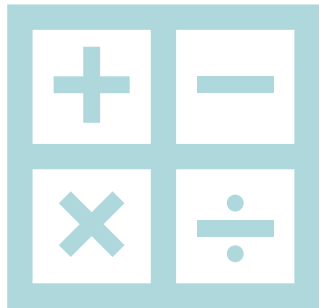
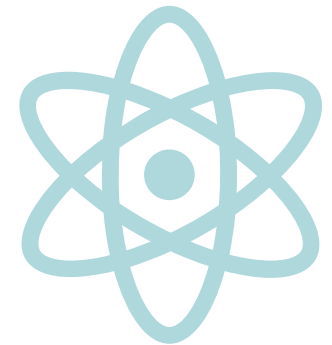


# TIMSS 2027

## Progress Report



**Matthias von Davier**  
TIMSS & PIRLS International Study Center



**IEA General Assembly**  
September 30, 2024

# TIMSS 2027

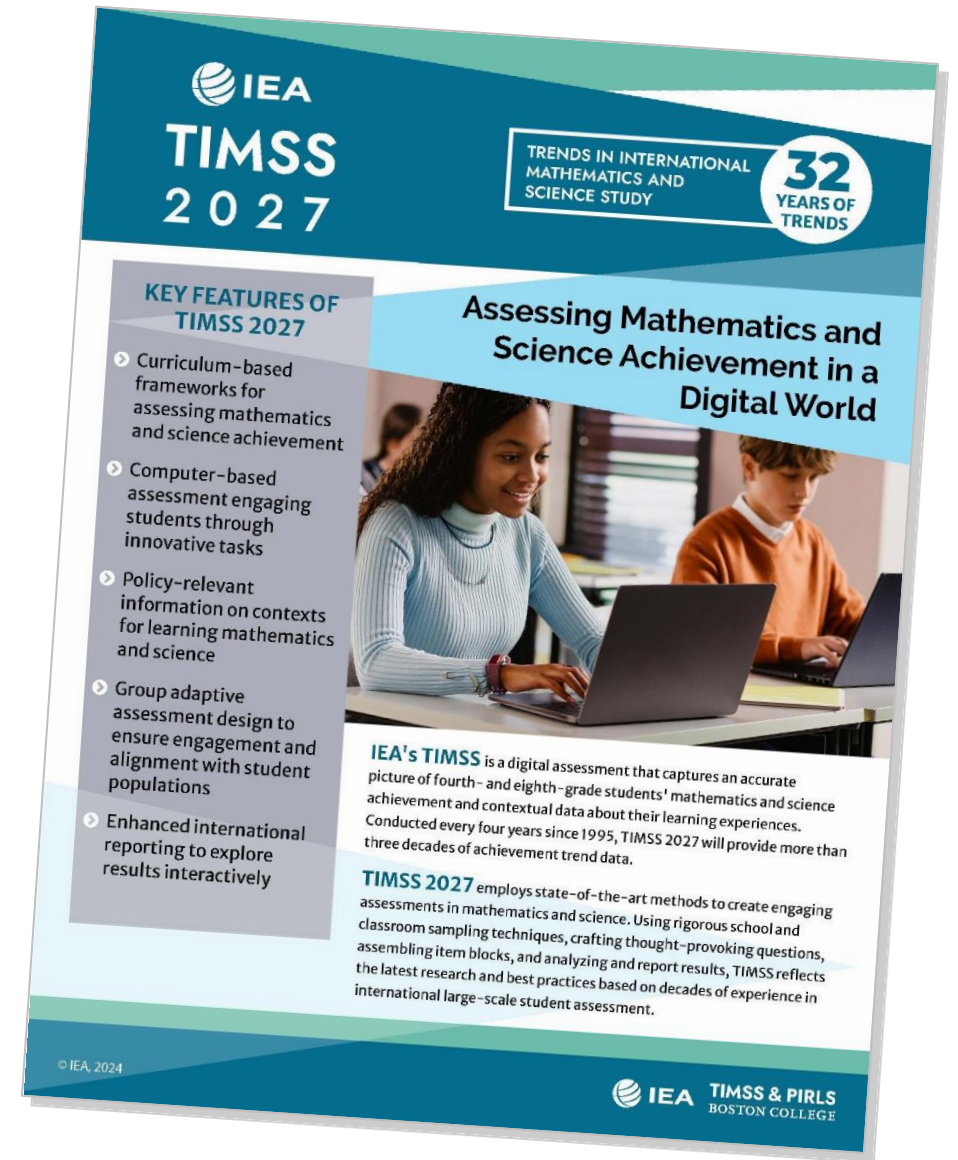


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# TIMSS 2027

## Trends in International Mathematics and Science Study

- The ninth cycle of TIMSS, providing 32 years of achievement trend data
- Fully digital assessment
- Advances measurement with improved group adaptive design



# TIMSS 2027



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# Innovations in TIMSS 2027



Expanding mathematics and science coverage



Understanding contexts in which students learn



More adaptive design for diverse populations



Modern assessment methods for development and scoring

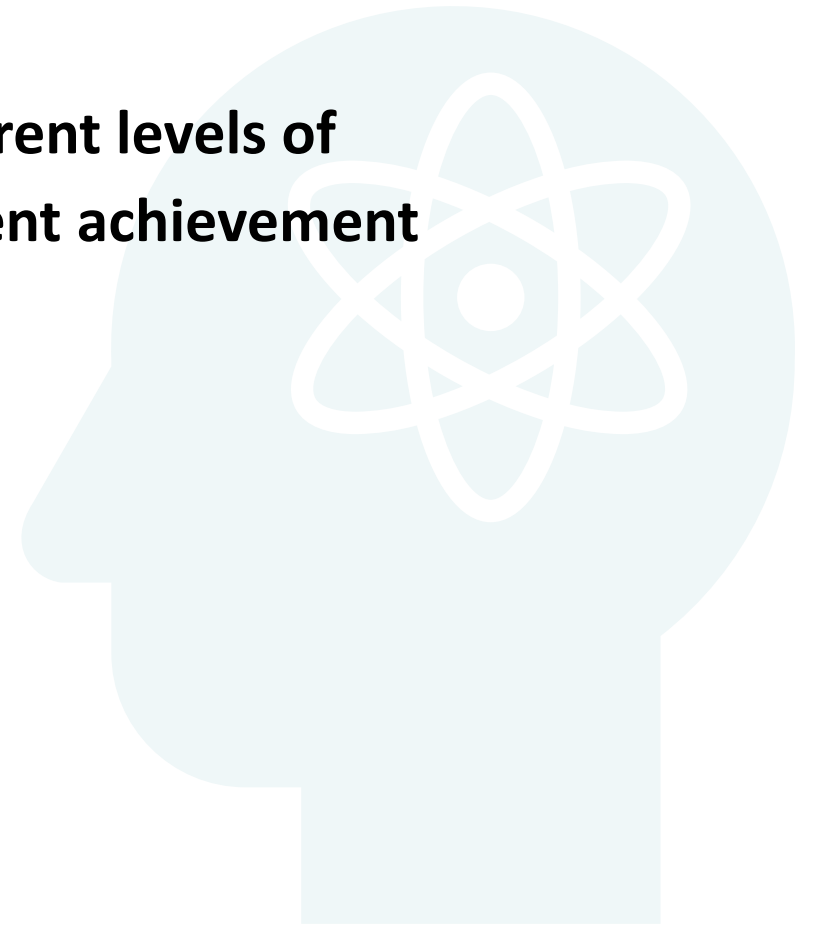


Sharper focus on research with the TIMSS Insights series

## Expanded Mathematics and Science Coverage

**TIMSS 2027 improves how skills are measured at different levels of achievement, ensuring a comprehensive view of student achievement across populations and over time.**

- Updated assessment frameworks
- Problem-solving and inquiry processes
- Environmental literacy (knowledge and awareness)



## Contexts for Learning

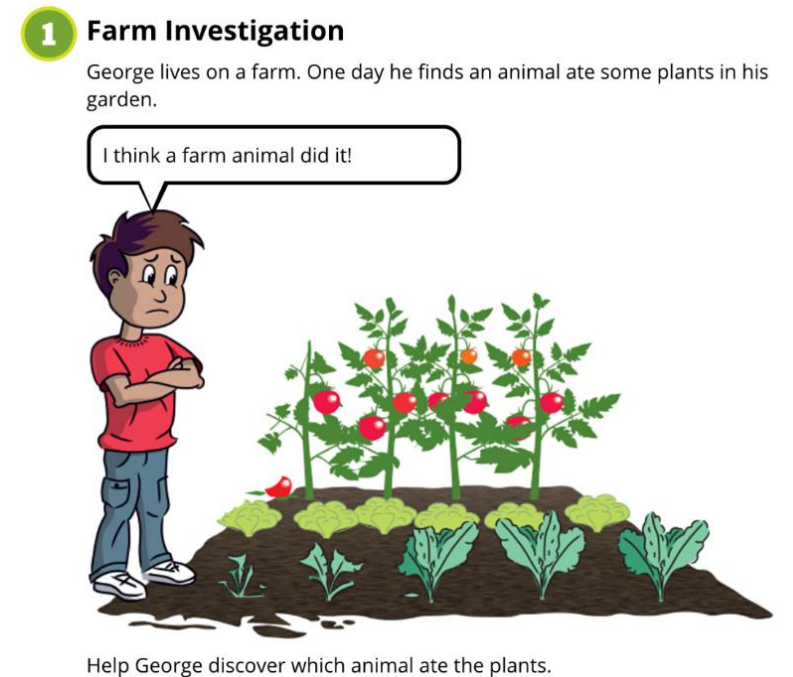
**TIMSS 2027 aims to capture valuable data that helps contextualize achievement for educators, researchers, and policymakers.**

- Questionnaires completed by students, parents, teachers, and school administrators
  - Learning experiences at home and in school
  - Process information on how students fill out questionnaires
- TIMSS Encyclopedia chapters authored by country representatives, describing national education systems and curricula

# Assessment Development

**TIMSS 2027 assessment items enhance student engagement and motivation and reflect the latest research and best practices.**

- Item types that allow students to demonstrate deeper understanding and critical thinking
- Interactive response formats, such as free-drawing and building charts and diagrams



## Group Adaptive Design

**TIMSS 2027 further develops an adaptive assessment design that caters to a wider range of student populations.**

- Improves measurement for previously less well targeted student groups
- Design based adaptivity better fits countries' student populations
- Targeted branching to improve measurement at/below low benchmark
- Better representation of achievement and meaningful insights for schools large and small, urban and rural

# Advancing Automated Scoring

**TIMSS 2027 further develops automated scoring using a range of scoring technologies.**

- Rule-based scoring for selected-response items
- Human scoring augmented by machine scoring methods for trend and new materials, increased consistency for trend items from TIMSS 2023
- Research-based scoring methods for items that are found to be scorable with Machine Learning or Artificial Intelligence



## TIMSS Insights Series

**The TIMSS Insights are a series of thematic reports that provide a closer look at specific education research topics using TIMSS data.**

- Thematic explorations of relationships between achievement results and context variables --- e.g., indicators of student well-being, socioeconomic status
- Topics of interest to stakeholders, policymakers, and researchers
- Similar format to the PIRLS Insights series: [pirls2021.org/insights](https://pirls2021.org/insights)

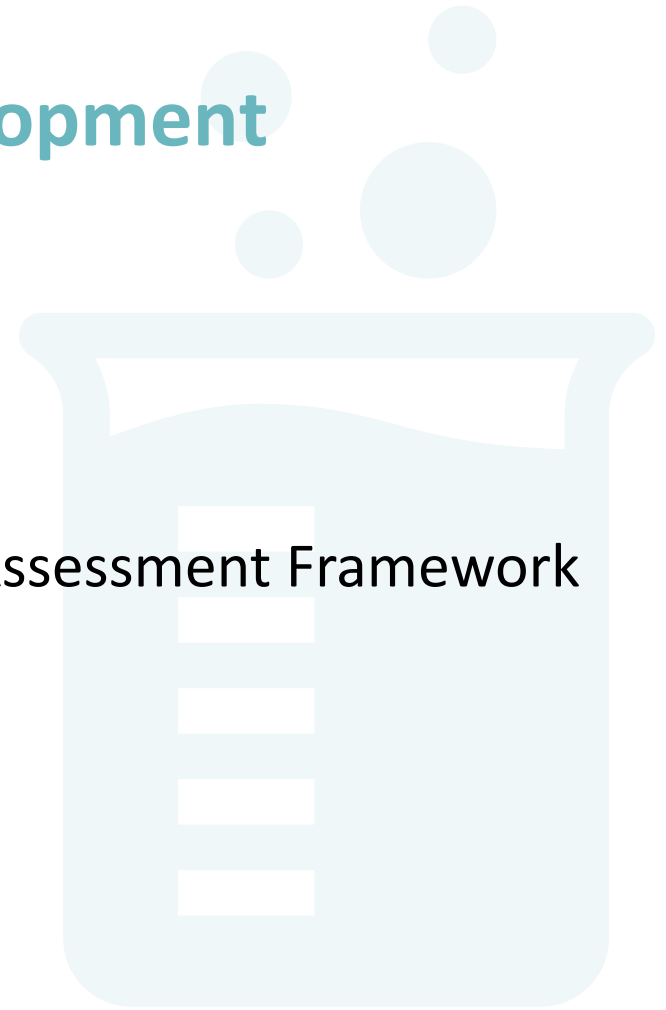
## Overview of the TIMSS 2027 Schedule

|           |                                       |
|-----------|---------------------------------------|
| 2024–2025 | Framework and instrument development  |
| 2026      | Field Test and finalizing instruments |
| 2027      | Data collection and processing        |
| 2028      | Data analysis and reporting           |

**International Database Released in February 2029**

# Preparations for TIMSS 2027 Test Development

- Convene TIMSS 2027 Expert Advisory Groups
- Establish Partnerships for Test Development
- Update the TIMSS 2027 Mathematics and Science Assessment Framework



## Convene TIMSS 2027 Expert Advisory Groups

- Science and Mathematics **International Research** Committee (SMIRC)
  - Provides guidance on the assessment frameworks and development
  - First meeting in October 2024 (online)
- Questionnaire **International Research** Committee (QIRC)
  - Provides guidance on the context questionnaire framework and questionnaire development
  - First meeting in February 2025 (online)
- QIRC and SMIRC help guide research disseminated in TIMSS Insights

# TIMSS 2027 SMIRC

## MATHEMATICS

**Ray Philpot** — Australia

**Kiril Bankov** — Bulgaria

**Franck Salles** — France

**Gráinne McHugh** — Ireland

**Hege Kaarstein** — Norway

**Cheow Kian Soh** — Singapore

**Gamze Kartal** — Türkiye

## SCIENCE

**Yun-Ping Ge** — Chinese Taipei

**Svatava Janoušková** — Czech Republic

**Mohamed Khunji** — Bahrain

**Ute Harms** — Germany

**Berenice Michels** — The Netherlands

**Stefania Pozio** — Italy

**Jens Anker-Hansen** — Sweden

**Alicia Alonzo** — United States



# TIMSS 2027 QIRC

**Nicole Wernert** — Australia

**Dries Verhelst** — Belgium (Flemish)

**Josef Basl** — Czech Republic

**Kit Tai Hau** — Hong Kong SAR

**Kyongah Sang** — Korea

**Trude Nilsen** — Norway

**Anabela Serrão** — Portugal

**Barbara Japelj** — Slovenia

**Nada Ruban** — UAE



# Establish Test Development Partnerships

Two partners for test development in TIMSS 2027

- Leibniz Institute for Science and Mathematics Education (IPN), Germany
  - Partnered also in TIMSS 2023 for science development
- Educational Research Centre (ERC), Ireland
  - New partner in TIMSS 2027

# Upcoming TIMSS 2027 Activities and Milestones

|                          |                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>October 2024</b>      | 1 <sup>st</sup> SMIRC meeting to discuss updates for the TIMSS 2027 assessment frameworks and review draft items     |
| <b>February 2025</b>     | 1 <sup>st</sup> QIRC meeting to discuss updates for the TIMSS 2027 contextual framework and review TIMSS 2023 scales |
| <b>February 12-13</b>    | 1 <sup>st</sup> NRC meeting (Hamburg, Germany)—Project overview and review of assessment framework revisions         |
| <b>March 16-21, 2025</b> | 2 <sup>nd</sup> NRC meeting (in person, TBD) – Item writing workshop                                                 |

## Upcoming TIMSS 2027 activities and milestones

|                         |                                                                                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>May 2025</b>         | 2 <sup>nd</sup> SMIRC and QIRC meetings to review and recommend achievement and questionnaire items for Field Test |
| <b>July 20-25, 2025</b> | 3 <sup>rd</sup> NRC Meeting (in person, TBD)—Finalize Field Test instruments                                       |
| <b>July–September</b>   | Finalize instruments for Field Test                                                                                |
| <b>September</b>        | Release of Field Test instruments and players to countries                                                         |
| <b>October</b>          | WinW3S release and Data Management Seminar                                                                         |
| <b>Early 2026</b>       | Review of scoring guides; online scoring training                                                                  |

# Upcoming TIMSS 2027 activities and milestones

|                    |                                                                                                                                 |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Mar 2026</b>    | 4th NRC Meeting (online)—conduct field test scoring training                                                                    |
| <b>March–April</b> | TIMSS 2027 Field Test                                                                                                           |
| <b>May–June</b>    | Field Test data processing and analysis                                                                                         |
| <b>July</b>        | Field Test data review; recommendation of items for main data collection (DC); 3 <sup>rd</sup> SMIRC and QIRC meetings (online) |
| <b>Late July</b>   | 5 <sup>th</sup> NRC Meeting (in person, TBD)—Finalize Data Collection Instruments                                               |
| <b>October</b>     | Release of DC instruments and players to countries                                                                              |

# Upcoming TIMSS 2027 activities and milestones

**February 2027**

6th NRC meeting (in person, TBD)—Discuss data collection activities and conduct scoring training

**March–June**

Main data collection, Northern Hemisphere

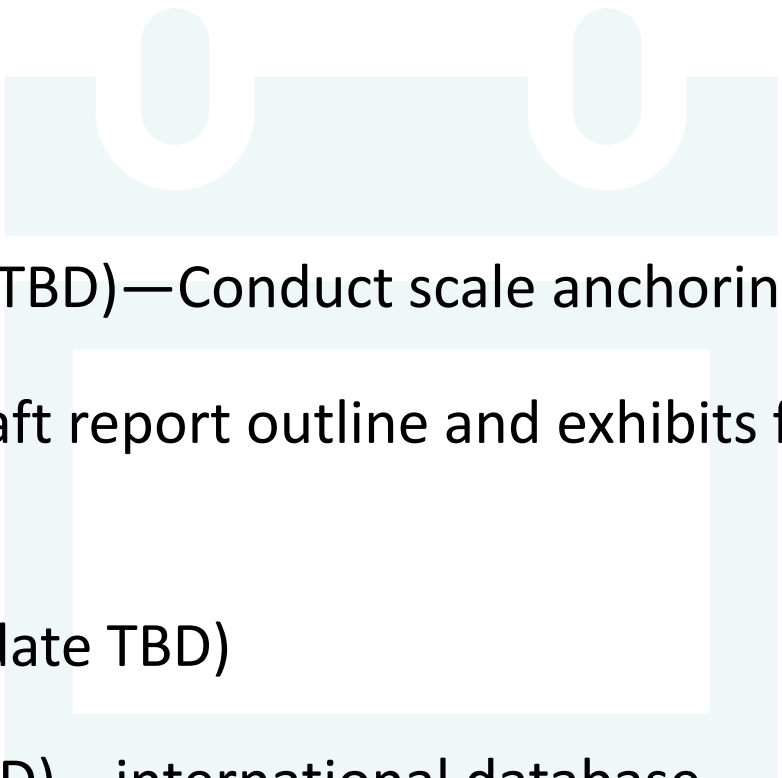
**Aug–Dec**

Main data collection, Southern Hemisphere

**December**

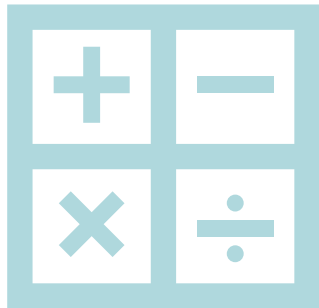
NRC Webinar on reporting plans and guidelines for checking data (version 1.0)

# Upcoming TIMSS 2027 activities and milestones

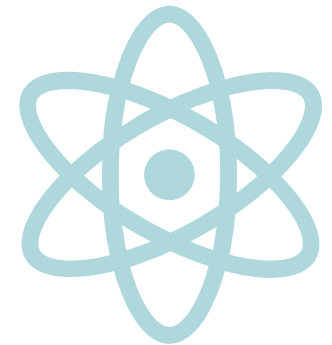


|                      |                                                                                                                             |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>March 2028</b>    | 7 <sup>th</sup> NRC meeting Review of draft report outline and exhibits for international report                            |
| <b>April</b>         | Sampling Adjudication (online)                                                                                              |
| <b>June</b>          | 4 <sup>th</sup> SMIRC Meeting (in person, TBD)—Conduct scale anchoring                                                      |
| <b>July</b>          | 8 <sup>th</sup> NRC meeting Review of draft report outline and exhibits for international report                            |
| <b>December</b>      | International Results release (date TBD)                                                                                    |
| <b>February 2029</b> | 9 <sup>th</sup> NRC meeting (in person, TBD)—international database training; International Database and User Guide release |

# Thank you!



**Matthias von Davier**  
TIMSS & PIRLS International Study Center



**IEA General Assembly**  
September 30, 2024

# TIMSS 2027



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