

TIMSS 2023 Longitudinal Curriculum Questionnaire—Fifth Grade

The TIMSS 2023 Longitudinal Curriculum Questionnaire is designed to collect information about the transition of students between grades as well as the mathematics and science curricula in each country.

The questionnaire should be completed by National Research Coordinators, drawing on the expertise of curriculum specialists and educators. Please submit this questionnaire by **January 31, 2025**.

Please note that the General Module is the same for the fifth and ninth grades. National Research Coordinators of countries participating in TIMSS 2023 Longitudinal at both the fifth and ninth grade should complete the General Module at only one of the grade levels. The Mathematics and Science Modules should be completed for both grades.

If you have any questions about the content of this questionnaire, please contact the TIMSS & PIRLS International Study Center at Boston College: timss-l_2023@bc.edu

If you have any technical questions about how to complete this questionnaire, please contact IEA Hamburg: timss@iea-hamburg.de

GENERAL MODULE

To be completed by all countries participating in TIMSS Longitudinal

GEN01

G1. Please describe how students in your country are organized as they transition between the fourth and fifth grades.

Example: Students remain in the same classes/groups when they move to fifth grade but have a different teacher.

GEN02

G2. Please describe how students in your country are organized as they transition between the eighth and ninth grades.

Example: Students have all subjects with the same classmates and a single teacher in eighth grade, but have different subjects with different classmates and teachers in ninth grade.

MATHEMATICS MODULE GRADE 5

To be completed by all countries participating in TIMSS Longitudinal at the fifth grade

This mathematics module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers mathematics instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

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Curriculum Specifications

This mathematics module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers mathematics instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

MA501

M1. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the fifth grade of primary/elementary school?

Click **one** circle only.

- ☐ Yes
☐ No

MA501TA

If Yes... Please specify the percentage:

MA501TB

Comments:

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M2. Does the fifth grade mathematics curriculum include any of the following?

Click **one** circle for each line.

		Yes	No
MA502A	a) Recommendations for the amount of time to be spent on particular areas or topics	☐	☐
MA502B	b) Recommendations for assessment methods	☐	☐
MA502C	c) Recommendations for instructional activities	☐	☐
MA502D	d) Recommendations for connecting mathematics to everyday contexts	☐	☐
MA502E	e) Other, please specify:	☐	☐

MA502ET

Use of Digital Devices

This mathematics module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers mathematics instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

MA503

M3. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in Grade 5 mathematics instruction?

*Click **one** circle only.*

☐ Yes

☐ No

MA503T

If Yes... What are the statements/policies?

Fifth Grade Mathematics Topics Covered

This mathematics module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers mathematics instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

M4. According to the national mathematics curriculum, what proportion of Grade 5 students should have been taught each of the following topics or skills by the end of Grade 5?

A. Number

Click **one** circle for each line.

		Proportion of Grade 5 Students Expected to be Taught Topic or Skill		
		All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 5
MA504AA	a) Recognize place value of numbers to 6 digits, connect representations of numbers (words, symbols, and models including number lines), and compare numbers	☐	☐	☐
MA504AB	b) Add and subtract up to 4-digit numbers	☐	☐	☐
MA504AC	c) Multiply (up to 3-digit by 1-digit and 2-digit by 2-digit numbers) and divide (up to 3-digit by 1-digit numbers)	☐	☐	☐
MA504AD	d) Solve problems involving odd and even numbers, multiples and factors of numbers, rounding numbers (up to the nearest powers of 10), and making estimates	☐	☐	☐
MA504AE	e) Combine two or more properties of numbers or operations to solve a problem	☐	☐	☐
MA504AF	f) Find the missing number or operation in a number sentence (e.g., $17 + w = 29$)	☐	☐	☐
MA504AG	g) Match or write expressions or number sentences to represent problem situations that may involve unknowns	☐	☐	☐
MA504AH	h) Match, describe, or use relationships in a well-defined pattern (e.g., describe the relationship between adjacent terms and generate pairs of whole numbers given a rule)	☐	☐	☐
MA504AI	i) Describe a fraction as part of a whole or collection; connect different representations of fractions (words, numbers, and models); compare the size of fractions; add and subtract simple fractions with like denominators	☐	☐	☐
MA504AJ	j) Connect different representations of decimals (words, numbers, and models); compare and order decimals and relate decimals to fractions; round decimals; add and subtract decimals (up to two decimal places)	☐	☐	☐
MA504AT	Comments:			

B. Measurement and GeometryClick **one** circle for each line.

		Proportion of Grade 5 Students Expected to be Taught Topic or Skill		
		All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 5
MA504BA	a) Measure, estimate, add, and subtract lengths (millimeters, centimeters, meters, kilometers)	☐	☐	☐
MA504BB	b) Add and subtract mass (gram and kilogram), volume (milliliter and liter), and time (minutes and hours); select appropriate types and sizes of units and read scales	☐	☐	☐
MA504BC	c) Determine perimeters of polygons, areas of rectangles, areas of shapes covered with squares or partial squares, and volumes filled with cubes	☐	☐	☐
MA504BD	d) Recognize and draw parallel and perpendicular lines, right angles, and angles smaller or larger than a right angle; compare the relative size of angles	☐	☐	☐
MA504BE	e) Use elementary properties, including line and rotational symmetry, to describe and create common two-dimensional shapes (circle, triangles, quadrilaterals, and other polygons)	☐	☐	☐
MA504BF	f) Use elementary properties to describe three dimensional shapes (cubes, rectangular solids, cones, cylinders, and spheres), the differences among them, and how they relate to their two-dimensional representations	☐	☐	☐

MA504BT Comments:

C. DataClick **one** circle for each line.

		Proportion of Grade 5 Students Expected to be Taught Topic or Skill		
		All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 5
MA504CA	a) Read data from tables, pictographs, bar graphs, line graphs, and pie charts	☐	☐	☐
MA504CB	b) Create or complete tables, pictographs, bar graphs, line graphs, and pie charts	☐	☐	☐
MA504CC	c) Interpret and use data to answer questions that go beyond directly reading data displays	☐	☐	☐
MA504CD	d) Combine or compare data from two or more sources and draw conclusions based on two or more datasets	☐	☐	☐

MA504CT Comments:

SCIENCE MODULE GRADE 5

To be completed by all countries participating in TIMSS Longitudinal at the fifth grade

This science module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers science instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

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Curriculum Specifications

This science module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers science instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

SC501

S1. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the fifth grade of primary/elementary school?

Click **one** circle only.

☐ Yes

☐ No

SC501TA

If Yes... Please specify the percentage:

SC501TB

Comments:

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S2. Does the fifth grade science curriculum include any of the following?

Click **one** circle for each line.

		Yes	No
SC502A	a) Recommendations for the amount of time to be spent on particular areas or topics	☐	☐
SC502B	b) Recommendations for assessment methods	☐	☐
SC502C	c) Recommendations for instructional activities	☐	☐
SC502D	d) Recommendations for connecting science to other subjects	☐	☐
SC502E	e) Other, please specify:	☐	☐

SC502ET

Use of Digital Devices

This science module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers science instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

SC503

S3. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in Grade 5 science instruction?

*Click **one** circle only.*

☐ Yes

☐ No

SC503T

If Yes... What are the statements/policies?

Fifth Grade Science Topics Covered

This science module refers to the national curriculum that was in effect for the fifth grade students assessed in TIMSS 2023 Longitudinal—the curriculum that covers science instruction at the fifth grade of primary/elementary school for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S4. According to the national science curriculum, what proportion of Grade 5 students should have been taught each of the following topics or skills by the end of Grade 5?

A. Life Science

Click **one** circle for each line.

		Proportion of Grade 5 Students Expected to be Taught Topic or Skill		
		All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 5
SC504AA	a) Differences between living and non-living things; what living things require to live	☐	☐	☐
SC504AB	b) Physical and behavioral characteristics of major groups of living things (e.g., birds, mammals, plants)	☐	☐	☐
SC504AC	c) Functions of major structures in plants and animals (e.g., bones, lungs, stem, leaves)	☐	☐	☐
SC504AD	d) Stages of life cycles; differences among the life cycles of common plants and animals (e.g., frogs, butterflies, flowering plants)	☐	☐	☐
SC504AE	e) Inheritance and reproductive strategies (e.g., plants producing many seeds, mammals caring for their young)	☐	☐	☐
SC504AF	f) Inherited and acquired characteristics in plants and animals	☐	☐	☐
SC504AG	g) Physical features of plants and animals that help them survive in their environment	☐	☐	☐
SC504AH	h) Responses of plants and animals to changes in environmental conditions	☐	☐	☐
SC504AI	i) The positive and negative impacts of humans on the environment	☐	☐	☐
SC504AJ	j) Plants and animals in common ecosystems (e.g., desert, forest, grassland)	☐	☐	☐
SC504AK	k) Relationships in simple food chains	☐	☐	☐
SC504AL	l) Competition in ecosystems	☐	☐	☐
SC504AM	m) Ways of promoting human health and preventing the transmission of common communicable diseases	☐	☐	☐

SC504AT Comments:

B. Physical ScienceClick **one** circle for each line.**Proportion of Grade 5 Students
Expected to be Taught Topic or Skill**

		<i>All or almost all students</i>	<i>Only the more advanced students</i>	<i>Not included in the curriculum through Grade 5</i>
SC504BA	a) Solids, liquids, gases, and their characteristics	☐	☐	☐
SC504BB	b) Physical properties as a basis for classifying matter (e.g., mass, volume, ability to conduct heat)	☐	☐	☐
SC504BC	c) Describe examples of mixtures and how they can be physically separated	☐	☐	☐
SC504BD	d) Magnetic attraction and repulsion	☐	☐	☐
SC504BE	e) Physical changes observed in everyday life (e.g., dissolving, crushing)	☐	☐	☐
SC504BF	f) Chemical changes observed in everyday life (e.g., decaying, burning)	☐	☐	☐
SC504BG	g) Common sources of energy (e.g., the Sun, wind, oil, gas)	☐	☐	☐
SC504BH	h) Common phenomena related to the behavior of light (e.g., shadows, reflections)	☐	☐	☐
SC504BI	i) Common phenomena related to the behavior of sound (e.g., echoes)	☐	☐	☐
SC504BJ	j) Heat transfer (e.g., energy flows from a warmer object to a colder object)	☐	☐	☐
SC504BK	k) Electricity and simple electrical circuits	☐	☐	☐
SC504BL	l) Familiar forces and the motion of objects (e.g., gravity, friction)	☐	☐	☐
SC504BM	m) Examples of simple machines (e.g., levers, ramps, pulleys)	☐	☐	☐

SC504BT Comments:

C. Earth Science

Click **one** circle for each line.

Proportion of Grade 5 Students Expected to be Taught Topic or Skill

		All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 5
SC504CA	a) Physical characteristics of Earth (e.g., fresh and salt water, air)	☐	☐	☐
SC504CB	b) Earth's renewable and non-renewable resources	☐	☐	☐
SC504CC	c) Changes in Earth's surface over time	☐	☐	☐
SC504CD	d) Fossils and what they show about Earth's history	☐	☐	☐
SC504CE	e) How weather can vary across geographic locations and seasons	☐	☐	☐
SC504CF	f) Earth's rising average temperatures and results of this change (e.g., melting ice caps, higher ocean levels)	☐	☐	☐
SC504CG	g) Composition of the Solar System (e.g., Sun, planets)	☐	☐	☐
SC504CH	h) Earth's motion and related patterns observed on Earth (e.g., day and night, seasons)	☐	☐	☐

SC504CT Comments:

Print Option

This summary shows all questionnaire items and your responses. Click the "Save responses as PDF" button to save a copy of your answers. Please submit your responses by clicking the "Submit Data" button at the bottom of this page.

Save responses as PDF

This completes the *Grade 5 TIMSS 2023 Longitudinal Curriculum Questionnaire*. Please click "Submit Data" to complete data entry and submit your responses to IEA.

Thank you for completing the TIMSS 2023 Longitudinal Curriculum Questionnaire.