Teacher Questionnaire
Mathematics

<Grade 8>

<TIMSS National Research Center Name>
<Address>
Your school has agreed to participate in TIMSS 2019 (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 almost 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.
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 Are you female or male?

Check one circle only.

Female --- ○
Male --- ○

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> --- ○
<br>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

a) Mathematics ------------------------------- ○ — ○
b) Biology ------------------------------- ○ — ○
c) Physics ------------------------------- ○ — ○
d) Chemistry ------------------------------- ○ — ○
e) <Earth Science> ------------------------------- ○ — ○
f) Education—Mathematics ------------------------------- ○ — ○
g) Education—Science ------------------------------- ○ — ○
h) Education—General ------------------------------- ○ — ○
i) Other ------------------------------- ○ — ○
How would you characterize each of the following within your school?

Check one circle for each line.

Very high

High

Medium

Low

Very low

a) Teachers’ understanding of the school’s curricular goals

b) Teachers’ degree of success in implementing the school’s curriculum

c) Teachers’ expectations for student achievement

d) Teachers’ ability to inspire students

e) Parental involvement in school activities

f) Parental commitment to ensure that students are ready to learn

g) Parental expectations for student achievement

h) Parental support for student achievement

i) Students’ desire to do well in school

j) Students’ ability to reach school’s academic goals

k) Students’ respect for classmates who excel academically

l) Collaboration between school leadership (including master teachers) and teachers to plan instruction

Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements.

Check one circle for each line.

Agree a lot

Agree a little

Disagree a little

Disagree a lot

a) This school is located in a safe neighborhood

b) I feel safe at this school

c) This school’s security policies and practices are sufficient

d) The students behave in an orderly manner

e) The students are respectful of the teachers

f) The students respect school property

g) This school has clear rules about student conduct

h) This school’s rules are enforced in a fair and consistent manner
About Being a Teacher

How often do you feel the following way about being a teacher?

Check one circle for each line.

<table>
<thead>
<tr>
<th>Very often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Never or almost never</th>
</tr>
</thead>
</table>

a) I am content with my profession as a teacher

b) I find my work full of meaning and purpose

c) I am enthusiastic about my job

d) My work inspires me

e) I am proud of the work I do

Indicate the extent to which you agree or disagree with each of the following statements.

Check one circle for each line.

<table>
<thead>
<tr>
<th>Agree a lot</th>
<th>Agree a little</th>
<th>Disagree a little</th>
<th>Disagree a lot</th>
</tr>
</thead>
</table>

a) There are too many students in the classes

b) I have too much material to cover in class

c) I have too many teaching hours

d) I need more time to prepare for class

e) I need more time to assist individual students

f) I feel too much pressure from parents

g) I have difficulty keeping up with all of the changes to the curriculum

h) I have too many administrative tasks
About Teaching the TIMSS Class

10

How many students are in this class?

_____________ students
Write in the number.

11

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

_____________ 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

a) Relate the lesson to students’ daily lives

b) Ask students to explain their answers

c) Ask students to complete challenging exercises that require them to go beyond the instruction

d) Encourage classroom discussions among students

e) Link new content to students’ prior knowledge

f) Ask students to decide their own problem solving procedures

g) Encourage students to express their ideas in class

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

a) Students lacking prerequisite knowledge or skills

b) Students suffering from lack of basic nutrition

c) Students suffering from not enough sleep

d) Students absent from class

e) Disruptive students

f) Uninterested students

g) Students with mental, emotional, or psychological impairment

h) 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?

_____________ 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.

Every or almost every lesson
About half the lessons
Some lessons
Never

a) Listen to me explain new mathematics content

b) Listen to me explain how to solve problems

c) Memorize rules, procedures, and facts

d) Practice procedures on their own

e) Apply what they have learned to new problem situations on their own

f) Work problems together in the whole class with direct guidance from me

g) Work in mixed ability groups

h) Work in same ability groups
16. Are the students in this class permitted to use calculators during mathematics lessons?

*Check one circle only.*

- Yes, with unrestricted use ---
- Yes, with restricted use ---
- No, calculators are not permitted ---

17. A. Do the students in this class have computers (including tablets) available to use during their mathematics lessons?

*Check one circle only.*

- Yes ---
- No --- (If No, go to #18)

If Yes,

B. What access do the students have to computers?

*Check one circle for each line.*

- Yes
- No

a) Each student has a computer --------------------

b) The class has computers that students can share ---------------------------------------------

c) The school has computers that the class can use sometimes -----------------------------------

C. How often do you do activities on computers during mathematics lessons to support learning for:

*Check one circle for each line.*

- Every or almost every day
- Once or twice a week
- Once or twice a month
- Never or almost never

a) Whole class ----------------------

b) Low-performing students ----

c) High-performing students -----------------------

d) Students with special needs ------------------
Mathematics Topics Taught to the TIMSS Class

The following list includes the main topics addressed by the TIMSS mathematics test. Choose the response that best describes when the students in this class have been taught each topic. If a topic was in the curriculum before the <eighth grade>, please choose “Mostly taught before this year.” If a topic was taught half this year but not yet completed, please choose “Mostly taught this year.” If a topic is not in the curriculum, please choose “Not yet taught or just introduced.”

Check one circle for each line.

Mostly taught before this year
Mostly taught this year
Not yet taught or just introduced

A. Number
a) Computing with negative numbers
b) Concepts of fractions and decimals
c) Solving problems involving proportions and percents

B. Algebra
a) Simplifying and evaluating algebraic expressions
b) Simple linear equations
c) Simple linear inequalities
d) Simultaneous (two variables) equations
e) Representation of linear and quadratic functions in tables, graphs, words, or equations
f) Properties of functions (slopes, intercepts, etc.)
g) Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns)

C. Geometry
a) Geometric properties of angles, pairs of lines, and geometric shapes (triangles, quadrilaterals, and other common polygons)
b) Solving problems involving perimeters, circumferences, and areas
c) Solving problems involving the Pythagorean Theorem
d) Translation, reflection, and rotation
e) Congruent figures and similar triangles
f) Solving problems with three-dimensional shapes

D. Data and Probability
a) Reading and interpreting data from one or more sources to solve problems (interpolating, extrapolating, drawing conclusions)
b) Identifying appropriate procedures for collecting data
c) Organizing and representing data to help answer questions
d) Calculating and interpreting statistics summarizing data distributions
e) Theoretical and empirical probability of simple events
f) Theoretical and empirical probability of compound events
## Mathematics Homework for the TIMSS Class

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

*Check one circle only.*

I do not assign mathematics homework --- ○

(Go to #20)

Less than once a week --- ○

1 or 2 times a week --- ○

3 or 4 times a week --- ○

Every day --- ○

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**B. When you assign mathematics homework to the students in this class, about how many minutes do you usually assign? (Consider the time it would take an average student in your class.)**

*Check one circle only.*

15 minutes or less --- ○

16–30 minutes --- ○

31–60 minutes --- ○

61–90 minutes --- ○

More than 90 minutes --- ○

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**C. 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

b) Have students correct their own homework

c) Discuss the homework in class

d) Monitor whether or not the homework was completed

e) Use the homework to contribute towards students’ grades or marks

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## Mathematics Assessment of the TIMSS Class

**20**

How much importance do you place on the following assessment strategies in mathematics?

*Check one circle for each line.*

A Lot

Some

None

a) Observing students as they work

b) Asking students to answer questions during class

c) Short, regular written assessments

d) Longer tests (e.g., unit tests or exams)

e) Long-term projects

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**21**

About how often do <eighth grade> students in this class take mathematics tests on computers or tablets?

*Check one circle only.*

More than once a month --- ○

Once a month --- ○

Twice a year --- ○

Once a year --- ○

Never --- ○
A. In the past two years, have you participated in professional development in any of the following?

Check one circle for each line.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
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<tbody>
<tr>
<td>a) Mathematics content</td>
<td></td>
<td></td>
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<td>b) Mathematics pedagogy/instruction</td>
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<tr>
<td>c) Mathematics curriculum</td>
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<tr>
<td>d) Integrating technology into mathematics instruction</td>
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<td></td>
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<tr>
<td>e) Improving students’ critical thinking or problem solving skills</td>
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<td>f) Mathematics assessment</td>
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<td>g) Addressing individual students’ needs</td>
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B. Do you need future professional development in any of the following?

Check one circle for each line.

<table>
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In the past two years, how many hours in total have you spent in formal in-service/professional development (e.g., workshops, seminars, etc.) for mathematics?

Check one circle only.

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Less than 6 hours</th>
<th>6–15 hours</th>
<th>16–35 hours</th>
<th>More than 35 hours</th>
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Thank You

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