



TIMSS

2023

Identification Label

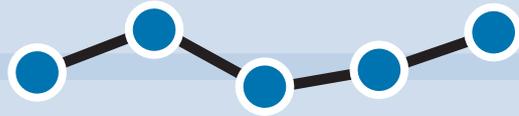
TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Teacher Questionnaire Mathematics

<Grade 8>

<TIMSS National Research Center Name>

<Address>



IEA

TIMSS & PIRLS
International Study Center
Lynch School of Education
BOSTON COLLEGE

Teacher Questionnaire

Your school has agreed to participate in TIMSS 2023 (Trends in International Mathematics and Science Study), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS measures trends in student achievement in mathematics and science and studies differences in national education systems in more than 60 countries in order to help improve teaching and learning worldwide.

This questionnaire is addressed to teachers of <eighth grade> students, and seeks information about teachers' academic and professional backgrounds, classroom resources, instructional practices, and attitudes toward teaching. Since your class has been selected as part of a nationwide sample, your responses are very important in helping to describe secondary education in <country>.

Some of the questions in the questionnaire refer to the **"TIMSS class"** or **"this class."** This is the class that is identified on the front of this booklet, and which will be tested as part of TIMSS in your school. If you teach some but not all of the students in the TIMSS class, please think only of the students that you teach when answering these class-specific questions. It is important that you answer each question carefully so that the information that you provide reflects your situation as accurately as possible.

Since TIMSS is an international study and all countries are using the same questionnaire, you may find that some of the questions seem unusual or are not entirely relevant to you or schools in <country>. Nevertheless, it is important that you do your best to answer all of the questions so comparisons can be made across countries in the studies.

It is estimated that you will need approximately 35 minutes to complete this questionnaire. We appreciate the time and effort that this takes and thank you for your cooperation and contribution.

When you have completed the questionnaire, please place it in the accompanying envelope and return it to:

<Insert country-specific information here>.

Thank you.

TIMSS 2023

About You

1

By the end of this school year, how many years will you have been teaching altogether?

_____ years
Please **round** to the nearest whole number.

2

Which of these describes you?

- Check **one** circle only.
- Female ---
- Male ---
- <Other> ---

3

How old are you?

- Check **one** circle only.
- Under 25 ---
- 25–29 ---
- 30–39 ---
- 40–49 ---
- 50–59 ---
- 60 or more ---

4

What is the **highest** level of formal education you have completed?

- Check **one** circle only.
- Did not complete <Upper secondary education—ISCED Level 3> ---
- <Upper secondary education—ISCED Level 3> --- 
- (If you have not completed <post-secondary or tertiary education>, go to #6)
- <Post-secondary, non-tertiary education—ISCED Level 4> ---
- <Short-cycle tertiary education—ISCED Level 5> ---
- <Bachelor's or equivalent level—ISCED Level 6> ---
- <Master's or equivalent level—ISCED Level 7> ---
- <Doctor or equivalent level—ISCED Level 8> ---

5

During your <post-secondary> education, what was your **major or main area(s) of study**?

- Check **one** circle for each line.
- | | | Yes | No |
|---------|--------------------------------|-----------------------|-----------------------|
| BTBG05A | a) Mathematics ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05B | b) Biology ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05C | c) Physics ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05D | d) Chemistry ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05E | e) <Earth Science> ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05F | f) Education—Mathematics ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05G | g) Education—Science ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05H | h) Education—General ----- | <input type="radio"/> | <input type="radio"/> |
| BTBG05I | i) Other ----- | <input type="radio"/> | <input type="radio"/> |

6

How would you characterize each of the following within your school?

Check **one** circle for each line.

		Very high _____ High _____ Medium _____ Low _____ Very low _____	
BTBG06A	a) Teachers' understanding of the school's curricular goals -----	<input type="radio"/>	<input type="radio"/>
BTBG06B	b) Teachers' degree of success in implementing the school's curriculum -----	<input type="radio"/>	<input type="radio"/>
BTBG06C	c) Teachers' expectations for student achievement -----	<input type="radio"/>	<input type="radio"/>
BTBG06D	d) Teachers' ability to inspire students -----	<input type="radio"/>	<input type="radio"/>
BTBG06E	e) Parental involvement in school activities -----	<input type="radio"/>	<input type="radio"/>
BTBG06F	f) Parental commitment to ensure that students are ready to learn -----	<input type="radio"/>	<input type="radio"/>
BTBG06G	g) Parental expectations for student achievement -----	<input type="radio"/>	<input type="radio"/>
BTBG06H	h) Parental support for student achievement -----	<input type="radio"/>	<input type="radio"/>
BTBG06I	i) Students' desire to do well in school -----	<input type="radio"/>	<input type="radio"/>
BTBG06J	j) Students' ability to reach school's academic goals -----	<input type="radio"/>	<input type="radio"/>
BTBG06K	k) Students' respect for classmates who excel academically -----	<input type="radio"/>	<input type="radio"/>

7

How much do you agree or disagree with the following statements about your current school?

Check **one** circle for each line.

		Agree a lot _____ Agree a little _____ Disagree a little _____ Disagree a lot _____	
BTBG07A	a) I feel safe at this school -----	<input type="radio"/>	<input type="radio"/>
BTBG07B	b) This school's security policies and practices are sufficient -----	<input type="radio"/>	<input type="radio"/>
BTBG07C	c) The students behave in an orderly manner -----	<input type="radio"/>	<input type="radio"/>
BTBG07D	d) The students are respectful of the teachers -----	<input type="radio"/>	<input type="radio"/>
BTBG07E	e) The students respect school property -----	<input type="radio"/>	<input type="radio"/>
BTBG07F	f) This school has clear rules about student conduct -----	<input type="radio"/>	<input type="radio"/>
BTBG07G	g) This school's rules are enforced in a fair and consistent manner -----	<input type="radio"/>	<input type="radio"/>

About Being a Teacher

8

How often do you have these feelings about being a teacher?

Check **one** circle for each line.



- BTBG08A a) I am content with my profession as a teacher ----- ○ — ○ — ○ — ○
- BTBG08B b) I find my work full of meaning and purpose ----- ○ — ○ — ○ — ○
- BTBG08C c) I am enthusiastic about my job ----- ○ — ○ — ○ — ○
- BTBG08D d) My work inspires me ----- ○ — ○ — ○ — ○
- BTBG08E e) I am proud of the work I do ----- ○ — ○ — ○ — ○
- BTBG08F f) I feel appreciated as a teacher ----- ○ — ○ — ○ — ○
- BTBG08G g) I enjoy the challenges of teaching ----- ○ — ○ — ○ — ○

9

How much do you agree or disagree with the statements below?

Check **one** circle for each line.



- BTBG09A a) There are too many students in the classes ----- ○ — ○ — ○ — ○
- BTBG09B b) I have too much material to cover in class ----- ○ — ○ — ○ — ○
- BTBG09C c) I have too many teaching hours ----- ○ — ○ — ○ — ○
- BTBG09D d) I need more time to prepare for class ----- ○ — ○ — ○ — ○
- BTBG09E e) I need more time to assist individual students ----- ○ — ○ — ○ — ○
- BTBG09F f) I feel too much pressure from parents ----- ○ — ○ — ○ — ○
- BTBG09G g) I have difficulty keeping up with all of the changes to the curriculum ----- ○ — ○ — ○ — ○
- BTBG09H h) I have too many administrative tasks ----- ○ — ○ — ○ — ○

About Teaching the TIMSS Class

10

How many students are in this class?

BTBG10

_____ students
Write in the number.

11

How many <eighth grade> students experience difficulties understanding spoken <language of test>?

BTBG11

_____ students in this class
Write in the number.

12

How often do you do the following in teaching this class?

Check **one** circle for each line.

Every or almost every lesson

About half the lessons

Some lessons

Never

- BTBG12A a) Relate the lesson to students' daily lives ----- — — —
- BTBG12B b) Ask students to explain their answers ----- — — —
- BTBG12C c) Communicate goals or objectives for the lesson to the students ----- — — —
- BTBG12D d) Ask students to complete challenging exercises that require them to go beyond the instruction ----- — — —
- BTBG12E e) Encourage classroom discussions among students ----- — — —
- BTBG12F f) Link new content to students' prior knowledge ----- — — —
- BTBG12G g) Ask students to decide their own problem solving procedures ----- — — —

13

In your view, to what extent do the following limit how you teach this class?

Check **one** circle for each line.

Not at all

Some

A lot

- BTBG13A a) Students lacking prerequisite knowledge or skills ----- — —
- BTBG13B b) Students suffering from lack of basic nutrition ----- — —
- BTBG13C c) Students suffering from not enough sleep ----- — —
- BTBG13D d) Students absent from class ----- — —
- BTBG13E e) Disruptive students ----- — —
- BTBG13F f) Uninterested students ----- — —
- BTBG13G g) Distracted students ----- — —
- BTBG13H h) Students with mental, emotional, or psychological impairment ----- — —
- BTBG13I i) Students with difficulties understanding the language of instruction ----- — —

14

In a typical week, how much time do you spend teaching mathematics to the students in this class?

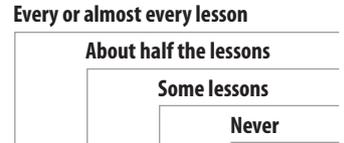
BTBM14

_____ minutes per week
 Write in the number of minutes per week.
 Please convert the number of hours into minutes.

15

In teaching mathematics to this class, how often do you ask students to do the following?

Check **one** circle for each line.



- BTBM15A a) Listen to me explain new mathematics content ----- — — —
- BTBM15B b) Listen to me explain how to solve problems ----- — — —
- BTBM15C c) Memorize rules, procedures, and facts ----- — — —
- BTBM15D d) Practice procedures on their own ----- — — —
- BTBM15E e) Apply what they have learned to new problem situations on their own ----- — — —
- BTBM15F f) Work problems together in the whole class with direct guidance from me ----- — — —
- BTBM15G g) Work in mixed ability groups -- — — —
- BTBM15H h) Work in same ability groups -- — — —

16

Are students in this class permitted to use calculators during mathematics lessons?

BTBM16

Check **one** circle only.

Yes, with unrestricted use ---

Yes, with restricted use ---

No ---

17

A. Do the students in this class have digital devices (including computers, tablets, or smartphones) available to use during mathematics lessons?

BTBM17A

Check **one** circle only.

Yes ---

No ---

(If No, go to #18)

If Yes,

B. What access do the students have to digital devices?

Check **one** circle for each line.

Yes

No

BTBM17BA a) The class has digital devices for each student to use -----

BTBM17BB b) The class has digital devices that students can share -----

BTBM17BC c) The school has digital devices that the class can use sometimes -----

BTBM17BD d) Students bring their own digital devices -----

C. How often do you have students use digital devices during mathematics instruction?

BTBM17C

Check **one** circle only.

At least once a week ---

Once or twice a month ---

A few times a year ---

Never or almost never ---

D. How often do you ask the students in your class to use digital devices to do these mathematics activities?

Check **one** circle for each line.

At least once a week

Once or twice a month

A few times a year

Never or almost never

BTBM17DA a) Practice problems and procedures -----

BTBM17DB b) Solve extended or contextualized problems -----

BTBM17DC c) Create graphs, tables, or other data displays -----

BTBM17DD d) Play games involving mathematics calculations or concepts -----

BTBM17DE e) Read the textbook or watch instructional videos -----

BTBM17DF f) Take a test -----

18

How much do each of these keep you from incorporating digital devices into mathematics instruction?

Check **one** circle for each line.

Not at all

Somewhat

A lot

BTBM18A a) Not knowing how to use digital devices to improve student learning -----

BTBM18B b) Not enough access to digital devices -----

BTBM18C c) Keeping students on task when the class is using digital devices -----

BTBM18D d) Lack of technical support from the school -----

The following list includes topics addressed by the TIMSS mathematics test. Choose the response that best describes when each topic is taught for students in this class.

If a topic was in the curriculum before <eighth grade>, choose “Mostly taught before this year.” If you have taught a topic this year, choose “Mostly taught this year.” If a topic is not in the <eighth grade> curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Check **one** circle for each line.

Mostly taught before this year

Mostly taught this year

Not yet taught

A. Number

- | | | | | |
|---|-----------------------|-----------------------|-----------------------|----------|
| a) Add and subtract positive and negative numbers ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19AA |
| b) Find and use factors, multiples, positive powers, or square roots of positive whole numbers----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19AB |
| c) Compare fractions and decimals----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19AC |
| d) Add, subtract, and multiply with fractions and decimals----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19AD |
| e) Divide fractions and decimals by a whole number----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19AE |
| f) Determine proportions and ratios ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19AF |
| g) Find percentages and convert between percentages and fractions/decimals ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19AG |

B. Algebra

- | | | | | |
|--|-----------------------|-----------------------|-----------------------|----------|
| a) Simplify and compare algebraic expressions----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BA |
| b) Solve simple linear equations ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BB |
| c) Solve simple linear inequalities ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BC |
| d) Solve simultaneous linear equations (two variables)----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BD |
| e) Write expressions, equations, or inequalities to represent problems----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BE |
| f) Interpret linear functions in graphs, tables, or words----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BF |
| g) Interpret simple non-linear functions (e.g., quadratic, cubic) in graphs, tables, or words----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BG |
| h) Generalize linear and non-linear pattern relationships or sequences ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19BH |

C. Geometry and Measurement

- | | | | | |
|---|-----------------------|-----------------------|-----------------------|----------|
| a) Read and plot points in the Cartesian plane ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19CA |
| b) Recognize and draw different types of angles and lines----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19CB |
| c) Use geometric properties of polygons to calculate lengths, perimeter, and area (including the Pythagorean Theorem) ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19CC |
| d) Determine the results of geometric translation, reflection, and rotation ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19CD |
| e) Use properties of similar and congruent figures ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19CE |
| f) Calculate surface area and volume of common three-dimensional shapes----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19CF |

D. Data and Probability

- | | | | | |
|--|-----------------------|-----------------------|-----------------------|----------|
| a) Interpret data from one or more data sources----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19DA |
| b) Represent data in graphs, charts, or plots----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19DB |
| c) Calculate and interpret the mean or median of a data distribution ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19DC |
| d) Calculate probabilities of simple and compound events----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM19DD |

20

A. How often do you usually assign mathematics homework to the students in this class?

BTBM20A

Check **one** circle only.

- I do not assign mathematics homework ---  **(Go to #21)**
- Less than once a week ---
- 1 or 2 times a week ---
- 3 or 4 times a week ---
- Every day ---

B. How often do you do the following with the mathematics homework assignments for this class?

Check **one** circle for each line.

- | | | | | |
|---|--------------------------------|-----------------------|------------------------------|----------|
| | Always or almost always | Sometimes | Never or almost never | |
| a) Correct assignments and give feedback to students ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM20BA |
| b) Have students correct their own homework ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM20BB |
| c) Discuss the homework in class ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM20BC |
| d) Monitor whether or not the homework was completed ---- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM20BD |
| e) Use the homework to contribute towards students' grades or marks ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | BTBM20BE |

21

How much importance do you place on these strategies to assess students' learning in mathematics?

Check **one** circle for each line.

- | | | | |
|---|-----------------------|-----------------------|-----------------------|
| | A lot | Some | None |
| BTBM21A a) Observing students as they work ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBM21B b) Asking students to answer questions during class ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBM21C c) Short, regular written assessments ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBM21D d) Longer tests (e.g., unit tests or exams) ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBM21E e) Long-term projects ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

A. In the past two years, have you participated in professional development in any of the following?

B. Do you need future professional development in any of the following?

Check **one** circle for each line.

Check **one** circle for each line.

	Yes	No	Yes	No		
a) Mathematics content -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM22AA	BTBM22BA
b) Mathematics pedagogy/ instruction-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM22AB	BTBM22BB
c) Mathematics curriculum--	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM22AC	BTBM22BC
d) Integrating technology into mathematics instruction-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM22AD	BTBM22BD
e) Improving students' critical thinking or problem solving skills-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM22AE	BTBM22BE
f) Mathematics assessment -	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM22AF	BTBM22BF
g) Addressing individual students' needs-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM22AG	BTBM22BG

Thank You

Thank you for the thought, time, and effort you have put into completing this questionnaire.



BOSTON
COLLEGE

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<Grade 8>



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