



science frameworks for each assessment cycle during its 28 year history. As a trend assessment, TIMSS needs stability from cycle to cycle and so the majority of the items (about two-thirds) are carried forward from each assessment to the next. An item typically appears in three adjacent assessment cycles before being retired. However, it is also necessary to keep the assessment frameworks educationally relevant, and so a substantial number of items are newly developed for each cycle in accordance with the updated frameworks. This permits the TIMSS assessment instruments and procedures to evolve gradually into the future.³

Consistent with procedures implemented with each new assessment cycle, the *TIMSS 2023 Mathematics and Science Frameworks* for fourth and eighth grades were updated from those used in TIMSS 2019 through an iterative review process. Taking into account curricular information provided by the participating countries in the *TIMSS 2019 Encyclopedia*,⁴ the TIMSS & PIRLS International Study Center worked with the TIMSS 2023 expert group, named the Science and Mathematics Item Review Committee (SMIRC), to develop and review the first drafts of the updated frameworks. Listed in the Acknowledgments, the SMIRC members also participated in iterative reviews of the items newly developed for TIMSS 2023.

The TIMSS 2023 National Research Coordinators (NRCs), comprised of the one or two individuals that are responsible for implementing TIMSS within each participating country, also had opportunities to review the frameworks. The TIMSS 2023 NRCs (see Acknowledgments) introduced fresh ideas and current information about curricula, standards, goals, and objectives related to mathematics and science instruction. The TIMSS & PIRLS International Study Center worked with the SMIRC to incorporate the NRCs' recommendations into the frameworks, such that the content of the frameworks evolved gradually.

Chapter 3 of the *TIMSS 2023 Assessment Frameworks* contains the *TIMSS 2023 Context Questionnaire Framework*. Similar to the process used to update the content area frameworks, the TIMSS & PIRLS International Study Center worked with the TIMSS 2023 Questionnaire Item Review Committee (QIRC) to update the *TIMSS 2019 Context Questionnaire Framework* and the questionnaires for TIMSS 2023. The QIRC members are listed in the Acknowledgments.





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- 2 Mullis, I.V.S. & Martin, M.O. (2022). IEA's TIMSS and PIRLS: Measuring long-term trends in student achievement. In T. Nilsen, A. Stancel-Pit tak, & J. Gustafsson (Eds.), *International handbook of comparative large-scale studies in education: perspectives, methods, and findings*. Springer, forthcoming.
- 3 Mullis, I.V.S. & Martin, M.O. (2022). IEA's TIMSS and PIRLS: Measuring long-term trends in student achievement. In T. Nilsen, A. Stancel-Pit tak, & J. Gustafsson (Eds.), *International handbook of comparative large-scale studies in education: perspectives, methods, and findings*. Springer, forthcoming.
- 4 Kelly, D.L., Centurino, V.A.S., Martin, M.O., & Mullis, I.V.S. (2020). *TIMSS 2019 encyclopedia: Education policy and curriculum in mathematics and science*. Retrieved from Boston College, TIMSS & PIRLS International Study Center website: <https://timssandpirls.bc.edu/timss2019/encyclopedia/>

