4%
16%	Intermediate Benchmark (475)	17%	15%
28%	Low Benchmark (400)	35%	45%

remarkable upward trend in Mathematics since TIMSS 2011

2011 ***

and a marginal decline in

aths Benchmark Science 1% Advanced Benchmark (625) 1%

High Benchmark (550)

ntermediate Benchmark (475)

Low Benchmark (400)

GRADE 9 2023 *** * * * * * * * ***

-Grade 5 Science