

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

TIMSS

TIMSS 2019 User Guide for the International Database

SUPPLEMENT 1

International Versions of the TIMSS 2019
Context Questionnaires



IEA

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

SUPPLEMENT 1

International Versions of the TIMSS 2019 Context Questionnaires

Overview

The TIMSS 2019 International Database includes data for all questionnaires administered as part of the TIMSS 2019 assessment. This supplement contains the international versions of the TIMSS 2019 context questionnaires in the following sections:

Section 1: Grade 4 Context Questionnaires

- Section 1.1: Student Questionnaire
- Section 1.2: Student Questionnaire—eTIMSS Supplement
- Section 1.3: Home Questionnaire (Early Learning Survey)
- Section 1.4: Teacher Questionnaire
- Section 1.5: School Questionnaire
- Section 1.6: Curriculum Questionnaire

Section 2: Grade 8 Context Questionnaires

- Section 2.1: Student Questionnaire—General/Integrated Science Version
- Section 2.2: Student Questionnaire—Separate Science Version
- Section 2.3: Student Questionnaire—eTIMSS Supplement
- Section 2.4: Teacher Questionnaire—Mathematics
- Section 2.5: Teacher Questionnaire—Science
- Section 2.6: School Questionnaire
- Section 2.7: Curriculum Questionnaire

Each section contains an exhibit that lists detailed information for each question, followed by the international version of the questionnaire with variable names labeled in the margin. Exhibits 1.1 through 1.6 list the questions for each of the fourth grade TIMSS 2019 context questionnaires, and Exhibits 2.1 through 2.7 list the questions for each of the grade 8 questionnaires. For each question, the exhibits provide the questionnaire number, the corresponding variable name, and the question text, as well as whether the question is considered to be ‘trend’—whether a comparable question was asked in 2015.

The TIMSS 2019 questionnaires were designed to provide an opportunity for individual countries to make modifications to some questions or response options. This allowed countries to include the appropriate wording or options most consistent with their own national systems. In the international version of the questionnaires, such questions contain instructions to the National Research Coordinators (NRCs) to substitute the appropriate wording for their country and/or modify or delete any inappropriate questions or options. These instructions were indicated in the questionnaires by text inserted within carets (e.g., <country-specific>). The NRCs were to substitute, if necessary, an appropriate national adaptation that would retain the same basic interpretation as the text within carets. These national adaptations of the context questionnaires are documented in [Supplement 2](#).

The TIMSS 2019 International Database also includes data for derived variables used to report context data in the [TIMSS 2019 International Results in Mathematics and Science](#) report. Procedures for deriving these variables are described in [Supplement 3](#).



SECTION 1.1: **STUDENT** **QUESTIONNAIRE** **GRADE 4**

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Exhibit 1.1: International Context Variables for the TIMSS 2019 Student Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-01	ASBG01	Are you a girl or a boy?	ASBG01	
SQG-02a	ASBG02A	When were you born? Month	ASBG02A	
SQG-02b	ASBG02B	When were you born? Year	ASBG02B	
SQG-03	ASBG03	How often do you speak <language of test> at home?	ASBG03	
SQG-04	ASBG04	About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)	ASBG04	
SQG-05a	ASBG05A	Do you have any of these things at your home? A computer or tablet	ASBG05A, ASBG05B	Modified wording in 2019
SQG-05b	ASBG05B	Do you have any of these things at your home? Study desk/table for your use	ASBG05C	
SQG-05c	ASBG05C	Do you have any of these things at your home? Your own room	ASBG05D	
SQG-05d	ASBG05D	Do you have any of these things at your home? Internet connection	ASBG05E	
SQG-05e	ASBG05E	Do you have any of these things at your home? Your own mobile phone	ASBG05F	
SQG-05f	ASBG05F	Do you have any of these things at your home? <country-specific indicator of wealth>	ASBG05H	
SQG-05g	ASBG05G	Do you have any of these things at your home? <country-specific indicator of wealth>	ASBG05I	
SQG-05h	ASBG05H	Do you have any of these things at your home? <country-specific indicator of wealth>	ASBG05J	
SQG-05i	ASBG05I	Do you have any of these things at your home? <country-specific indicator of wealth>	ASBG05K	
SQG-06A	ASBG06A	Were your <parents/guardians> born in <country>? <Parent/Guardian A>	ASBG06A	Modified wording and response options in 2019
SQG-06B	ASBG06B	Were your <parents/guardians> born in <country>? <Parent/Guardian B>	ASBG06B	Modified wording and response options in 2019
SQG-07	ASBG07	Were you born in <country>?	ASBG07	
SQG-08	ASBG08	About how often are you absent from school?	ASBG08	Modified response options in 2019
SQG-09a	ASBG09A	How often do you feel this way when you arrive at school? I feel tired		
SQG-09b	ASBG09B	How often do you feel this way when you arrive at school? I feel hungry		
SQG-10a	ASBG10A	What do you think about your school? Tell how much you agree with these statements. I like being in school	ASBG11A	
SQG-10b	ASBG10B	What do you think about your school? Tell how much you agree with these statements. I feel safe when I am at school	ASBG11B	
SQG-10c	ASBG10C	What do you think about your school? Tell how much you agree with these statements. I feel like I belong at this school	ASBG11C	
SQG-10d	ASBG10D	What do you think about your school? Tell how much you agree with these statements. Teachers at my school are fair to me	ASBG11E	
SQG-10e	ASBG10E	What do you think about your school? Tell how much you agree with these statements. I am proud to go to this school	ASBG11F	
SQG-11a	ASBG11A	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Made fun of me or called me names	ASBG12A	
SQG-11b	ASBG11B	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Left me out of their games or activities	ASBG12B	

Exhibit 1.1: International Context Variables for the TIMSS 2019 Student Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-11c	ASBG11C	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Spread lies about me	ASBG12C	
SQG-11d	ASBG11D	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Stole something from me	ASBG12D	
SQG-11e	ASBG11E	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Damaged something of mine on purpose		
SQG-11f	ASBG11F	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Hit or hurt me	ASBG12E	
SQG-11g	ASBG11G	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Made me do things I didn't want to do	ASBG12F	
SQG-11h	ASBG11H	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Sent me nasty or hurtful messages online		
SQG-11i	ASBG11I	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared nasty or hurtful things about me online		
SQG-11j	ASBG11J	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared embarrassing photos of me online		
SQG-11k	ASBG11K	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Threatened me	ASBG12H	
SQMS-01	ASBM01	In mathematics lessons, how often do you work problems on your own?		
SQMS-02a	ASBM02A	How much do you agree with these statements about learning mathematics? I enjoy learning mathematics	ASBM01A	
SQMS-02b	ASBM02B	How much do you agree with these statements about learning mathematics? I wish I did not have to study mathematics	ASBM01B	
SQMS-02c	ASBM02C	How much do you agree with these statements about learning mathematics? Mathematics is boring	ASBM01C	
SQMS-02d	ASBM02D	How much do you agree with these statements about learning mathematics? I learn many interesting things in mathematics	ASBM01D	
SQMS-02e	ASBM02E	How much do you agree with these statements about learning mathematics? I like mathematics	ASBM01E	
SQMS-02f	ASBM02F	How much do you agree with these statements about learning mathematics? I like any schoolwork that involves numbers	ASBM01F	
SQMS-02g	ASBM02G	How much do you agree with these statements about learning mathematics? I like to solve mathematics problems	ASBM01G	
SQMS-02h	ASBM02H	How much do you agree with these statements about learning mathematics? I look forward to mathematics lessons	ASBM01H	
SQMS-02i	ASBM02I	How much do you agree with these statements about learning mathematics? Mathematics is one of my favorite subjects	ASBM01I	
SQMS-03a	ASBM03A	How much do you agree with these statements about your mathematics lessons? I know what my teacher expects me to do	ASBM02A	

Exhibit 1.1: International Context Variables for the TIMSS 2019 Student Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQMS-03b	ASBM03B	How much do you agree with these statements about your mathematics lessons? My teacher is easy to understand	ASBM02B	
SQMS-03c	ASBM03C	How much do you agree with these statements about your mathematics lessons? My teacher has clear answers to my questions	ASBM02E	
SQMS-03d	ASBM03D	How much do you agree with these statements about your mathematics lessons? My teacher is good at explaining mathematics	ASBM02F	
SQMS-03e	ASBM03E	How much do you agree with these statements about your mathematics lessons? My teacher does a variety of things to help us learn	ASBM02H	
SQMS-03f	ASBM03F	How much do you agree with these statements about your mathematics lessons? My teacher explains a topic again when we don't understand		
SQMS-04a	ASBM04A	How often do these things happen in your mathematics lessons? Students don't listen to what the teacher says		
SQMS-04b	ASBM04B	How often do these things happen in your mathematics lessons? There is disruptive noise		
SQMS-04c	ASBM04C	How often do these things happen in your mathematics lessons? It is too disorderly for students to work well		
SQMS-04d	ASBM04D	How often do these things happen in your mathematics lessons? My teacher has to wait a long time for students to quiet down		
SQMS-04e	ASBM04E	How often do these things happen in your mathematics lessons? Students interrupt the teacher		
SQMS-04f	ASBM04F	How often do these things happen in your mathematics lessons? My teacher has to keep telling us to follow the classroom rules		
SQMS-05a	ASBM05A	How much do you agree with these statements about mathematics? I usually do well in mathematics	ASBM03A	
SQMS-05b	ASBM05B	How much do you agree with these statements about mathematics? Mathematics is harder for me than for many of my classmates	ASBM03B	
SQMS-05c	ASBM05C	How much do you agree with these statements about mathematics? I am just not good at mathematics	ASBM03C	
SQMS-05d	ASBM05D	How much do you agree with these statements about mathematics? I learn things quickly in mathematics	ASBM03D	
SQMS-05e	ASBM05E	How much do you agree with these statements about mathematics? Mathematics makes me nervous	ASBM03E	
SQMS-05f	ASBM05F	How much do you agree with these statements about mathematics? I am good at working out difficult mathematics problems	ASBM03F	
SQMS-05g	ASBM05G	How much do you agree with these statements about mathematics? My teacher tells me I am good at mathematics	ASBM03G	
SQMS-05h	ASBM05H	How much do you agree with these statements about mathematics? Mathematics is harder for me than any other subject	ASBM03H	
SQMS-05i	ASBM05I	How much do you agree with these statements about mathematics? Mathematics makes me confused	ASBM03I	
SQMS-06	ASBS06	In science lessons, how often does your teacher ask you to conduct science experiments?		
SQMS-07a	ASBS07A	How much do you agree with these statements about learning science? I enjoy learning science	ASBS04A	
SQMS-07b	ASBS07B	How much do you agree with these statements about learning science? I wish I did not have to study science	ASBS04B	
SQMS-07c	ASBS07C	How much do you agree with these statements about learning science? Science is boring	ASBS04C	

Exhibit 1.1: International Context Variables for the TIMSS 2019 Student Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQMS-07d	ASBS07D	How much do you agree with these statements about learning science? I learn many interesting things in science	ASBS04D	
SQMS-07e	ASBS07E	How much do you agree with these statements about learning science? I like science	ASBS04E	
SQMS-07f	ASBS07F	How much do you agree with these statements about learning science? I look forward to learning science in school	ASBS04F	
SQMS-07g	ASBS07G	How much do you agree with these statements about learning science? Science teaches me how things in the world work	ASBS04G	
SQMS-07h	ASBS07H	How much do you agree with these statements about learning science? I like to do science experiments	ASBS04H	
SQMS-07i	ASBS07I	How much do you agree with these statements about learning science? Science is one of my favorite subjects	ASBS04I	
SQMS-08a	ASBS08A	How much do you agree with these statements about your science lessons? I know what my teacher expects me to do	ASBS05A	
SQMS-08b	ASBS08B	How much do you agree with these statements about your science lessons? My teacher is easy to understand	ASBS05B	
SQMS-08c	ASBS08C	How much do you agree with these statements about your science lessons? My teacher has clear answers to my questions	ASBS05E	
SQMS-08d	ASBS08D	How much do you agree with these statements about your science lessons? My teacher is good at explaining science	ASBS05F	
SQMS-08e	ASBS08E	How much do you agree with these statements about your science lessons? My teacher does a variety of things to help us learn	ASBS05H	
SQMS-08f	ASBS08F	How much do you agree with these statements about your science lessons? My teacher explains a topic again when we don't understand		
SQMS-09a	ASBS09A	How much do you agree with these statements about science? I usually do well in science	ASBS06A	
SQMS-09b	ASBS09B	How much do you agree with these statements about science? Science is harder for me than for many of my classmates	ASBS06B	
SQMS-09c	ASBS09C	How much do you agree with these statements about science? I am just not good at science	ASBS06C	
SQMS-09d	ASBS09D	How much do you agree with these statements about science? I learn things quickly in science	ASBS06D	
SQMS-09e	ASBS09E	How much do you agree with these statements about science? My teacher tells me I am good at science	ASBS06E	
SQMS-09f	ASBS09F	How much do you agree with these statements about science? Science is harder for me than any other subject	ASBS06F	
SQMS-09g	ASBS09G	How much do you agree with these statements about science? Science makes me confused	ASBS06G	



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TIMSS

2019

Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Student Questionnaire

<Grade 4>

<TIMSS National Research Center Name>

<Address>

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Directions

In this booklet, you will find questions about you and what you think. For each question, you should choose the answer you think is best.

Let us take a few minutes to practice the kinds of questions you will answer in this booklet.

Example 1 is one kind of question you will find in this booklet.

Example 1

Do you go to school?

Fill **one** circle only.

Yes -- ☐

No -- ☐

Example 2 is another kind of question you will find in this booklet.

Example 2

How often do you do these things?

Fill **one** circle for each line.

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
a) I talk with my friends	☐	☐	☐	☐
b) I play sports	☐	☐	☐	☐
c) I ride a skateboard	☐	☐	☐	☐

Example 3 is another kind of question you will find in this booklet.

Example 3

What do you think? Tell how much you agree with these statements.

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) Watching movies is fun	☐	☐	☐	☐
b) I like eating ice cream	☐	☐	☐	☐
c) I do not like waking up early	☐	☐	☐	☐
d) I enjoy doing chores	☐	☐	☐	☐

- Read each question carefully, and pick the answer you think is best.
- Fill in the circle next to or under your answer.
- If you decide to change your answer, draw an **X** through your first answer, like this: ~~☐~~. Then, fill in the circle next to or under your new answer.
- Ask for help if you do not understand something or are not sure how to answer.

About you

G1 _____

Are you a girl or a boy?

ASBG01

*Fill **one** circle only.*

Girl -- ☐

Boy -- ☐

G2 _____

When were you born?

ASBG02A

Fill the circles next to the month and year you were born.

ASBG02B

a) Month

b) Year

January -- ☐

2006 -- ☐

February -- ☐

2007 -- ☐

March -- ☐

2008 -- ☐

April -- ☐

2009 -- ☐

May -- ☐

2010 -- ☐

June -- ☐

2011 -- ☐

July -- ☐

2012 -- ☐

August -- ☐

Other -- ☐

September -- ☐

October -- ☐

November -- ☐

December -- ☐

G3

How often do you speak <language of test> at home?

ASBG03

Fill **one** circle only.

I always speak
<language of test> at home -- ☐

I almost always speak
<language of test> at home -- ☐

I sometimes speak <language
of test> and sometimes speak
another language at home -- ☐

I never speak <language
of test> at home -- ☐

G4

About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)

ASBG04

Fill **one** circle only.

None or very few (0–10 books) -- ☐

This shows 10 books



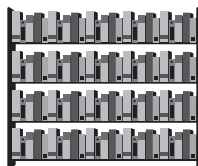
Enough to fill one shelf (11–25 books) -- ☐

This shows 25 books



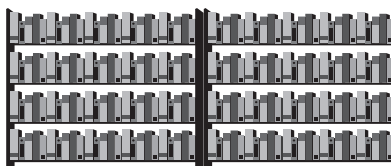
Enough to fill one bookcase
(26–100 books) -- ☐

This shows 100 books



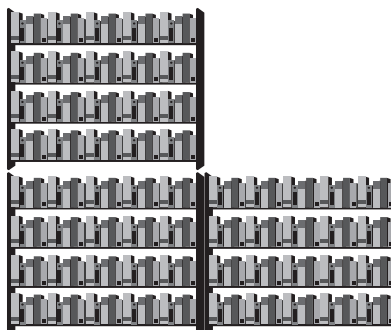
Enough to fill two bookcases
(101–200 books) -- ☐

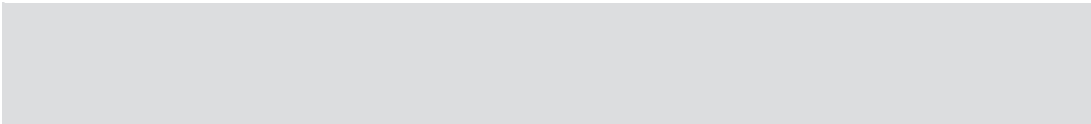
This shows 200 books



Enough to fill three or more bookcases
(more than 200) -- ☐

This shows more than 200 books





G5

Do you have any of these things at your home?

Fill **one** circle for each line.

		Yes	No
		↓	↓
ASBG05A	a) A computer or tablet -----	☐	☐
ASBG05B	b) Study desk/table for your use -----	☐	☐
ASBG05C	c) Your own room -----	☐	☐
ASBG05D	d) Internet connection -----	☐	☐
ASBG05E	e) Your own mobile phone -----	☐	☐
ASBG05F	f) <country-specific indicator of wealth> -----	☐	☐
ASBG05G	g) <country-specific indicator of wealth> -----	☐	☐
ASBG05H	h) <country-specific indicator of wealth> -----	☐	☐
ASBG05I	i) <country-specific indicator of wealth> -----	☐	☐

The following question is about your <Parent/Guardian A> and <Parent/Guardian B>. <If you have only one parent/guardian, answer for Parent/Guardian A. If you have two parents/guardians, choose one for Parent/Guardian A and the other for Parent/Guardian B.>

G6

Were your <parents/guardians> born in <country>?

A. <Parent/Guardian A>

ASBG06A

*Fill **one** circle only.*

Yes -- ☐

No -- ☐

I don't know -- ☐

Not applicable -- ☐

B. <Parent/Guardian B>

ASBG06B

*Fill **one** circle only.*

Yes -- ☐

No -- ☐

I don't know -- ☐

Not applicable -- ☐

G7

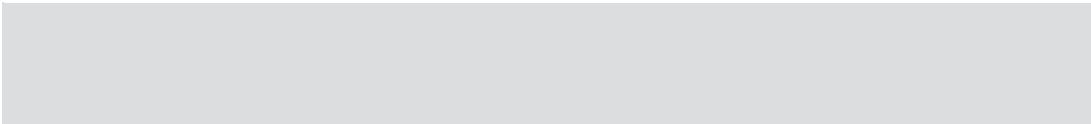
Were you born in <country>?

ASBG07

*Fill **one** circle only.*

Yes -- ☐

No -- ☐



G8

About how often are you absent from school?

ASBG08

Fill **one** circle only.

- Once a week -- ☐
- Once every two weeks -- ☐
- Once a month -- ☐
- Once every two months -- ☐
- Never or almost never -- ☐

G9

How often do you feel this way when you arrive at school?

Fill **one** circle for each line.

		Every day	Almost every day	Sometimes	Never
		↓	↓	↓	↓
ASBG09A	a) I feel tired -----	☐	☐	☐	☐
ASBG09B	b) I feel hungry -----	☐	☐	☐	☐

Your School

G10

What do you think about your school? Tell how much you agree with these statements.

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBG10A	a) I like being in school	☐	☐	☐	☐
ASBG10B	b) I feel safe when I am at school	☐	☐	☐	☐
ASBG10C	c) I feel like I belong at this school	☐	☐	☐	☐
ASBG10D	d) Teachers at my school are fair to me	☐	☐	☐	☐
ASBG10E	e) I am proud to go to this school	☐	☐	☐	☐

G11

During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet?

Fill **one** circle for each line.

		At least once a week	Once or twice a month	A few times a year	Never
ASBG11A	a) Made fun of me or called me names	☐	☐	☐	☐
ASBG11B	b) Left me out of their games or activities	☐	☐	☐	☐
ASBG11C	c) Spread lies about me	☐	☐	☐	☐
ASBG11D	d) Stole something from me	☐	☐	☐	☐
ASBG11E	e) Damaged something of mine on purpose	☐	☐	☐	☐
ASBG11F	f) Hit or hurt me (<i>e.g., shoving, hitting, kicking</i>)	☐	☐	☐	☐
ASBG11G	g) Made me do things I didn't want to do	☐	☐	☐	☐
ASBG11H	h) Sent me nasty or hurtful messages online	☐	☐	☐	☐
ASBG11I	i) Shared nasty or hurtful things about me online	☐	☐	☐	☐
ASBG11J	j) Shared embarrassing photos of me online	☐	☐	☐	☐
ASBG11K	k) Threatened me	☐	☐	☐	☐

Mathematics in school

MS1

In mathematics lessons, how often do you work problems on your own?

ASBM01

Fill **one** circle only.

Every or almost every lesson -- ☐

About half the lessons -- ☐

Some lessons -- ☐

Never -- ☐

MS2

How much do you agree with these statements about learning mathematics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBM02A	a) I enjoy learning mathematics -----	☐	☐	☐	☐
ASBM02B	b) I wish I did not have to study mathematics -----	☐	☐	☐	☐
ASBM02C	c) Mathematics is boring -----	☐	☐	☐	☐
ASBM02D	d) I learn many interesting things in mathematics -----	☐	☐	☐	☐
ASBM02E	e) I like mathematics -----	☐	☐	☐	☐
ASBM02F	f) I like any schoolwork that involves numbers -----	☐	☐	☐	☐
ASBM02G	g) I like to solve mathematics problems -----	☐	☐	☐	☐
ASBM02H	h) I look forward to mathematics lessons -----	☐	☐	☐	☐
ASBM02I	i) Mathematics is one of my favorite subjects -----	☐	☐	☐	☐

MS3

How much do you agree with these statements about your mathematics lessons?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBM03A	a) I know what my teacher expects me to do -----	☐	☐	☐	☐
ASBM03B	b) My teacher is easy to understand --	☐	☐	☐	☐
ASBM03C	c) My teacher has clear answers to my questions -----	☐	☐	☐	☐
ASBM03D	d) My teacher is good at explaining mathematics -----	☐	☐	☐	☐
ASBM03E	e) My teacher does a variety of things to help us learn -----	☐	☐	☐	☐
ASBM03F	f) My teacher explains a topic again when we don't understand ---	☐	☐	☐	☐

MS4

How often do these things happen in your
mathematics lessons?

Fill **one** circle for each line.

		Every or almost every lesson	About half the lessons	Some lessons	Never
		↓	↓	↓	↓
ASBM04A	a) Students don't listen to what the teacher says	☐	☐	☐	☐
ASBM04B	b) There is disruptive noise	☐	☐	☐	☐
ASBM04C	c) It is too disorderly for students to work well	☐	☐	☐	☐
ASBM04D	d) My teacher has to wait a long time for students to quiet down	☐	☐	☐	☐
ASBM04E	e) Students interrupt the teacher	☐	☐	☐	☐
ASBM04F	f) My teacher has to keep telling us to follow the classroom rules	☐	☐	☐	☐

MS5

How much do you agree with these statements about mathematics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBM05A	a) I usually do well in mathematics ---	☐	☐	☐	☐
ASBM05B	b) Mathematics is harder for me than for many of my classmates ----	☐	☐	☐	☐
ASBM05C	c) I am just not good at mathematics -	☐	☐	☐	☐
ASBM05D	d) I learn things quickly in mathematics -----	☐	☐	☐	☐
ASBM05E	e) Mathematics makes me nervous----	☐	☐	☐	☐
ASBM05F	f) I am good at working out difficult mathematics problems -----	☐	☐	☐	☐
ASBM05G	g) My teacher tells me I am good at mathematics -----	☐	☐	☐	☐
ASBM05H	h) Mathematics is harder for me than any other subject -----	☐	☐	☐	☐
ASBM05I	i) Mathematics makes me confused---	☐	☐	☐	☐

Science in school

MS6

In science lessons, how often does your teacher ask you to conduct science experiments?

ASBS06

Fill *one* circle only.

- At least once a week -- ☐
- Once or twice a month -- ☐
- A few times a year -- ☐
- Never -- ☐

MS7

How much do you agree with these statements about learning science?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBS07A	a) I enjoy learning science	☐	☐	☐	☐
ASBS07B	b) I wish I did not have to study science	☐	☐	☐	☐
ASBS07C	c) Science is boring	☐	☐	☐	☐
ASBS07D	d) I learn many interesting things in science	☐	☐	☐	☐
ASBS07E	e) I like science	☐	☐	☐	☐
ASBS07F	f) I look forward to learning science in school	☐	☐	☐	☐
ASBS07G	g) Science teaches me how things in the world work	☐	☐	☐	☐
ASBS07H	h) I like to do science experiments ----	☐	☐	☐	☐
ASBS07I	i) Science is one of my favorite subjects	☐	☐	☐	☐

MS8

How much do you agree with these statements about your science lessons?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBS08A a) I know what my teacher expects me to do -----	☐	☐	☐	☐
ASBS08B b) My teacher is easy to understand --	☐	☐	☐	☐
ASBS08C c) My teacher has clear answers to my questions -----	☐	☐	☐	☐
ASBS08D d) My teacher is good at explaining science -----	☐	☐	☐	☐
ASBS08E e) My teacher does a variety of things to help us learn -----	☐	☐	☐	☐
ASBS08F f) My teacher explains a topic again when we don't understand ---	☐	☐	☐	☐

MS9

How much do you agree with these statements about science?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBS09A	a) I usually do well in science -----	☐	☐	☐	☐
ASBS09B	b) Science is harder for me than for many of my classmates ----	☐	☐	☐	☐
ASBS09C	c) I am just not good at science -----	☐	☐	☐	☐
ASBS09D	d) I learn things quickly in science -----	☐	☐	☐	☐
ASBS09E	e) My teacher tells me I am good at science -----	☐	☐	☐	☐
ASBS09F	f) Science is harder for me than any other subject -----	☐	☐	☐	☐
ASBS09G	g) Science makes me confused -----	☐	☐	☐	☐

Thank You!

Thank you for filling out the questionnaire!



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<Grade 4>



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Educational Achievement



SECTION 1.2: **STUDENT QUESTIONNAIRE —** **eTIMSS SUPPLEMENT** **GRADE 4**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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

Exhibit 1.2: International Context Variables for the TIMSS 2019 Student Questionnaire—eTIMSS Supplement (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
SQE-01A	ASBE01A	Did you like that this test was on a computer or tablet?
SQE-01Ba	ASBE01BA	Did you have any of these difficulties? It was hard to type
SQE-01Bb	ASBE01BB	Did you have any of these difficulties? I had trouble using the number pad
SQE-01Bc	ASBE01BC	Did you have any of these difficulties? Objects were hard to drag
SQE-01Bd	ASBE01BD	Did you have any of these difficulties? There was no good place to work out my answers
SQE-01Be	ASBE01BE	Did you have any of these difficulties? The computer or tablet was slow
SQE-01Bf	ASBE01BF	Did you have any of these difficulties? I had to start my test over because of a computer or tablet problem
SQE-02a	ASBE02A	At school this year, how often did you use a computer or tablet to do each of the following? Work on a school assignment such as a paper, report, or presentation
SQE-02b	ASBE02B	At school this year, how often did you use a computer or tablet to do each of the following? Mathematics schoolwork
SQE-02c	ASBE02C	At school this year, how often did you use a computer or tablet to do each of the following? Science schoolwork
SQE-02d	ASBE02D	At school this year, how often did you use a computer or tablet to do each of the following? Take a test or quiz
SQE-03a	ASBE03A	How much do you agree with these statements? I am good at using a computer
SQE-03b	ASBE03B	How much do you agree with these statements? I am good at typing
SQE-03c	ASBE03C	How much do you agree with these statements? I can use a touchscreen on a computer, tablet, or smartphone
SQE-03d	ASBE03D	How much do you agree with these statements? It is easy for me to find information on the Internet
SQE-03e	ASBE03E	How much do you agree with these statements? I can look up the meanings of words on the Internet
SQE-03f	ASBE03F	How much do you agree with these statements? I can write sentences and paragraphs using a computer
SQE-03g	ASBE03G	How much do you agree with these statements? I can edit text on a computer

ASBE01A

ASBE01BA

ASBE01BB

ASBE01BC

ASBE01BD

ASBE01BE

ASBE01BF

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eTIMSS Questionnaire

1

A. Did you like that this test was on a computer or tablet?

☐ I liked it a lot 😊

☐ I liked it a little 😊

☐ I didn't like it very much 😞

☐ I didn't like it at all 😞

B. Did you have any of these difficulties?

Click one circle for each row.

	Yes	No
a) It was hard to type	☐	☐
b) I had trouble using the number pad	☐	☐
c) Objects were hard to drag	☐	☐
d) There was no good place to work out my answers	☐	☐
e) The computer or tablet was slow	☐	☐
f) I had to start my test over because of a computer or tablet problem	☐	☐

Calculator icon

← →

ASBE02A

ASBE02B

ASBE02C

ASBE02D

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eTIMSS Questionnaire

2

At school this year, how often did you use a computer or tablet to do each of the following?

Click *one* circle for each row.

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
a) Work on a school assignment such as a paper, report, or presentation	☐	☐	☐	☐
b) Mathematics schoolwork	☐	☐	☐	☐
c) Science schoolwork	☐	☐	☐	☐
d) Take a test or quiz	☐	☐	☐	☐

←

→

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SECTION 1.2: STUDENT QUESTIONNAIRE—eTIMSS SUPPLEMENT – GRADE 4
TIMSS 2019 USER GUIDE FOR THE INTERNATIONAL DATABASE

33

ASBE03A

ASBE03B

ASBE03C

ASBE03D

ASBE03E

ASBE03F

ASBE03G

IEA
eTIMSS
2019

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eTIMSS Questionnaire

3 How much do you agree with these statements?

Click *one* circle for each row.

Agree a lot Agree a little Disagree a little Disagree a lot

a) I am good at using a computer

☐
☐
☐
☐

b) I am good at typing

☐
☐
☐
☐

c) I can use a touchscreen on a computer, tablet, or smartphone

☐
☐
☐
☐

d) It is easy for me to find information on the Internet

☐
☐
☐
☐

e) I can look up the meanings of words on the Internet

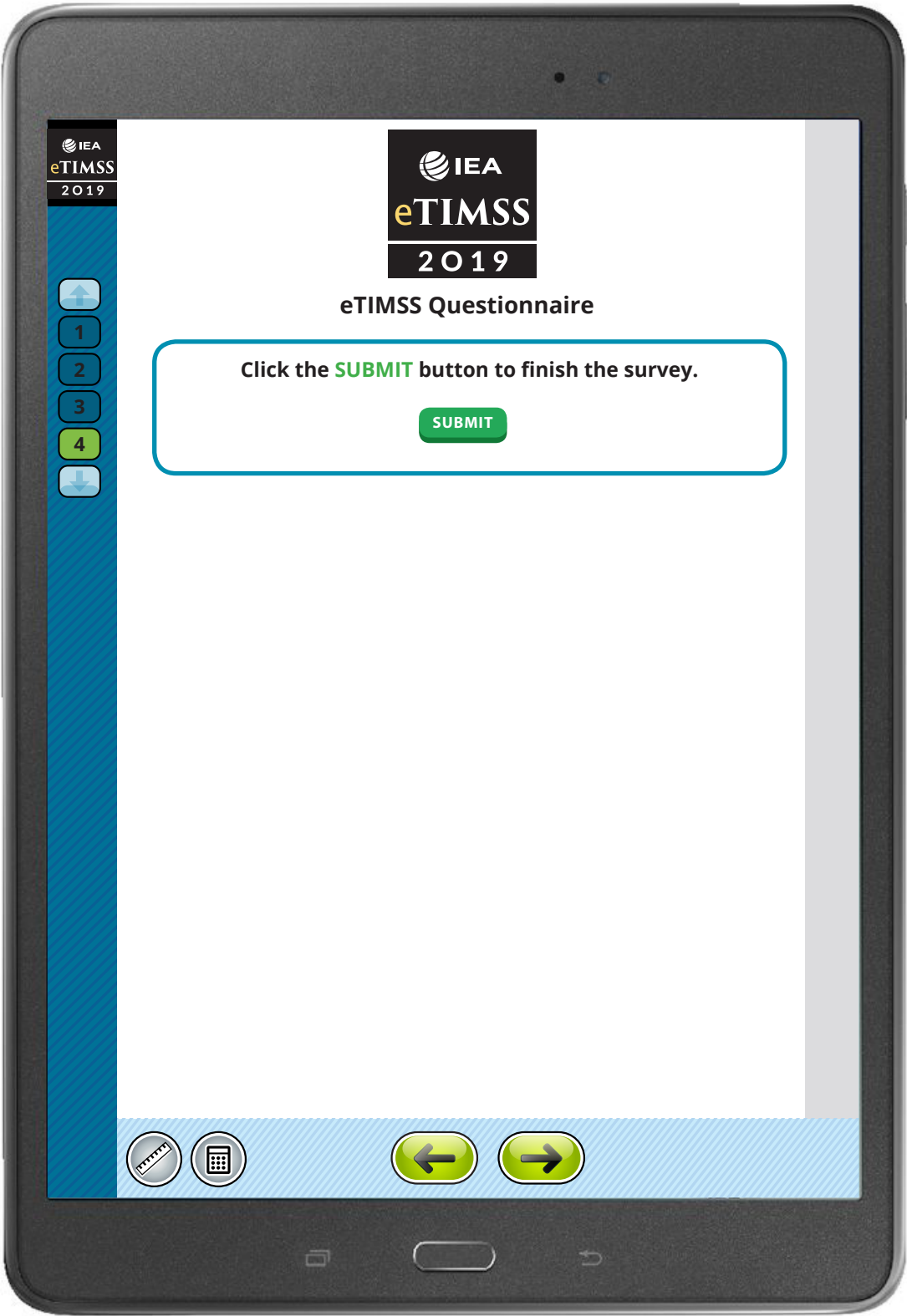
☐
☐
☐
☐

f) I can write sentences and paragraphs using a computer

☐
☐
☐
☐

g) I can edit text on a computer

☐
☐
☐
☐



SECTION 1.3: **HOME QUESTIONNAIRE** **(EARLY LEARNING SURVEY)** **GRADE 4**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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Exhibit 1.3: International Context Variables for the TIMSS 2019 Home Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
HQ-01a	ASBH01A	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Read books	ASBH02A	
HQ-01b	ASBH01B	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Tell stories	ASBH02B	
HQ-01c	ASBH01C	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Sing songs	ASBH02C	
HQ-01d	ASBH01D	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Play with alphabet toys	ASBH02D	
HQ-01e	ASBH01E	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Talk about things you had done	ASBH02E	
HQ-01f	ASBH01F	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Talk about what you had read	ASBH02F	
HQ-01g	ASBH01G	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Play word games	ASBH02G	
HQ-01h	ASBH01H	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Write letters or words	ASBH02H	
HQ-01i	ASBH01I	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Read aloud signs and labels	ASBH02I	
HQ-01j	ASBH01J	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Say counting rhymes or sing counting songs	ASBH02J	
HQ-01k	ASBH01K	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Play with number toys	ASBH02K	
HQ-01l	ASBH01L	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Count different things	ASBH02L	
HQ-01m	ASBH01M	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Play games involving shapes	ASBH02M	
HQ-01n	ASBH01N	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Play with building blocks or construction toys	ASBH02N	
HQ-01o	ASBH01O	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Play board or card games	ASBH02O	
HQ-01p	ASBH01P	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Write numbers	ASBH02P	

Exhibit 1.3: International Context Variables for the TIMSS 2019 Home Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
HQ-01q	ASBH01Q	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Draw shapes		
HQ-01r	ASBH01R	Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her? Measure or weigh things		
HQ-02A	ASBH02A	Was your child born in <country>?	ASBH03A	Modified wording in 2019
HQ-02B	ASBH02B	How old was your child when he/she came to <country>?	ASBH03B	Modified wording in 2019
HQ-03a	ASBH03A	What language did your child speak before he/she began school? <language of test>	ASBH04A	
HQ-03b	ASBH03B	What language did your child speak before he/she began school? <country-specific>	ASBH04B	
HQ-03c	ASBH03C	What language did your child speak before he/she began school? <country-specific>	ASBH04C	
HQ-03d	ASBH03D	What language did your child speak before he/she began school? <country-specific>	ASBH04D	
HQ-03e	ASBH03E	What language did your child speak before he/she began school? <country-specific>	ASBH04E	
HQ-03f	ASBH03F	What language did your child speak before he/she began school? Other	ASBH04F	
HQ-04Aa	ASBH04AA	Did your child attend the following before <first grade>? Early childhood educational program or center for children under age 3	ASBH05AA	Modified wording in 2019
HQ-04Ab	ASBH04AB	Did your child attend the following before <first grade>? Pre-primary educational program for children age 3 or older, including <Kindergarten>	ASBH05AB	Modified wording in 2019
HQ-04B	ASBH04B	Approximately, how long was your child in these programs altogether?	ASBH05B	
HQ-05	ASBH05	How old was your child when he/she began the <first grade> of primary/elementary school?	ASBH06	
HQ-06a	ASBH06A	How well could your child do the following when he/she began the <first grade> of primary/elementary school? Recognize most of the letters of the alphabet	ASBH07A	
HQ-06b	ASBH06B	How well could your child do the following when he/she began the <first grade> of primary/elementary school? Read some words	ASBH07B	
HQ-06c	ASBH06C	How well could your child do the following when he/she began the <first grade> of primary/elementary school? Read sentences	ASBH07C	
HQ-06d	ASBH06D	How well could your child do the following when he/she began the <first grade> of primary/elementary school? Read a story	ASBH07D	
HQ-06e	ASBH06E	How well could your child do the following when he/she began the <first grade> of primary/elementary school? Write letters of the alphabet	ASBH07E	
HQ-06f	ASBH06F	How well could your child do the following when he/she began the <first grade> of primary/elementary school? Write his/her name		
HQ-06g	ASBH06G	How well could your child do the following when he/she began the <first grade> of primary/elementary school? Write words other than his/her name		
HQ-07a	ASBH07A	Could your child do the following when he/she began the <first grade> of primary/elementary school? Count by himself/herself	ASBH08A	
HQ-07b	ASBH07B	Could your child do the following when he/she began the <first grade> of primary/elementary school? Recognize written numbers	ASBH08B	

Exhibit 1.3: International Context Variables for the TIMSS 2019 Home Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
HQ-07c	ASBH07C	Could your child do the following when he/she began the <first grade> of primary/elementary school? Write numbers	ASBH08C	
HQ-07d	ASBH07D	Could your child do the following when he/she began the <first grade> of primary/elementary school? Do simple addition	ASBH08D	
HQ-07e	ASBH07E	Could your child do the following when he/she began the <first grade> of primary/elementary school? Do simple subtraction	ASBH08E	
HQ-08Aa	ASBH08AA	During the last 12 months, has your child attended extra lessons or tutoring not provided by the school in the following subjects? Mathematics	ASBH10AA	
HQ-08Ab	ASBH08AB	During the last 12 months, has your child attended extra lessons or tutoring not provided by the school in the following subjects? Science	ASBH10AB	
HQ-08Ba	ASBH08BA	For how many of the last 12 months has your child attended extra lessons or tutoring? Mathematics	ASBH10BA	
HQ-08Bb	ASBH08BB	For how many of the last 12 months has your child attended extra lessons or tutoring? Science	ASBH10BB	
HQ-09a	ASBH09A	What do you think of your child's school? My child's school does a good job including me in my child's education	ASBH11A	
HQ-09b	ASBH09B	What do you think of your child's school? My child's school provides a safe environment	ASBH11B	
HQ-09c	ASBH09C	What do you think of your child's school? My child's school cares about my child's progress in school	ASBH11C	
HQ-09d	ASBH09D	What do you think of your child's school? My child's school does a good job informing me of his/her progress	ASBH11D	
HQ-09e	ASBH09E	What do you think of your child's school? My child's school promotes high academic standards	ASBH11E	
HQ-09f	ASBH09F	What do you think of your child's school? My child's school does a good job in helping him/her become better in reading	ASBH11F	
HQ-09g	ASBH09G	What do you think of your child's school? My child's school does a good job in helping him/her become better in mathematics	ASBH11G	
HQ-09h	ASBH09H	What do you think of your child's school? My child's school does a good job in helping him/her become better in science	ASBH11H	
HQ-10	ASBH10	About how many books are there in your home? (Do not count ebooks, magazines, newspapers, or children's books.)	ASBH13	
HQ-11	ASBH11	About how many children's books are there in your home? (Do not count children's ebooks, magazines, or school books.)	ASBH14	
HQ-12A	ASBH12A	Were the child's <parents/guardians> born in <country>? <Parent/Guardian A>	ASBH17A	Modified wording and response options in 2019
HQ-12B	ASBH12B	Were the child's <parents/guardians> born in <country>? <Parent/Guardian B>	ASBH17B	Modified wording and response options in 2019
HQ-13Aa	ASBH13AA	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian A> <language of test>	ASBH18AA	Modified wording in 2019
HQ-13Ab	ASBH13AB	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian B> <language of test>	ASBH18AB	Modified wording in 2019
HQ-13Ba	ASBH13BA	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian A> <country-specific>	ASBH18BA	Modified wording in 2019
HQ-13Bb	ASBH13BB	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian B> <country-specific>	ASBH18BB	Modified wording in 2019

Exhibit 1.3: International Context Variables for the TIMSS 2019 Home Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
HQ-13Ca	ASBH13CA	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian A> <country-specific>	ASBH18CA	Modified wording in 2019
HQ-13Cb	ASBH13CB	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian B> <country-specific>	ASBH18CB	Modified wording in 2019
HQ-13Da	ASBH13DA	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian A> <country-specific>	ASBH18DA	Modified wording in 2019
HQ-13Db	ASBH13DB	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian B> <country-specific>	ASBH18DB	Modified wording in 2019
HQ-13Ea	ASBH13EA	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian A> <country-specific>	ASBH18EA	Modified wording in 2019
HQ-13Eb	ASBH13EB	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian B> <country-specific>	ASBH18EB	Modified wording in 2019
HQ-13Fa	ASBH13FA	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian A> Other	ASBH18FA	Modified wording in 2019
HQ-13Fb	ASBH13FB	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian B> Other	ASBH18FB	Modified wording in 2019
HQ-13Ga	ASBH13GA	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian A> Not applicable	ASBH18GA	Modified wording and response options in 2019
HQ-13Gb	ASBH13GB	Do the child's <parents/guardians> talk with the child in the following languages? <Parent/Guardian B> Not applicable	ASBH18GB	Modified wording and response options in 2019
HQ-14	ASBH14	How often does your child speak <language of test> at home?	ASBH19	
HQ-15a	ASBH15A	What is the highest level of education completed by the child's <parents/guardians>? <Parent/Guardian A>	ASBH20A	Modified wording in 2019
HQ-15b	ASBH15B	What is the highest level of education completed by the child's <parents/guardians>? <Parent/Guardian B>	ASBH20B	Modified wording in 2019
HQ-16	ASBH16	How far in his/her education do you expect your child to go?	ASBH21	
HQ-17a	ASBH17A	What kind of work do the child's <parents/guardians> do for their main jobs? <Parent/Guardian A>	ASBH23A	Modified wording and response options in 2019
HQ-17b	ASBH17B	What kind of work do the child's <parents/guardians> do for their main jobs? <Parent/Guardian B>	ASBH23B	Modified wording and response options in 2019

Identification Label



TRENDS IN INTERNATIONAL
MATHEMATICS AND SCIENCE STUDY

Early Learning Survey

<Grade 4>

<TIMSS National Research Center Name>
<Address>

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International Study Center
Lynch School of Education
BOSTON COLLEGE

Early Learning Survey

Your child's class has been selected to participate in the Trends in International Mathematics and Science Study (TIMSS). TIMSS is a research study about how children learn to do mathematics and science. The study is sponsored by the International Association for the Evaluation of Educational Achievement (IEA) and is being conducted in almost 60 countries around the world.

This survey asks about your child's early learning experiences. We are interested in what you and your child do together and what you think about different things related to your child's school. There are no right or wrong answers to these questions.

The information being collected will be extremely useful for helping understand how young children learn and for helping to improve the teaching and learning for all children. We ask that you respond to all of the questions you feel comfortable answering. We would like to reassure you, however, that your responses to this survey are confidential.

This survey should be completed by the child's <parent/guardian>, or jointly by both <parents/guardians>.

TIMSS 2019

Before Your Child Began Primary/Elementary School

1

Before your child began primary/elementary school, how often did you or someone else in your home do the following activities with him or her?

Check **one** circle for each line.

		Often	Sometimes	Never or almost never
ASBH01A	a) Read books -----	☐	☐	☐
ASBH01B	b) Tell stories -----	☐	☐	☐
ASBH01C	c) Sing songs -----	☐	☐	☐
ASBH01D	d) Play with alphabet toys (e.g., blocks with letters of the alphabet) -----	☐	☐	☐
ASBH01E	e) Talk about things you had done -----	☐	☐	☐
ASBH01F	f) Talk about what you had read -	☐	☐	☐
ASBH01G	g) Play word games -----	☐	☐	☐
ASBH01H	h) Write letters or words -----	☐	☐	☐
ASBH01I	i) Read aloud signs and labels ---	☐	☐	☐
ASBH01J	j) Say counting rhymes or sing counting songs -----	☐	☐	☐
ASBH01K	k) Play with number toys (e.g., blocks with numbers) ---	☐	☐	☐
ASBH01L	l) Count different things -----	☐	☐	☐
ASBH01M	m) Play games involving shapes (e.g., shape sorting toys, puzzles) -----	☐	☐	☐
ASBH01N	n) Play with building blocks or construction toys -----	☐	☐	☐
ASBH01O	o) Play board or card games -----	☐	☐	☐
ASBH01P	p) Write numbers -----	☐	☐	☐
ASBH01Q	q) Draw shapes -----	☐	☐	☐
ASBH01R	r) Measure or weigh things (e.g., when cooking) -----	☐	☐	☐

Please turn the page

Early Learning Survey

2

2

ASBH02A **A. Was your child born in <country>?**

Check **one** circle only.

Yes--- ☐ (If Yes, go to #3)

No--- ☐

If No,

ASBH02B **B. How old was your child when he/she came to <country>?**

Check **one** circle only.

Younger than 3 years old--- ☐

3 to 5 years old--- ☐

6 to 7 years old--- ☐

8 years old or older--- ☐

3

What language did your child speak before he/she began school?

If your child spoke more than one language check "Yes" for more than one language.

Check **one** circle for each line.

		Yes	No
ASBH03A	a) <language of test> -----	☐	☐
ASBH03B	b) <country-specific> -----	☐	☐
ASBH03C	c) <country-specific> -----	☐	☐
ASBH03D	d) <country-specific> -----	☐	☐
ASBH03E	e) <country-specific> -----	☐	☐
ASBH03F	f) Other -----	☐	☐

4

A. Did your child attend the following before <first grade>?

Check **one** circle for each line.

- | | | Yes | No |
|----------|--|-----------------------|-----------------------|
| ASBH04AA | a) Early childhood educational program or center for children under age 3 ----- | ☐ | ☐ |
| ASBH04AB | b) Pre-primary educational program for children age 3 or older, including <Kindergarten> ----- | ☐ | ☐ |

ASBH04B B. Approximately, how long was your child in these programs altogether?

Check **one** circle only.

- Did not attend --- ☐
- Less than 1 year --- ☐
- 1 year --- ☐
- 2 years --- ☐
- 3 years --- ☐
- 4 years or more --- ☐

ASBH05

5

**How old was your child when he/she began the
<first grade> of primary/elementary school?**

Check **one** circle only.

5 years old or younger --- ☐

6 years old --- ☐

7 years old --- ☐

8 years old or older --- ☐

6

**How well could your child do the following when
he/she began the <first grade> of primary/
elementary school?**

Check **one** circle for each line.

		Very well		Moderately well		Not very well		Not at all
ASBH06A	a) Recognize most of the letters of the alphabet -----	☐	—	☐	—	☐	—	☐
ASBH06B	b) Read some words -----	☐	—	☐	—	☐	—	☐
ASBH06C	c) Read sentences -----	☐	—	☐	—	☐	—	☐
ASBH06D	d) Read a story -----	☐	—	☐	—	☐	—	☐
ASBH06E	e) Write letters of the alphabet -----	☐	—	☐	—	☐	—	☐
ASBH06F	f) Write his/her name -----	☐	—	☐	—	☐	—	☐
ASBH06G	g) Write words other than his/her name -----	☐	—	☐	—	☐	—	☐

7

Could your child do the following when he/she began the <first grade> of primary/elementary school?

Check **one** circle for each line.

Not at all

Up to 10

Up to 20

Up to 100 or higher

ASBH07A

a) Count by himself/herself -----

☐
☐
☐
☐

ASBH07B

b) Recognize written numbers -----

☐
☐
☐
☐

ASBH07C

c) Write numbers -----

☐
☐
☐
☐

Yes

No

ASBH07D

d) Do simple addition -----

☐
☐

ASBH07E

e) Do simple subtraction -----

☐
☐

Studying Outside of School

8

A. During the last 12 months, has your child attended extra lessons or tutoring not provided by the school in the following subjects?

Check **one** circle for each line.

		Yes, to excel in class	Yes, to keep up in class	No
ASBH08AA	a) Mathematics -----	☐	☐	☐
ASBH08AB	b) Science -----	☐	☐	☐

B. For how many of the last 12 months has your child attended extra lessons or tutoring?

Check **one** circle for each line.

		Did not attend	Less than 4 months	4-8 months	More than 8 months
ASBH08BA	a) Mathematics -----	☐	☐	☐	☐
ASBH08BB	b) Science -----	☐	☐	☐	☐

9

What do you think of your child's school?

Check **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
ASBH09A	a) My child's school does a good job including me in my child's education -----	☐	☐	☐	☐
ASBH09B	b) My child's school provides a safe environment -----	☐	☐	☐	☐
ASBH09C	c) My child's school cares about my child's progress in school -----	☐	☐	☐	☐
ASBH09D	d) My child's school does a good job informing me of his/her progress -----	☐	☐	☐	☐
ASBH09E	e) My child's school promotes high academic standards -----	☐	☐	☐	☐
ASBH09F	f) My child's school does a good job in helping him/her become better in <u>reading</u> -----	☐	☐	☐	☐
ASBH09G	g) My child's school does a good job in helping him/her become better in <u>mathematics</u> -----	☐	☐	☐	☐
ASBH09H	h) My child's school does a good job in helping him/her become better in <u>science</u> -----	☐	☐	☐	☐

Additional Information

ASBH10 **10**

**About how many books are there in your home?
(Do not count ebooks, magazines, newspapers,
or children's books.)**

*Check **one** circle only.*

- 0–10--- ☐
- 11–25--- ☐
- 26–100--- ☐
- 101–200--- ☐
- More than 200--- ☐

ASBH11 **11**

**About how many children's books are there in
your home? (Do not count children's ebooks,
magazines, or school books.)**

*Check **one** circle only.*

- 0–10--- ☐
- 11–25--- ☐
- 26–50--- ☐
- 51–100--- ☐
- More than 100--- ☐

The following questions are about the child's <Parent/Guardian A> and <Parent/Guardian B>. <If the child has only one parent/guardian, answer for Parent/Guardian A. If there are two parents/guardians, choose one for Parent/Guardian A and the other for Parent/Guardian B.>

12

Were the child's <parents/guardians> born in <country>?

ASBH12A A. <Parent/Guardian A>

Check **one** circle only.

Yes--- ☐

No--- ☐

Not applicable--- ☐

ASBH12B B. <Parent/Guardian B>

Check **one** circle only.

Yes--- ☐

No--- ☐

Not applicable--- ☐

13

Do the child's <parents/guardians> talk with the child in the following languages?

Check **all** that apply.

		<Parent/ Guardian A>	<Parent/ Guardian B>	
ASBH13AA	a) <language of test> -----	☐	☐	ASBH13AB
ASBH13BA	b) <country-specific> -----	☐	☐	ASBH13BB
ASBH13CA	c) <country-specific> -----	☐	☐	ASBH13CB
ASBH13DA	d) <country-specific> -----	☐	☐	ASBH13DB
ASBH13EA	e) <country-specific> -----	☐	☐	ASBH13EB
ASBH13FA	f) Other -----	☐	☐	ASBH13FB
ASBH13GA	g) Not applicable -----	☐	☐	ASBH13GB

14

ASBH14 How often does your child speak <language of test> at home?

Check **one** circle only.

Always--- ☐

Almost always--- ☐

Sometimes--- ☐

Never--- ☐

15

What is the highest level of education completed by the child's <parents/guardians>?

ASBH15A

Check **one** circle in each column.

ASBH15B

<Parent/
Guardian A>

<Parent/
Guardian B>

- | | | |
|---|-----------------------|-----------------------|
| a) Did not go to school ----- | ☐ | ☐ |
| b) Some <Primary education—
ISCED Level 1 or Lower secondary
education—ISCED Level 2> ----- | ☐ | ☐ |
| c) <Lower secondary education—
ISCED Level 2> ----- | ☐ | ☐ |
| d) <Upper secondary education—
ISCED Level 3> ----- | ☐ | ☐ |
| e) <Post-secondary, non-tertiary
education—ISCED Level 4> ----- | ☐ | ☐ |
| f) <Short-cycle tertiary
education—ISCED Level 5> ----- | ☐ | ☐ |
| g) <Bachelor's or equivalent
level—ISCED Level 6> ----- | ☐ | ☐ |
| h) <Postgraduate degree:
Master's—ISCED Level 7
or Doctor—ISCED Level 8> ----- | ☐ | ☐ |
| i) Not applicable ----- | ☐ | ☐ |

ASBH16

16

How far in his/her education do you expect your child to go?

*Check **one** circle only.*

Finish <Lower secondary
education—ISCED Level 2> --- ☐

Finish <Upper secondary
education—ISCED Level 3> --- ☐

Finish <Post-secondary, non-tertiary
education—ISCED Level 4> --- ☐

Finish <Short-cycle tertiary
education—ISCED Level 5> --- ☐

Finish <Bachelor's or equivalent
level—ISCED Level 6> --- ☐

Finish <Postgraduate degree:
Master's—ISCED Level 7
or Doctor—ISCED Level 8> --- ☐

17

What kind of work do the child's <parents/
guardians> do for their main jobs?

For each, check the circle for the job category that best describes what he/she does (opposite page). Each category has a few examples to help you decide the correct category. If the <parent/guardian> is not working now, think about the last job that he/she had.

17 (continued)

Check **one** circle in each column.

ASBH17A

ASBH17B

	<Parent / Guardian A>	<Parent / Guardian B>
a) Has never worked for pay -----	☐	☐
b) Small Business Owner ----- Includes owners of small businesses (fewer than 25 employees) such as retail shops, services, restaurants	☐	☐
c) Clerical Worker ----- Includes office clerks; secretaries; typists; data entry operators; customer service clerks	☐	☐
d) Service or Sales Worker ----- Includes travel attendants; restaurant service workers; personal care workers; protective service workers; salespersons; street vendors	☐	☐
e) Skilled Agricultural or Fishery Worker ----- Includes farmers; forestry workers; fishery workers; hunters and trappers	☐	☐
f) Craft or Trade Worker ----- Includes builders, carpenters, plumbers, electricians, metal workers; machine mechanics; handicraft workers	☐	☐
g) Plant or Machine Operator ----- Includes plant and machine operators; assembly-line operators; motor-vehicle drivers	☐	☐
h) General Laborers ----- Includes domestic helpers and cleaners; building caretakers; messengers, porters, and doorkeepers; farm, fishery, agricultural, and construction workers	☐	☐
i) Corporate Manager or Senior Official ----- Includes corporate managers such as managers of large companies (25 or more employees) or managers of departments within large companies; legislators or senior government officials; senior officials of special-interest organizations; military officers	☐	☐
j) Professional ----- Includes scientists; mathematicians; computer scientists; architects; engineers; life science and health professionals; teachers; legal professionals; police officers; social scientists; writers and artists; religious professionals	☐	☐
k) Technician or Associate Professional ----- Includes science, engineering, and computer associates and technicians; life science and health technicians and assistants; teacher aides; finance and sales associate professionals; business service agents; administrative assistants	☐	☐
l) Not applicable -----	☐	☐

Thank You

Thank you for taking the time
to fill out this survey.





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SECTION 1.4: **TEACHER QUESTIONNAIRE** **GRADE 4**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



IEA

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

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-01	ATBG01	By the end of this school year, how many years will you have been teaching altogether?	ATBG01	
TQG-02	ATBG02	Are you male or female?	ATBG02	
TQG-03	ATBG03	How old are you?	ATBG03	
TQG-04	ATBG04	What is the highest level of formal education you have completed?	ATBG04	
TQG-05Aa	ATBG05AA	During your <post-secondary> education, what was your major or main area(s) of study? Education—Primary/Elementary	ATBG05AA	
TQG-05Ab	ATBG05AB	During your <post-secondary> education, what was your major or main area(s) of study? Education—Secondary	ATBG05AB	
TQG-05Ac	ATBG05AC	During your <post-secondary> education, what was your major or main area(s) of study? Mathematics	ATBG05AC	
TQG-05Ad	ATBG05AD	During your <post-secondary> education, what was your major or main area(s) of study? Science	ATBG05AD	
TQG-05Ae	ATBG05AE	During your <post-secondary> education, what was your major or main area(s) of study? <language of test>	ATBG05AE	
TQG-05Af	ATBG05AF	During your <post-secondary> education, what was your major or main area(s) of study? Other	ATBG05AF	
TQG-05Ba	ATBG05BA	If your major or main area of study was education, did you have a <specialization> in any of the following? Mathematics	ATBG05BA	
TQG-05Bb	ATBG05BB	If your major or main area of study was education, did you have a <specialization> in any of the following? Science	ATBG05BB	
TQG-05Bc	ATBG05BC	If your major or main area of study was education, did you have a <specialization> in any of the following? Language/reading	ATBG05BC	
TQG-05Bd	ATBG05BD	If your major or main area of study was education, did you have a <specialization> in any of the following? Other subject	ATBG05BD	
TQG-06a	ATBG06A	How would you characterize each of the following within your school? Teachers' understanding of the school's curricular goals	ATBG06A	
TQG-06b	ATBG06B	How would you characterize each of the following within your school? Teachers' degree of success in implementing the school's curriculum	ATBG06B	
TQG-06c	ATBG06C	How would you characterize each of the following within your school? Teachers' expectations for student achievement	ATBG06C	
TQG-06d	ATBG06D	How would you characterize each of the following within your school? Teachers' ability to inspire students	ATBG06E	
TQG-06e	ATBG06E	How would you characterize each of the following within your school? Parental involvement in school activities	ATBG06F	
TQG-06f	ATBG06F	How would you characterize each of the following within your school? Parental commitment to ensure that students are ready to learn	ATBG06G	
TQG-06g	ATBG06G	How would you characterize each of the following within your school? Parental expectations for student achievement	ATBG06H	
TQG-06h	ATBG06H	How would you characterize each of the following within your school? Parental support for student achievement	ATBG06I	
TQG-06i	ATBG06I	How would you characterize each of the following within your school? Students' desire to do well in school	ATBG06K	
TQG-06j	ATBG06J	How would you characterize each of the following within your school? Students' ability to reach school's academic goals	ATBG06L	
TQG-06k	ATBG06K	How would you characterize each of the following within your school? Students' respect for classmates who excel academically	ATBG06M	Modified wording in 2019

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-06l	ATBG06L	How would you characterize each of the following within your school? Collaboration between school leadership (including master teachers) and teachers to plan instruction	ATBG06O	Modified wording in 2019
TQG-07a	ATBG07A	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school is located in a safe neighborhood	ATBG07A	
TQG-07b	ATBG07B	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. I feel safe at this school	ATBG07B	
TQG-07c	ATBG07C	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school's security policies and practices are sufficient	ATBG07C	
TQG-07d	ATBG07D	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students behave in an orderly manner	ATBG07D	
TQG-07e	ATBG07E	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students are respectful of the teachers	ATBG07E	
TQG-07f	ATBG07F	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students respect school property	ATBG07F	
TQG-07g	ATBG07G	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school has clear rules about student conduct	ATBG07G	
TQG-07h	ATBG07H	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school's rules are enforced in a fair and consistent manner	ATBG07H	
TQG-08a	ATBG08A	How often do you feel the following way about being a teacher? I am content with my profession as a teacher	ATBG10A	
TQG-08b	ATBG08B	How often do you feel the following way about being a teacher? I find my work full of meaning and purpose	ATBG10C	
TQG-08c	ATBG08C	How often do you feel the following way about being a teacher? I am enthusiastic about my job	ATBG10D	
TQG-08d	ATBG08D	How often do you feel the following way about being a teacher? My work inspires me	ATBG10E	
TQG-08e	ATBG08E	How often do you feel the following way about being a teacher? I am proud of the work I do	ATBG10F	
TQG-09a	ATBG09A	Indicate the extent to which you agree or disagree with each of the following statements. There are too many students in the classes	ATBG11A	
TQG-09b	ATBG09B	Indicate the extent to which you agree or disagree with each of the following statements. I have too much material to cover in class	ATBG11B	
TQG-09c	ATBG09C	Indicate the extent to which you agree or disagree with each of the following statements. I have too many teaching hours	ATBG11C	
TQG-09d	ATBG09D	Indicate the extent to which you agree or disagree with each of the following statements. I need more time to prepare for class	ATBG11D	
TQG-09e	ATBG09E	Indicate the extent to which you agree or disagree with each of the following statements. I need more time to assist individual students	ATBG11E	
TQG-09f	ATBG09F	Indicate the extent to which you agree or disagree with each of the following statements. I feel too much pressure from parents	ATBG11F	

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-09g	ATBG09G	Indicate the extent to which you agree or disagree with each of the following statements. I have difficulty keeping up with all of the changes to the curriculum	ATBG11G	
TQG-09h	ATBG09H	Indicate the extent to which you agree or disagree with each of the following statements. I have too many administrative tasks	ATBG11H	
TQG-10A	ATBG10A	How many students are in this class?	ATBG12A	
TQG-10B	ATBG10B	How many of the students in #G10A are in <fourth grade>?	ATBG12B	
TQG-11	ATBG11	How many <fourth grade> students experience difficulties understanding spoken <language of test>?	ATBG13	
TQG-12a	ATBG12A	How often do you do the following in teaching this class? Relate the lesson to students' daily lives	ATBG14A	
TQG-12b	ATBG12B	How often do you do the following in teaching this class? Ask students to explain their answers	ATBG14B	
TQG-12c	ATBG12C	How often do you do the following in teaching this class? Bring interesting materials to class	ATBG14C	
TQG-12d	ATBG12D	How often do you do the following in teaching this class? Ask students to complete challenging exercises that require them to go beyond the instruction	ATBG14D	
TQG-12e	ATBG12E	How often do you do the following in teaching this class? Encourage classroom discussions among students	ATBG14E	
TQG-12f	ATBG12F	How often do you do the following in teaching this class? Link new content to students' prior knowledge	ATBG14F	
TQG-12g	ATBG12G	How often do you do the following in teaching this class? Ask students to decide their own problem solving procedures	ATBG14G	
TQG-12h	ATBG12H	How often do you do the following in teaching this class? Encourage students to express their ideas in class	ATBG14H	
TQG-13a	ATBG13A	In your view, to what extent do the following limit how you teach this class? Students lacking prerequisite knowledge or skills	ATBG15A	
TQG-13b	ATBG13B	In your view, to what extent do the following limit how you teach this class? Students suffering from lack of basic nutrition	ATBG15B	
TQG-13c	ATBG13C	In your view, to what extent do the following limit how you teach this class? Students suffering from not enough sleep	ATBG15C	
TQG-13d	ATBG13D	In your view, to what extent do the following limit how you teach this class? Students absent from class		
TQG-13e	ATBG13E	In your view, to what extent do the following limit how you teach this class? Disruptive students	ATBG15D	
TQG-13f	ATBG13F	In your view, to what extent do the following limit how you teach this class? Uninterested students	ATBG15E	
TQG-13g	ATBG13G	In your view, to what extent do the following limit how you teach this class? Students with mental, emotional, or psychological impairment	ATBG15G	Modified wording in 2019
TQG-13h	ATBG13H	In your view, to what extent do the following limit how you teach this class? Students with difficulties understanding the language of instruction		
TQM-01	ATBM01	In a typical week, how much time do you spend teaching mathematics to the students in this class? (minutes)	ATBM01	
TQM-02a	ATBM02A	In teaching mathematics to this class, how often do you ask students to do the following? Listen to me explain new mathematics content	ATBM03A	
TQM-02b	ATBM02B	In teaching mathematics to this class, how often do you ask students to do the following? Listen to me explain how to solve problems	ATBM03B	

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQM-02c	ATBM02C	In teaching mathematics to this class, how often do you ask students to do the following? Memorize rules, procedures, and facts	ATBM03C	
TQM-02d	ATBM02D	In teaching mathematics to this class, how often do you ask students to do the following? Practice procedures on their own		
TQM-02e	ATBM02E	In teaching mathematics to this class, how often do you ask students to do the following? Apply what they have learned to new problem situations on their own		
TQM-02f	ATBM02F	In teaching mathematics to this class, how often do you ask students to do the following? Work problems together in the whole class with direct guidance from me	ATBM03E	
TQM-02g	ATBM02G	In teaching mathematics to this class, how often do you ask students to do the following? Work in mixed ability groups	ATBM03H	
TQM-02h	ATBM02H	In teaching mathematics to this class, how often do you ask students to do the following? Work in same ability groups	ATBM03I	
TQM-03	ATBM03	Are the students in this class permitted to use calculators during mathematics lessons?	ATBM04	
TQM-04A	ATBM04A	Do the students in this class have computers (including tablets) available to use during their mathematics lessons?	ATBM05A	
TQM-04Ba	ATBM04BA	What access do the students have to computers? Each student has a computer	ATBM05BA	
TQM-04Bb	ATBM04BB	What access do the students have to computers? The class has computers that students can share	ATBM05BB	
TQM-04Bc	ATBM04BC	What access do the students have to computers? The school has computers that the class can use sometimes	ATBM05BC	
TQM-04Ca	ATBM04CA	How often do you do activities on computers during mathematics lessons to support learning for: Whole class		
TQM-04Cb	ATBM04CB	How often do you do activities on computers during mathematics lessons to support learning for: Low-performing students		
TQM-04Cc	ATBM04CC	How often do you do activities on computers during mathematics lessons to support learning for: High-performing students		
TQM-04Cd	ATBM04CD	How often do you do activities on computers during mathematics lessons to support learning for: Students with special needs		
TQM-05Aa	ATBM05AA	When students in this class have been taught each of the following mathematics topics. Number: Concepts of whole numbers, including place value and ordering	See TQM-06 in 2015 for sub-topics	
TQM-05Ab	ATBM05AB	When students in this class have been taught each of the following mathematics topics. Number: Adding, subtracting, multiplying, and dividing with whole numbers	See TQM-06 in 2015 for sub-topics	
TQM-05Ac	ATBM05AC	When students in this class have been taught each of the following mathematics topics. Number: Concepts of multiples and factors; odd and even numbers	See TQM-06 in 2015 for sub-topics	
TQM-05Ad	ATBM05AD	When students in this class have been taught each of the following mathematics topics. Number: Number sentences (finding the missing number, representing problem situations with number sentences)	See TQM-06 in 2015 for sub-topics	
TQM-05Ae	ATBM05AE	When students in this class have been taught each of the following mathematics topics. Number: Number patterns (extending number patterns and finding missing terms)	See TQM-06 in 2015 for sub-topics	

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQM-05Af	ATBM05AF	When students in this class have been taught each of the following mathematics topics. Number: Concepts of fractions, including representing, comparing and ordering, adding and subtracting simple fractions	See TQM-06 in 2015 for sub-topics	
TQM-05Ag	ATBM05AG	When students in this class have been taught each of the following mathematics topics. Number: Concepts of decimals, including place value and ordering, adding and subtracting with decimals	See TQM-06 in 2015 for sub-topics	
TQM-05Ba	ATBM05BA	When students in this class have been taught each of the following mathematics topics. Measurement and Geometry: Solving problems involving length, including measuring and estimating	See TQM-06 in 2015 for sub-topics	
TQM-05Bb	ATBM05BB	When students in this class have been taught each of the following mathematics topics. Measurement and Geometry: Solving problems involving mass, volume, and time	See TQM-06 in 2015 for sub-topics	
TQM-05Bc	ATBM05BC	When students in this class have been taught each of the following mathematics topics. Measurement and Geometry: Finding and estimating perimeter, area, and volume	See TQM-06 in 2015 for sub-topics	
TQM-05Bd	ATBM05BD	When students in this class have been taught each of the following mathematics topics. Measurement and Geometry: Parallel and perpendicular lines	See TQM-06 in 2015 for sub-topics	
TQM-05Be	ATBM05BE	When students in this class have been taught each of the following mathematics topics. Measurement and Geometry: Comparing and drawing angles	See TQM-06 in 2015 for sub-topics	
TQM-05Bf	ATBM05BF	When students in this class have been taught each of the following mathematics topics. Measurement and Geometry: Elementary properties of common geometric shapes	See TQM-06 in 2015 for sub-topics	
TQM-05Bg	ATBM05BG	When students in this class have been taught each of the following mathematics topics. Measurement and Geometry: Three-dimensional shapes, including relationships with their two-dimensional representations	See TQM-06 in 2015 for sub-topics	
TQM-05Ca	ATBM05CA	When students in this class have been taught each of the following mathematics topics. Data: Reading and interpreting data from tables, pictographs, bar graphs, line graphs, and pie charts	See TQM-06 in 2015 for sub-topics	
TQM-05Cb	ATBM05CB	When students in this class have been taught each of the following mathematics topics. Data: Organizing and representing data to help answer questions	See TQM-06 in 2015 for sub-topics	
TQM-05Cc	ATBM05CC	When students in this class have been taught each of the following mathematics topics. Data: Drawing conclusions from data displays	See TQM-06 in 2015 for	
TQM-06A	ATBM06A	How often do you usually assign mathematics homework to the students in this class?	ATBM07A	
TQM-06B	ATBM06B	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.)	ATBM07B	
TQM-06Ca	ATBM06CA	How often do you do the following with the mathematics homework assignments for this class? Correct assignments and give feedback to students	ATBM07CA	
TQM-06Cb	ATBM06CB	How often do you do the following with the mathematics homework assignments for this class? Discuss the homework in class	ATBM07CB	
TQM-06Cc	ATBM06CC	How often do you do the following with the mathematics homework assignments for this class? Monitor whether or not the homework was completed	ATBM07CC	

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQM-07a	ATBM07A	How much importance do you place on the following assessment strategies in mathematics? Observing students as they work		
TQM-07b	ATBM07B	How much importance do you place on the following assessment strategies in mathematics? Asking students to answer questions during class		
TQM-07c	ATBM07C	How much importance do you place on the following assessment strategies in mathematics? Short, regular written assessments		
TQM-07d	ATBM07D	How much importance do you place on the following assessment strategies in mathematics? Longer tests (e.g., unit tests or exams)		
TQM-07e	ATBM07E	How much importance do you place on the following assessment strategies in mathematics? Long-term projects		
TQM-08	ATBM08	About how often do <fourth grade> students in this class take mathematics tests on computers or tablets?		
TQM-09Aa	ATBM09AA	In the past two years, have you participated in professional development in any of the following? Mathematics content	ATBM09A	Modified format in 2019
TQM-09Ab	ATBM09AB	In the past two years, have you participated in professional development in any of the following? Mathematics pedagogy/instruction	ATBM09B	Modified format in 2019
TQM-09Ac	ATBM09AC	In the past two years, have you participated in professional development in any of the following? Mathematics curriculum	ATBM09C	Modified format in 2019
TQM-09Ad	ATBM09AD	In the past two years, have you participated in professional development in any of the following? Integrating technology into mathematics instruction	ATBM09D	Modified wording and format in 2019
TQM-09Ae	ATBM09AE	In the past two years, have you participated in professional development in any of the following? Improving students' critical thinking or problem solving skills	ATBM09E	Modified format in 2019
TQM-09Af	ATBM09AF	In the past two years, have you participated in professional development in any of the following? Mathematics assessment	ATBM09F	Modified format in 2019
TQM-09Ag	ATBM09AG	In the past two years, have you participated in professional development in any of the following? Addressing individual students' needs	ATBM09G	Modified format in 2019
TQM-09Ba	ATBM09BA	Do you need future professional development in any of the following? Mathematics content		
TQM-09Bb	ATBM09BB	Do you need future professional development in any of the following? Mathematics pedagogy/instruction		
TQM-09Bc	ATBM09BC	Do you need future professional development in any of the following? Mathematics curriculum		
TQM-09Bd	ATBM09BD	Do you need future professional development in any of the following? Integrating technology into mathematics instruction		
TQM-09Be	ATBM09BE	Do you need future professional development in any of the following? Improving students' critical thinking or problem solving skills		
TQM-09Bf	ATBM09BF	Do you need future professional development in any of the following? Mathematics assessment		
TQM-09Bg	ATBM09BG	Do you need future professional development in any of the following? Addressing individual students' needs		
TQM-10	ATBM10	In the past two years, how many hours in total have you spent in formal <in-service/professional development> for mathematics?	ATBM10	
TQS-01A	ATBS01A	Is science taught mainly as a separate subject (i.e., not integrated with other subjects) to the students in this class?	ATBS01A	
TQS-01B	ATBS01B	Please estimate the time that you spend on science topics with students in this class (minutes per week).	ATBS01B	

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-02a	ATBS02A	In teaching science to the students in this class, how often do you ask them to do the following? Listen to me explain new science content	ATBS03A	
TQS-02b	ATBS02B	In teaching science to the students in this class, how often do you ask them to do the following? Observe natural phenomena such as the weather or a plant growing and describe what they see	ATBS03B	
TQS-02c	ATBS02C	In teaching science to the students in this class, how often do you ask them to do the following? Watch me demonstrate an experiment or investigation	ATBS03C	
TQS-02d	ATBS02D	In teaching science to the students in this class, how often do you ask them to do the following? Design or plan experiments or investigations	ATBS03D	
TQS-02e	ATBS02E	In teaching science to the students in this class, how often do you ask them to do the following? Conduct experiments or investigations	ATBS03E	
TQS-02f	ATBS02F	In teaching science to the students in this class, how often do you ask them to do the following? Present data from experiments or investigations	ATBS03F	
TQS-02g	ATBS02G	In teaching science to the students in this class, how often do you ask them to do the following? Interpret data from experiments or investigations	ATBS03G	
TQS-02h	ATBS02H	In teaching science to the students in this class, how often do you ask them to do the following? Use evidence from experiments or investigations to support conclusions	ATBS03H	
TQS-02i	ATBS02I	In teaching science to the students in this class, how often do you ask them to do the following? Read their textbooks or other resource materials	ATBS03I	
TQS-02j	ATBS02J	In teaching science to the students in this class, how often do you ask them to do the following? Have students memorize facts and principles	ATBS03J	
TQS-02k	ATBS02K	In teaching science to the students in this class, how often do you ask them to do the following? Do field work outside the class	ATBS03K	
TQS-02l	ATBS02L	In teaching science to the students in this class, how often do you ask them to do the following? Work in mixed ability groups	ATBS03M	
TQS-02m	ATBS02M	In teaching science to the students in this class, how often do you ask them to do the following? Work in same ability groups	ATBS03N	
TQS-03A	ATBS03A	Do the students in this class have computers (including tablets) available to use during their science lessons?	ATBS04A	
TQS-03Ba	ATBS03BA	What access do the students have to computers? Each student has a computer	ATBS04BA	
TQS-03Bb	ATBS03BB	What access do the students have to computers? The class has computers that students can share	ATBS04BB	
TQS-03Bc	ATBS03BC	What access do the students have to computers? The school has computers that the class can use sometimes	ATBS04BC	
TQS-03Ca	ATBS03CA	How often do you do activities on computers during science lessons to support learning for: Whole class		
TQS-03Cb	ATBS03CB	How often do you do activities on computers during science lessons to support learning for: Low-performing students		
TQS-03Cc	ATBS03CC	How often do you do activities on computers during science lessons to support learning for: High-performing students		
TQS-03Cd	ATBS03CD	How often do you do activities on computers during science lessons to support learning for: Students with special needs		
TQS-04Aa	ATBS04AA	When students in this class have been taught each of the following science topics. Life Science: Physical and behavioral characteristics of living things and major groups of living things (e.g., mammals, birds, insects, flowering plants)	See TQS-05 in 2015 for sub-topics	

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-04Ab	ATBS04AB	When students in this class have been taught each of the following science topics. Life Science: Major body structures and their functions in humans, other animals, and plants	See TQS-05 in 2015 for sub-topics	
TQS-04Ac	ATBS04AC	When students in this class have been taught each of the following science topics. Life Science: Life cycles of common plants and animals (e.g., flowering plants, butterflies, frogs)	See TQS-05 in 2015 for sub-topics	
TQS-04Ad	ATBS04AD	When students in this class have been taught each of the following science topics. Life Science: Characteristics of plants and animals that are inherited	See TQS-05 in 2015 for sub-topics	
TQS-04Ae	ATBS04AE	When students in this class have been taught each of the following science topics. Life Science: Interactions between organisms and their environments (e.g., physical features and behaviors that help living things survive in their environments)	See TQS-05 in 2015 for sub-topics	
TQS-04Af	ATBS04AF	When students in this class have been taught each of the following science topics. Life Science: Relationships in ecosystems (e.g., simple food chains, predator-prey relationships, competition)	See TQS-05 in 2015 for sub-topics	
TQS-04Ag	ATBS04AG	When students in this class have been taught each of the following science topics. Life Science: Human health (transmission and prevention of diseases, everyday behaviors that promote good health)	See TQS-05 in 2015 for sub-topics	
TQS-04Ba	ATBS04BA	When students in this class have been taught each of the following science topics. Physical Science: States of matter (solid, liquid, gas) and their properties (volume, shape)	See TQS-05 in 2015 for sub-topics	
TQS-04Bb	ATBS04BB	When students in this class have been taught each of the following science topics. Physical Science: Classifying materials based on physical properties (e.g., weight/mass, volume, state of matter, conductivity of heat or electricity)	See TQS-05 in 2015 for sub-topics	
TQS-04Bc	ATBS04BC	When students in this class have been taught each of the following science topics. Physical Science: Mixtures, including methods for separating a mixture into its components (e.g., sifting, filtering, evaporation, using a magnet)	See TQS-05 in 2015 for sub-topics	
TQS-04Bd	ATBS04BD	When students in this class have been taught each of the following science topics. Physical Science: Properties of magnets (e.g., like poles repel and opposite poles attract, magnets can attract some objects)	See TQS-05 in 2015 for sub-topics	
TQS-04Be	ATBS04BE	When students in this class have been taught each of the following science topics. Physical Science: Physical changes in everyday life (e.g., changes of state, dissolving)	See TQS-05 in 2015 for sub-topics	
TQS-04Bf	ATBS04BF	When students in this class have been taught each of the following science topics. Physical Science: Chemical changes in everyday life (e.g., decaying, burning, rusting, cooking)	See TQS-05 in 2015 for sub-topics	
TQS-04Bg	ATBS04BG	When students in this class have been taught each of the following science topics. Physical Science: Common sources of energy (e.g., the Sun, wind, oil) and uses of energy (heating and cooling homes, providing light)	See TQS-05 in 2015 for sub-topics	
TQS-04Bh	ATBS04BH	When students in this class have been taught each of the following science topics. Physical Science: Light and sound in everyday life (e.g., shadows and reflections, vibrating objects make sound)	See TQS-05 in 2015 for sub-topics	
TQS-04Bi	ATBS04BI	When students in this class have been taught each of the following science topics. Physical Science: Heat transfer (e.g., energy flows from a hot object to a colder object)	See TQS-05 in 2015 for sub-topics	

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-04Bj	ATBS04BJ	When students in this class have been taught each of the following science topics. Physical Science: Electricity and simple electrical circuits (e.g., a circuit must be complete to work correctly)	See TQS-05 in 2015 for sub-topics	
TQS-04Bk	ATBS04BK	When students in this class have been taught each of the following science topics. Physical Science: Forces that cause objects to move (e.g., gravity, pushing/pulling) or change their motion (e.g., friction)	See TQS-05 in 2015 for sub-topics	
TQS-04Bl	ATBS04BL	When students in this class have been taught each of the following science topics. Physical Science: Simple machines (e.g., levers, pulleys, wheels, ramps) that help make motion easier	See TQS-05 in 2015 for sub-topics	
TQS-04Ca	ATBS04CA	When students in this class have been taught each of the following science topics. Earth Science: Physical makeup of Earth's surface (e.g., land and water in unequal proportions, sources of fresh and salt water)	See TQS-05 in 2015 for sub-topics	
TQS-04Cb	ATBS04CB	When students in this class have been taught each of the following science topics. Earth Science: Earth's resources used in everyday life (e.g., water, wind, soil, forests, oil, natural gas, minerals)	See TQS-05 in 2015 for sub-topics	
TQS-04Cc	ATBS04CC	When students in this class have been taught each of the following science topics. Earth Science: Changes in Earth's surface over time (e.g., mountain building, weathering, erosion)	See TQS-05 in 2015 for sub-topics	
TQS-04Cd	ATBS04CD	When students in this class have been taught each of the following science topics. Earth Science: Fossils and what they can tell us about past conditions on Earth	See TQS-05 in 2015 for sub-topics	
TQS-04Ce	ATBS04CE	When students in this class have been taught each of the following science topics. Earth Science: Weather and climate (e.g., daily, seasonal, and locational variations versus long term trends)	See TQS-05 in 2015 for sub-topics	
TQS-04Cf	ATBS04CF	When students in this class have been taught each of the following science topics. Earth Science: Objects in the Solar System (the Sun, the Earth, the Moon, and other planets) and their movements	See TQS-05 in 2015 for sub-topics	
TQS-04Cg	ATBS04CG	When students in this class have been taught each of the following science topics. Earth Science: Earth's motion and related patterns observed on Earth (e.g., day and night, seasons)	See TQS-05 in 2015 for sub-topics	
TQS-05A	ATBS05A	How often do you usually assign science homework to the students in this class?	ATBS06A	
TQS-05B	ATBS05B	When you assign science 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.)	ATBS06B	
TQS-05Ca	ATBS05CA	How often do you do the following with the science homework assignments for this class? Correct assignments and give feedback to students	ATBS06CA	
TQS-05Cb	ATBS05CB	How often do you do the following with the science homework assignments for this class? Discuss the homework in class	ATBS06CB	
TQS-05Cc	ATBS05CC	How often do you do the following with the science homework assignments for this class? Monitor whether or not the homework was completed	ATBS06CC	
TQS-06a	ATBS06A	How much importance do you place on the following assessment strategies in science? Observing students as they work		
TQS-06b	ATBS06B	How much importance do you place on the following assessment strategies in science? Asking students to answer questions during class		
TQS-06c	ATBS06C	How much importance do you place on the following assessment strategies in science? Short, regular written assessments		

Exhibit 1.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-06d	ATBS06D	How much importance do you place on the following assessment strategies in science? Longer tests (e.g., unit tests or exams)		
TQS-06e	ATBS06E	How much importance do you place on the following assessment strategies in science? Long-term projects		
TQS-07	ATBS07	About how often do <fourth grade> students in this class take science tests on computers or tablets?		
TQS-08Aa	ATBS08AA	In the past two years, have you participated in professional development in any of the following? Science content	ATBS08A	Modified format in 2019
TQS-08Ab	ATBS08AB	In the past two years, have you participated in professional development in any of the following? Science pedagogy/instruction	ATBS08B	Modified format in 2019
TQS-08Ac	ATBS08AC	In the past two years, have you participated in professional development in any of the following? Science curriculum	ATBS08C	Modified format in 2019
TQS-08Ad	ATBS08AD	In the past two years, have you participated in professional development in any of the following? Integrating technology into science instruction	ATBS08D	Modified wording and format in 2019
TQS-08Ae	ATBS08AE	In the past two years, have you participated in professional development in any of the following? Improving students' critical thinking or inquiry skills	ATBS08E	Modified format in 2019
TQS-08Af	ATBS08AF	In the past two years, have you participated in professional development in any of the following? Science assessment	ATBS08F	Modified format in 2019
TQS-08Ag	ATBS08AG	In the past two years, have you participated in professional development in any of the following? Addressing individual students' needs	ATBS08G	Modified format in 2019
TQS-08Ah	ATBS08AH	In the past two years, have you participated in professional development in any of the following? Integrating science with other subjects	ATBS08H	Modified format in 2019
TQS-08Ba	ATBS08BA	Do you need future professional development in any of the following? Science content		
TQS-08Bb	ATBS08BB	Do you need future professional development in any of the following? Science pedagogy/instruction		
TQS-08Bc	ATBS08BC	Do you need future professional development in any of the following? Science curriculum		
TQS-08Bd	ATBS08BD	Do you need future professional development in any of the following? Integrating technology into science instruction		
TQS-08Be	ATBS08BE	Do you need future professional development in any of the following? Improving students' critical thinking or inquiry skills		
TQS-08Bf	ATBS08BF	Do you need future professional development in any of the following? Science assessment		
TQS-08Bg	ATBS08BG	Do you need future professional development in any of the following? Addressing individual students' needs		
TQS-08Bh	ATBS08BH	Do you need future professional development in any of the following? Integrating science with other subjects (e.g., mathematics, technology)		
TQS-09	ATBS09	In the past two years, how many hours in total have you spent in formal <in-service/professional development> for science?	ATBS09	



Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Teacher Questionnaire

<Grade 4>

<TIMSS National Research Center Name>
<Address>

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

Teacher Questionnaire

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 <fourth 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 primary/elementary 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 2019

About You

G1

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

ATBG01

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

G2

Are you female or male?

ATBG02

Check **one** circle only.

Female --- ☐

Male --- ☐

G3

How old are you?

ATBG03

Check **one** circle only.

Under 25 --- ☐

25–29 --- ☐

30–39 --- ☐

40–49 --- ☐

50–59 --- ☐

60 or more --- ☐

G4

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

ATBG04

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 #G6)

<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> --- ☐

G5

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

Check **one** circle for each line.

ATBG05AA

a) Education—Primary/Elementary ----- ☐ Yes ☐ No

ATBG05AB

b) Education—Secondary ----- ☐ Yes ☐ No

ATBG05AC

c) Mathematics ----- ☐ Yes ☐ No

ATBG05AD

d) Science ----- ☐ Yes ☐ No

ATBG05AE

e) <language of test> ----- ☐ Yes ☐ No

ATBG05AF

f) Other ----- ☐ Yes ☐ No

B. If your major or main area of study was education, did you have a <specialization> in any of the following?

Check **one** circle for each line.

ATBG05BA

a) Mathematics ----- ☐ Yes ☐ No

ATBG05BB

b) Science ----- ☐ Yes ☐ No

ATBG05BC

c) Language/reading ----- ☐ Yes ☐ No

ATBG05BD

d) Other subject ----- ☐ Yes ☐ No

School Emphasis on Academic Success

G6

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

Check **one** circle for each line.

	Very high	High	Medium	Low	Very low
ATBG06A a) Teachers' understanding of the school's curricular goals	☐	☐	☐	☐	☐
ATBG06B b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
ATBG06C c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
ATBG06D d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
ATBG06E e) Parental involvement in school activities	☐	☐	☐	☐	☐
ATBG06F f) Parental commitment to ensure that students are ready to learn	☐	☐	☐	☐	☐
ATBG06G g) Parental expectations for student achievement	☐	☐	☐	☐	☐
ATBG06H h) Parental support for student achievement	☐	☐	☐	☐	☐
ATBG06I i) Students' desire to do well in school	☐	☐	☐	☐	☐
ATBG06J j) Students' ability to reach school's academic goals	☐	☐	☐	☐	☐
ATBG06K k) Students' respect for classmates who excel academically	☐	☐	☐	☐	☐
ATBG06L l) Collaboration between school leadership (including master teachers) and teachers to plan instruction	☐	☐	☐	☐	☐

School Environment

G7

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
ATBG07A a) This school is located in a safe neighborhood	☐	☐	☐	☐
ATBG07B b) I feel safe at this school	☐	☐	☐	☐
ATBG07C c) This school's security policies and practices are sufficient	☐	☐	☐	☐
ATBG07D d) The students behave in an orderly manner	☐	☐	☐	☐
ATBG07E e) The students are respectful of the teachers	☐	☐	☐	☐
ATBG07F f) The students respect school property	☐	☐	☐	☐
ATBG07G g) This school has clear rules about student conduct	☐	☐	☐	☐
ATBG07H h) This school's rules are enforced in a fair and consistent manner	☐	☐	☐	☐

About Being a Teacher

G8

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

Check **one** circle for each line.

Very often
Often
Sometimes
Never or almost never

- ATBG08A a) I am content with my profession as a teacher ----- ○ — ○ — ○ — ○
- ATBG08B b) I find my work full of meaning and purpose ----- ○ — ○ — ○ — ○
- ATBG08C c) I am enthusiastic about my job ----- ○ — ○ — ○ — ○
- ATBG08D d) My work inspires me ----- ○ — ○ — ○ — ○
- ATBG08E e) I am proud of the work I do --- ○ — ○ — ○ — ○

G9

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

- ATBG09A a) There are too many students in the classes ----- ○ — ○ — ○ — ○
- ATBG09B b) I have too much material to cover in class ----- ○ — ○ — ○ — ○
- ATBG09C c) I have too many teaching hours ----- ○ — ○ — ○ — ○
- ATBG09D d) I need more time to prepare for class ----- ○ — ○ — ○ — ○
- ATBG09E e) I need more time to assist individual students ----- ○ — ○ — ○ — ○
- ATBG09F f) I feel too much pressure from parents ----- ○ — ○ — ○ — ○
- ATBG09G g) I have difficulty keeping up with all of the changes to the curriculum ----- ○ — ○ — ○ — ○
- ATBG09H h) I have too many administrative tasks ----- ○ — ○ — ○ — ○

About Teaching the TIMSS Class

G10

A. How many students are in this class?

ATBG10A

_____ students
Write in the number.

B. How many of the students in #G10A are in <fourth grade>?

ATBG10B

_____ <fourth grade> students
Write in the number.

G11

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

ATBG11

_____ students in this class
Write in the number.

G12

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

ATBG12A a) Relate the lesson to students' daily lives ----- ☐ — ☐ — ☐ — ☐

ATBG12B b) Ask students to explain their answers ----- ☐ — ☐ — ☐ — ☐

ATBG12C c) Bring interesting materials to class ----- ☐ — ☐ — ☐ — ☐

ATBG12D d) Ask students to complete challenging exercises that require them to go beyond the instruction ----- ☐ — ☐ — ☐ — ☐

ATBG12E e) Encourage classroom discussions among students ----- ☐ — ☐ — ☐ — ☐

ATBG12F f) Link new content to students' prior knowledge ---- ☐ — ☐ — ☐ — ☐

ATBG12G g) Ask students to decide their own problem solving procedures ----- ☐ — ☐ — ☐ — ☐

ATBG12H h) Encourage students to express their ideas in class ---- ☐ — ☐ — ☐ — ☐

G13

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

- ATBG13A a) Students lacking prerequisite knowledge or skills ----- ○ — ○ — ○
- ATBG13B b) Students suffering from lack of basic nutrition ----- ○ — ○ — ○
- ATBG13C c) Students suffering from not enough sleep ----- ○ — ○ — ○
- ATBG13D d) Students absent from class ----- ○ — ○ — ○
- ATBG13E e) Disruptive students ----- ○ — ○ — ○
- ATBG13F f) Uninterested students ----- ○ — ○ — ○
- ATBG13G g) Students with mental, emotional, or psychological impairment ----- ○ — ○ — ○
- ATBG13H h) Students with difficulties understanding the language of instruction ----- ○ — ○ — ○

Teaching Mathematics to the TIMSS Class

M1

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

ATBM01

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

M2

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

- | | | | | | |
|---------|---|-----------------------|-----------------------|-----------------------|-----------------------|
| ATBM02A | a) Listen to me explain new mathematics content ----- | ☐ | ☐ | ☐ | ☐ |
| ATBM02B | b) Listen to me explain how to solve problems ----- | ☐ | ☐ | ☐ | ☐ |
| ATBM02C | c) Memorize rules, procedures, and facts ----- | ☐ | ☐ | ☐ | ☐ |
| ATBM02D | d) Practice procedures on their own ----- | ☐ | ☐ | ☐ | ☐ |
| ATBM02E | e) Apply what they have learned to new problem situations on their own ----- | ☐ | ☐ | ☐ | ☐ |
| ATBM02F | f) Work problems together in the whole class with direct guidance from me ----- | ☐ | ☐ | ☐ | ☐ |
| ATBM02G | g) Work in mixed ability groups -- | ☐ | ☐ | ☐ | ☐ |
| ATBM02H | h) Work in same ability groups -- | ☐ | ☐ | ☐ | ☐ |

Using Calculators and Computers for Teaching Mathematics to the TIMSS Class

M3

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

ATBM03

Check **one** circle only.

Yes, with unrestricted use --- ☐

Yes, with restricted use --- ☐

No, calculators are not permitted --- ☐

M4

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

ATBM04A

Check **one** circle only.

Yes --- ☐

No --- ☐ 
(If No, go to #M5)

If Yes,

B. What access do the students have to computers?

Check **one** circle for each line.

	Yes	No
ATBM04BA a) Each student has a computer -----	☐	☐
ATBM04BB b) The class has computers that students can share -----	☐	☐
ATBM04BC 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
ATBM04CA a) Whole class -----	☐	☐	☐	☐
ATBM04CB b) Low-performing students -----	☐	☐	☐	☐
ATBM04CC c) High-performing students -----	☐	☐	☐	☐
ATBM04CD d) Students with special needs -----	☐	☐	☐	☐

Mathematics Topics Taught to the TIMSS Class

M5

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 <fourth 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

- ATBM05AA a) Concepts of whole numbers, including place value and ordering ----- ○ — ○ — ○
- ATBM05AB b) Adding, subtracting, multiplying, and dividing with whole numbers ----- ○ — ○ — ○
- ATBM05AC c) Concepts of multiples and factors; odd and even numbers ----- ○ — ○ — ○
- ATBM05AD d) Number sentences (finding the missing number, representing problem situations with number sentences) ----- ○ — ○ — ○
- ATBM05AE e) Number patterns (extending number patterns and finding missing terms) ----- ○ — ○ — ○
- ATBM05AF f) Concepts of fractions, including representing, comparing and ordering, adding and subtracting simple fractions ----- ○ — ○ — ○
- ATBM05AG g) Concepts of decimals, including place value and ordering, adding and subtracting with decimals ----- ○ — ○ — ○

B. Measurement and Geometry

- ATBM05BA a) Solving problems involving length, including measuring and estimating ----- ○ — ○ — ○
- ATBM05BB b) Solving problems involving mass, volume, and time ----- ○ — ○ — ○
- ATBM05BC c) Finding and estimating perimeter, area, and volume ----- ○ — ○ — ○
- ATBM05BD d) Parallel and perpendicular lines ----- ○ — ○ — ○
- ATBM05BE e) Comparing and drawing angles ----- ○ — ○ — ○
- ATBM05BF f) Elementary properties of common geometric shapes ----- ○ — ○ — ○
- ATBM05BG g) Three-dimensional shapes, including relationships with their two-dimensional representations ----- ○ — ○ — ○

C. Data

- ATBM05CA a) Reading and interpreting data from tables, pictographs, bar graphs, line graphs, and pie charts ----- ○ — ○ — ○
- ATBM05CB b) Organizing and representing data to help answer questions ----- ○ — ○ — ○
- ATBM05CC c) Drawing conclusions from data displays ----- ○ — ○ — ○

Mathematics Homework for the TIMSS Class

M6

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

ATBM06A

Check **one** circle only.

- I do not assign mathematics homework --- ☐ 
(Go to #M7)
- Less than once a week --- ☐
- 1 or 2 times a week --- ☐
- 3 or 4 times a week --- ☐
- Every day --- ☐

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.)

ATBM06B

Check **one** circle only.

- 15 minutes or less --- ☐
- 16–30 minutes --- ☐
- 31–60 minutes --- ☐
- More than 60 minutes --- ☐

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 |
|--|-------------------------|-----------------------|-----------------------|
| ATBM06CA
a) Correct assignments and give feedback to students ----- | ☐ | ☐ | ☐ |
| ATBM06CB
b) Discuss the homework in class ----- | ☐ | ☐ | ☐ |
| ATBM06CC
c) Monitor whether or not the homework was completed ----- | ☐ | ☐ | ☐ |

Mathematics Assessment of the TIMSS Class

M7

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

Check **one** circle for each line.

- | | A Lot | Some | None |
|--|-----------------------|-----------------------|-----------------------|
| ATBM07A
a) Observing students as they work ----- | ☐ | ☐ | ☐ |
| ATBM07B
b) Asking students to answer questions during class ----- | ☐ | ☐ | ☐ |
| ATBM07C
c) Short, regular written assessments ----- | ☐ | ☐ | ☐ |
| ATBM07D
d) Longer tests (e.g., unit tests or exams) ----- | ☐ | ☐ | ☐ |
| ATBM07E
e) Long-term projects ----- | ☐ | ☐ | ☐ |

M8

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

ATBM08

Check **one** circle only.

- More than once a month --- ☐
- Once a month --- ☐
- Twice a year --- ☐
- Once a year --- ☐
- Never --- ☐

Professional Development to Teach Mathematics

M9

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

Check **one** circle
for each line.

Yes No

- ATBM09AA a) Mathematics content ----- ☐ Yes ☐ No ----- ATBM09BA
- ATBM09AB b) Mathematics pedagogy/ instruction ----- ☐ Yes ☐ No ----- ATBM09BB
- ATBM09AC c) Mathematics curriculum ----- ☐ Yes ☐ No ----- ATBM09BC
- ATBM09AD d) Integrating technology into mathematics instruction ----- ☐ Yes ☐ No ----- ATBM09BD
- ATBM09AE e) Improving students' critical thinking or problem solving skills ----- ☐ Yes ☐ No ----- ATBM09BE
- ATBM09AF f) Mathematics assessment ----- ☐ Yes ☐ No ----- ATBM09BF
- ATBM09AG g) Addressing individual students' needs ----- ☐ Yes ☐ No ----- ATBM09BG

M10

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?

ATBM10

Check **one** circle only.

- None ----- ☐
- Less than 6 hours ----- ☐
- 6–15 hours ----- ☐
- 16–35 hours ----- ☐
- More than 35 hours ----- ☐

Teaching Science to the TIMSS Class

S1

A. Is science taught mainly as a separate subject (i.e., not integrated with other subjects) to the students in this class?

ATBS01A

Check **one** circle only.

Yes --- ☐

No --- ☐

B. Please estimate the time that you spend on science topics with students in this class.

ATBS01B

_____ minutes per week

Write in the number of minutes per week.

Please convert the number of hours into minutes.

S2

In teaching science to the students in this class, how often do you ask them to do the following?

Check **one** circle for each line.

Every or almost every lesson

About half the lessons

Some lessons

Never

ATBS02A a) Listen to me explain new science content ----- ☐ — ☐ — ☐ — ☐

ATBS02B b) Observe natural phenomena such as the weather or a plant growing and describe what they see ----- ☐ — ☐ — ☐ — ☐

ATBS02C c) Watch me demonstrate an experiment or investigation --- ☐ — ☐ — ☐ — ☐

ATBS02D d) Design or plan experiments or investigations ----- ☐ — ☐ — ☐ — ☐

ATBS02E e) Conduct experiments or investigations ----- ☐ — ☐ — ☐ — ☐

ATBS02F f) Present data from experiments or investigations ----- ☐ — ☐ — ☐ — ☐

ATBS02G g) Interpret data from experiments or investigations ----- ☐ — ☐ — ☐ — ☐

ATBS02H h) Use evidence from experiments or investigations to support conclusions ----- ☐ — ☐ — ☐ — ☐

ATBS02I i) Read their textbooks or other resource materials ----- ☐ — ☐ — ☐ — ☐

ATBS02J j) Have students memorize facts and principles ----- ☐ — ☐ — ☐ — ☐

ATBS02K k) Do field work outside the class ☐ — ☐ — ☐ — ☐

ATBS02L l) Work in mixed ability groups -- ☐ — ☐ — ☐ — ☐

ATBS02M m) Work in same ability groups -- ☐ — ☐ — ☐ — ☐

Using Computers for Teaching Science to the TIMSS Class

S3

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

ATBS03A

Check **one** circle only.

Yes --- ☐
No --- ☐ 
(If No, go to #54)

If Yes,

B. What access do the students have to computers?

Check **one** circle for each line.

	Yes	No
ATBS03BA a) Each student has a computer -----	☐	☐
ATBS03BB b) The class has computers that students can share -----	☐	☐
ATBS03BC c) The school has computers that the class can use sometimes -----	☐	☐

C. How often do you do activities on computers during science 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
ATBS03CA a) Whole class -----	☐	☐	☐	☐
ATBS03CB b) Low-performing students -----	☐	☐	☐	☐
ATBS03CC c) High-performing students -----	☐	☐	☐	☐
ATBS03CD d) Students with special needs -----	☐	☐	☐	☐

Science Topics Taught to the TIMSS Class

S4

The following list includes the main topics addressed by the TIMSS science 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 <fourth 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. Life Science

- ATBS04AA a) Physical and behavioral characteristics of living things and major groups of living things (e.g., mammals, birds, insects, flowering plants) ----- ☐ — ☐ — ☐
- ATBS04AB b) Major body structures and their functions in humans, other animals, and plants ----- ☐ — ☐ — ☐
- ATBS04AC c) Life cycles of common plants and animals (e.g., flowering plants, butterflies, frogs) ----- ☐ — ☐ — ☐
- ATBS04AD d) Characteristics of plants and animals that are inherited ----- ☐ — ☐ — ☐
- ATBS04AE e) Interactions between organisms and their environments (e.g., physical features and behaviors that help living things survive in their environments) ----- ☐ — ☐ — ☐
- ATBS04AF f) Relationships in ecosystems (e.g., simple food chains, predator-prey relationships, competition) ----- ☐ — ☐ — ☐
- ATBS04AG g) Human health (transmission and prevention of diseases, everyday behaviors that promote good health) ----- ☐ — ☐ — ☐

B. Physical Science

- ATBS04BA a) States of matter (solid, liquid, gas) and their properties (volume, shape) ----- ☐ — ☐ — ☐
- ATBS04BB b) Classifying materials based on physical properties (e.g., weight/mass, volume, state of matter, conductivity of heat or electricity) ----- ☐ — ☐ — ☐
- ATBS04BC c) Mixtures, including methods for separating a mixture into its components (e.g., sifting, filtering, evaporation, using a magnet) ----- ☐ — ☐ — ☐
- ATBS04BD d) Properties of magnets (e.g., like poles repel and opposite poles attract, magnets can attract some objects) ----- ☐ — ☐ — ☐
- ATBS04BE e) Physical changes in everyday life (e.g., changes of state, dissolving) ----- ☐ — ☐ — ☐
- ATBS04BF f) Chemical changes in everyday life (e.g., decaying, burning, rusting, cooking) ----- ☐ — ☐ — ☐
- ATBS04BG g) Common sources of energy (e.g., the Sun, wind, oil) and uses of energy (heating and cooling homes, providing light) ----- ☐ — ☐ — ☐
- ATBS04BH h) Light and sound in everyday life (e.g., shadows and reflections, vibrating objects make sound) ----- ☐ — ☐ — ☐
- ATBS04BI i) Heat transfer (e.g., energy flows from a hot object to a colder object) ----- ☐ — ☐ — ☐
- ATBS04BJ j) Electricity and simple electrical circuits (e.g., a circuit must be complete to work correctly) ----- ☐ — ☐ — ☐
- ATBS04BK k) Forces that cause objects to move (e.g., gravity, pushing/pulling) or change their motion (e.g., friction) ----- ☐ — ☐ — ☐
- ATBS04BL l) Simple machines (e.g., levers, pulleys, wheels, ramps) that help make motion easier ----- ☐ — ☐ — ☐

S4 (continued)

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 <fourth 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

C. Earth Science

- | | | | | |
|----------|--|-----------------------|-----------------------|-----------------------|
| ATBS04CA | a) Physical makeup of Earth's surface (e.g., land and water in unequal proportions, sources of fresh and salt water) ----- | ☐ | ☐ | ☐ |
| ATBS04CB | b) Earth's resources used in everyday life (e.g., water, wind, soil, forests, oil, natural gas, minerals) ----- | ☐ | ☐ | ☐ |
| ATBS04CC | c) Changes in Earth's surface over time (e.g., mountain building, weathering, erosion) ----- | ☐ | ☐ | ☐ |
| ATBS04CD | d) Fossils and what they can tell us about past conditions on Earth ----- | ☐ | ☐ | ☐ |
| ATBS04CE | e) Weather and climate (e.g., daily, seasonal, and locational variations versus long term trends)----- | ☐ | ☐ | ☐ |
| ATBS04CF | f) Objects in the Solar System (the Sun, the Earth, the Moon, and other planets) and their movements ----- | ☐ | ☐ | ☐ |
| ATBS04CG | g) Earth's motion and related patterns observed on Earth (e.g., day and night, seasons) ----- | ☐ | ☐ | ☐ |

Science Homework for the TIMSS Class

S5

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

ATBS05A

Check **one** circle only.

- I do not assign science homework --- ☐ →
(Go to #S6)
- Less than once a week --- ☐
- 1 or 2 times a week --- ☐
- 3 or 4 times a week --- ☐
- Every day --- ☐

B. When you assign science 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.)

ATBS05B

Check **one** circle only.

- 15 minutes or less --- ☐
- 16–30 minutes --- ☐
- 31–60 minutes --- ☐
- More than 60 minutes --- ☐

C. How often do you do the following with the science homework assignments for this class?

Check **one** circle for each line.

- | | Always or almost always | Sometimes | Never or almost never |
|--|-------------------------|-----------------------|-----------------------|
| ATBS05CA
a) Correct assignments and give feedback to students | ☐ | ☐ | ☐ |
| ATBS05CB
b) Discuss the homework in class | ☐ | ☐ | ☐ |
| ATBS05CC
c) Monitor whether or not the homework was completed | ☐ | ☐ | ☐ |

Science Assessment of the TIMSS Class

S6

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

Check **one** circle for each line.

- | | A Lot | Some | None |
|--|-----------------------|-----------------------|-----------------------|
| ATBS06A
a) Observing students as they work | ☐ | ☐ | ☐ |
| ATBS06B
b) Asking students to answer questions during class | ☐ | ☐ | ☐ |
| ATBS06C
c) Short, regular written assessments | ☐ | ☐ | ☐ |
| ATBS06D
d) Longer tests (e.g., unit tests or exams) | ☐ | ☐ | ☐ |
| ATBS06E
e) Long-term projects | ☐ | ☐ | ☐ |

S7

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

ATBS07

Check **one** circle only.

- More than once a month --- ☐
- Once a month --- ☐
- Twice a year --- ☐
- Once a year --- ☐
- Never --- ☐

Professional Development to Teach Science

S8

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

Check **one** circle for each line.

Yes No

- ATBS08AA a) Science content ----- ☐ ----- ☐ ATBS08BA
- ATBS08AB b) Science pedagogy/ instruction ----- ☐ ----- ☐ ATBS08BB
- ATBS08AC c) Science curriculum ----- ☐ ----- ☐ ATBS08BC
- ATBS08AD d) Integrating technology into science instruction --- ☐ ----- ☐ ATBS08BD
- ATBS08AE e) Improving students' critical thinking or inquiry skills ----- ☐ ----- ☐ ATBS08BE
- ATBS08AF f) Science assessment ----- ☐ ----- ☐ ATBS08BF
- ATBS08AG g) Addressing individual students' needs ----- ☐ ----- ☐ ATBS08BG
- ATBS08AH h) Integrating science with other subjects (e.g., mathematics, technology) ----- ☐ ----- ☐ ATBS08BH

S9

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 science?

ATBS09

Check **one** circle only.

- None ---- ☐
- Less than 6 hours ---- ☐
- 6–15 hours ---- ☐
- 16–35 hours ---- ☐
- More than 35 hours ---- ☐

Thank You

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



TIMSS

2019



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<Grade 4>



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SECTION 1.5: **SCHOOL QUESTIONNAIRE** **GRADE 4**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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

**Exhibit 1.5: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 4)**

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-01	ACBG01	What is the total enrollment of students in your school as of <first day of month TIMSS testing begins, 2019>?	ACBG01	
ScQ-02	ASBG02	What is the total enrollment of <fourth grade> students in your school as of <first day of month TIMSS testing begins, 2019>?	ASBG02	
ScQ-03a	ACBG03A	Approximately what percentage of students in your school have the following backgrounds? Come from economically disadvantaged homes	ACBG03A	
ScQ-03b	ACBG03B	Approximately what percentage of students in your school have the following backgrounds? Come from economically affluent homes	ACBG03B	
ScQ-04	ACBG04	Approximately what percentage of students in your school have <language of test> as their native language?	ACBG04	
ScQ-05A	ACBG05A	How many people live in the city, town, or area where your school is located?	ACBG05A	
ScQ-05B	ACBG05B	Which best describes the immediate area in which your school is located?	ACBG05B	
ScQ-06A	ACBG06A	For the <fourth grade> students in your school: How many days per year is your school open for instruction?	ACBG08A	
ScQ-06B	ACBG06B	For the <fourth grade> students in your school: What is the total instructional time, excluding breaks, in a typical day? (minutes)	ACBG08B	
ScQ-06C	ACBG06C	For the <fourth grade> students in your school: In one calendar week, how many days is the school open for instruction?	ACBG08C	
ScQ-07	ACBG07	How many computers (including tablets) does your school have for use by <fourth grade> students?	ACBG11	
ScQ-08A	ACBG08A	Does your school have a science laboratory that can be used by <fourth grade> students?	ACBG12A	
ScQ-08B	ACBG08B	Do teachers usually have assistance available when students are conducting science experiments?	ACBG12B	
ScQ-09	ACBG09	Does your school use an online learning management system to support learning (e.g., teacher-student communication, management of grades, student access to course materials)?		
ScQ-10A	ACBG10A	Does your school have a school library?	ACBG13	
ScQ-10B	ACBG10B	Approximately how many books (print) with different titles does your school library have (exclude magazines and periodicals)?	ACBG13AA	Modified wording and response options in 2019
ScQ-11	ACBG11	Does your school have classroom libraries?		
ScQ-12	ACBG12	Does your school provide students access to digital learning resources (e.g., books, videos)?		
ScQ-13Aa	ACBG13AA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Instructional materials	ACBG14AA	
ScQ-13Ab	ACBG13AB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Supplies	ACBG14AB	
ScQ-13Ac	ACBG13AC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: School buildings and grounds	ACBG14AC	
ScQ-13Ad	ACBG13AD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Heating/cooling and lighting systems	ACBG14AD	

Exhibit 1.5: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-13Ae	ACBG13AE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Instructional space	ACBG14AE	
ScQ-13Af	ACBG13AF	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Technologically competent staff	ACBG14AF	
ScQ-13Ag	ACBG13AG	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Audio-visual resources for delivery of instruction	ACBG14AG	
ScQ-13Ah	ACBG13AH	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Computer technology for teaching and learning	ACBG14AH	
ScQ-13Ai	ACBG13AI	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Resources for students with disabilities	ACBG14AI	
ScQ-13Ba	ACBG13BA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Teachers with a specialization in mathematics	ACBG14BA	
ScQ-13Bb	ACBG13BB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Computer software/applications for mathematics instruction	ACBG14BB	
ScQ-13Bc	ACBG13BC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Library resources relevant to mathematics instruction	ACBG14BC	
ScQ-13Bd	ACBG13BD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Calculators for mathematics instruction	ACBG14BD	
ScQ-13Be	ACBG13BE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Concrete objects or materials to help students understand quantities or procedures	ACBG14BE	
ScQ-13Ca	ACBG13CA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Teachers with a specialization in science	ACBG14CA	
ScQ-13Cb	ACBG13CB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Computer software/applications for science instruction	ACBG14CB	
ScQ-13Cc	ACBG13CC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Library resources relevant to science instruction	ACBG14CC	
ScQ-13Cd	ACBG13CD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Science equipment and materials for experiments	ACBG14CD	
ScQ-14a	ACBG14A	How would you characterize each of the following within your school? Teachers' understanding of the school's curricular goals	ACBG15A	
ScQ-14b	ACBG14B	How would you characterize each of the following within your school? Teachers' degree of success in implementing the school's curriculum	ACBG15B	

Exhibit 1.5: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-14c	ACBG14C	How would you characterize each of the following within your school? Teachers' expectations for student achievement	ACBG15C	
ScQ-14d	ACBG14D	How would you characterize each of the following within your school? Teachers' ability to inspire students	ACBG15E	
ScQ-14e	ACBG14E	How would you characterize each of the following within your school? Parental involvement in school activities	ACBG15F	
ScQ-14f	ACBG14F	How would you characterize each of the following within your school? Parental commitment to ensure that students are ready to learn	ACBG15G	
ScQ-14g	ACBG14G	How would you characterize each of the following within your school? Parental expectations for student achievement	ACBG15H	
ScQ-14h	ACBG14H	How would you characterize each of the following within your school? Parental support for student achievement	ACBG15I	
ScQ-14i	ACBG14I	How would you characterize each of the following within your school? Students' desire to do well in school	ACBG15K	
ScQ-14j	ACBG14J	How would you characterize each of the following within your school? Students' ability to reach school's academic goals	ACBG15L	
ScQ-14k	ACBG14K	How would you characterize each of the following within your school? Students' respect for classmates who excel academically	ACBG15M	Modified wording in 2019
ScQ-15a	ACBG15A	To what degree is each of the following a problem among <fourth grade> students in your school? Arriving late at school	ACBG16A	
ScQ-15b	ACBG15B	To what degree is each of the following a problem among <fourth grade> students in your school? Absenteeism	ACBG16B	
ScQ-15c	ACBG15C	To what degree is each of the following a problem among <fourth grade> students in your school? Classroom disturbance	ACBG16C	
ScQ-15d	ACBG15D	To what degree is each of the following a problem among <fourth grade> students in your school? Cheating	ACBG16D	
ScQ-15e	ACBG15E	To what degree is each of the following a problem among <fourth grade> students in your school? Profanity	ACBG16E	
ScQ-15f	ACBG15F	To what degree is each of the following a problem among <fourth grade> students in your school? Vandalism	ACBG16F	
ScQ-15g	ACBG15G	To what degree is each of the following a problem among <fourth grade> students in your school? Theft	ACBG16G	
ScQ-15h	ACBG15H	To what degree is each of the following a problem among <fourth grade> students in your school? Intimidation or verbal abuse among students	ACBG16H	
ScQ-15i	ACBG15I	To what degree is each of the following a problem among <fourth grade> students in your school? Physical fights among students	ACBG16I	
ScQ-15j	ACBG15J	To what degree is each of the following a problem among <fourth grade> students in your school? Intimidation or verbal abuse of teachers or staff	ACBG16J	
ScQ-16a	ACBG16A	To what degree is each of the following a problem among teachers in your school? Arriving late or leaving early	ACBG17A	
ScQ-16b	ACBG16B	To what degree is each of the following a problem among teachers in your school? Absenteeism	ACBG17B	
ScQ-17a	ACBG17A	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Recognize most of the letters of the alphabet	ACBG18A	
ScQ-17b	ACBG17B	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Read some words	ACBG18B	

Exhibit 1.5: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-17c	ACBG17C	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Read sentences	ACBG18C	
ScQ-17d	ACBG17D	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Write letters of the alphabet	ACBG18D	
ScQ-17e	ACBG17E	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Write their names		
ScQ-17f	ACBG17F	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Write words other than their names		
ScQ-17g	ACBG17G	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Count up to 100 or higher	ACBG18F	
ScQ-17h	ACBG17H	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Recognize written numbers from 1-10	ACBG18G	
ScQ-17i	ACBG17I	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Recognize written numbers higher than 10	ACBG18H	
ScQ-17j	ACBG17J	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Write numbers from 1-10	ACBG18I	
ScQ-17k	ACBG17K	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Do simple addition	ACBG18J	
ScQ-17l	ACBG17L	About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school? Do simple subtraction	ACBG18K	
ScQ-18	ACBG18	By the end of this school year, how many years will you have been a principal altogether?	ACBG19	
ScQ-19	ACBG19	By the end of this school year, how many years will you have been a principal at this school?	ACBG20	
ScQ-20	ACBG20	What is the highest level of formal education you have completed?	ACBG21	
ScQ-21a	ACBG21A	Do you hold the following qualifications or credentials in educational leadership? <Certificate or license>		
ScQ-21b	ACBG21B	Do you hold the following qualifications or credentials in educational leadership? <Master's or equivalent level—ISCED Level 7>	ACBG22A	Modified wording in 2019
ScQ-21c	ACBG21C	Do you hold the following qualifications or credentials in educational leadership? <Doctor or equivalent level—ISCED Level 8>	ACBG22B	Modified wording in 2019



Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

School Questionnaire

<Grade 4>

<TIMSS National Research Center Name>
<Address>

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

School Questionnaire

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 school principals and department heads who are asked to supply information about their schools. Since your school has been selected as part of a nationwide sample, your responses are very important in helping to describe primary/elementary education in <country>.

It is important that you answer each question carefully so that the information provided reflects the situation in your school as accurately as possible. Some of the questions will require that you look up school records, so you may wish to arrange for the assistance of another staff member to help provide this information.

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 study.

It is estimated that you will need approximately 30 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 2019

School Enrollment and Characteristics

ACBG01 **1**

What is the total enrollment of students in your school as of <first day of month TIMSS testing begins, 2019>?

_____ students
Write in the number.

ACBG02 **2**

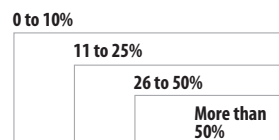
What is the total enrollment of <fourth grade> students in your school as of <first day of month TIMSS testing begins, 2019>?

_____ students
Write in the number.

3

Approximately what percentage of students in your school have the following backgrounds?

Check **one** circle for each line.



ACBG03A

a) Come from economically disadvantaged homes ----- ☐ ☐ ☐ ☐

ACBG03B

b) Come from economically affluent homes ----- ☐ ☐ ☐ ☐

ACBG04 **4**

Approximately what percentage of students in your school have <language of test> as their native language?

Check **one** circle only.

- More than 90% --- ☐
76 to 90% --- ☐
51 to 75% --- ☐
26 to 50% --- ☐
25% or less --- ☐

5

A. How many people live in the city, town, or area where your school is located?

ACBG05A

Check **one** circle only.

- More than 500,000 people --- ☐
100,001 to 500,000 people --- ☐
50,001 to 100,000 people --- ☐
30,001 to 50,000 people --- ☐
15,001 to 30,000 people --- ☐
3,001 to 15,000 people --- ☐
3,000 people or fewer --- ☐

B. Which best describes the immediate area in which your school is located?

ACBG05B

Check **one** circle only.

- Urban—Densely populated --- ☐
Suburban—On fringe or outskirts of urban area --- ☐
Medium size city or large town --- ☐
Small town or village --- ☐
Remote rural --- ☐

Instructional Time

6

For the <fourth grade> students in your school:

ACBG06A A. How many days per year is your school open for instruction?

_____ days
Write in the number.

ACBG06B B. What is the total instructional time, excluding breaks, in a typical day?

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

ACBG06C C. In one calendar week, how many days is the school open for instruction?

Check **one** circle only.

- 6 days --- ☐
- 5 1/2 days --- ☐
- 5 days --- ☐
- 4 1/2 days --- ☐
- 4 days --- ☐
- Other --- ☐

Resources and Technology

ACBG07

7

How many computers (including tablets) does your school have for use by <fourth grade> students?

_____ computers
Write in the number.

8

ACBG08A

A. Does your school have a science laboratory that can be used by <fourth grade> students?

Check **one** circle only.

Yes --- ☐
No --- ☐

ACBG08B

B. Do teachers usually have assistance available when students are conducting science experiments?

Check **one** circle only.

Yes --- ☐
No --- ☐

ACBG09

9

Does your school use an online learning management system to support learning (e.g., teacher-student communication, management of grades, student access to course materials)?

Check **one** circle only.

Yes --- ☐
No --- ☐

10

A. Does your school have a school library?

ACBG10A

Check **one** circle only.

Yes --- ☐

No --- ☐

(If No, go to #11)

If Yes,

B. Approximately how many books (print) with different titles does your school library have (exclude magazines and periodicals)?

ACBG10B

Check **one** circle only.

2,000 books or fewer --- ☐

More than 2,000 books --- ☐

11

Does your school have classroom libraries?

ACBG11

Check **one** circle only.

Yes --- ☐

No --- ☐

12

Does your school provide students access to digital learning resources (e.g., books, videos)?

ACBG12

Check **one** circle only.

Yes --- ☐

No --- ☐

13

How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following?

Check **one** circle for each line.

Not at all
A little
Some
A lot

A. General School Resources

- ACBG13AA a) Instructional materials (e.g., textbooks) -----○—○—○—○
- ACBG13AB b) Supplies (e.g., papers, pencils, materials) -----○—○—○—○
- ACBG13AC c) School buildings and grounds -----○—○—○—○
- ACBG13AD d) Heating/cooling and lighting systems -----○—○—○—○
- ACBG13AE e) Instructional space (e.g., classrooms) -----○—○—○—○
- ACBG13AF f) Technologically competent staff -----○—○—○—○
- ACBG13AG g) Audio-visual resources for delivery of instruction (e.g., interactive white boards, digital projectors) -----○—○—○—○
- ACBG13AH h) Computer technology for teaching and learning (e.g., computers or tablets for student use) -----○—○—○—○
- ACBG13AI i) Resources for students with disabilities -----○—○—○—○

Check **one** circle for each line.

Not at all
A little
Some
A lot

B. Resources for Mathematics Instruction

- ACBG13BA a) Teachers with a specialization in mathematics -----○—○—○—○
- ACBG13BB b) Computer software/applications for mathematics instruction -----○—○—○—○
- ACBG13BC c) Library resources relevant to mathematics instruction -----○—○—○—○
- ACBG13BD d) Calculators for mathematics instruction -----○—○—○—○
- ACBG13BE e) Concrete objects or materials to help students understand quantities or procedures -----○—○—○—○

C. Resources for Science Instruction

- ACBG13CA a) Teachers with a specialization in science -----○—○—○—○
- ACBG13CB b) Computer software/applications for science instruction -----○—○—○—○
- ACBG13CC c) Library resources relevant to science instruction -----○—○—○—○
- ACBG13CD d) Science equipment and materials for experiments -----○—○—○—○

School Emphasis on Academic Success

14

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

Check **one** circle for each line.

	Very high	High	Medium	Low	Very low
ACBG14A a) Teachers' understanding of the school's curricular goals	☐	☐	☐	☐	☐
ACBG14B b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
ACBG14C c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
ACBG14D d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
ACBG14E e) Parental involvement in school activities	☐	☐	☐	☐	☐
ACBG14F f) Parental commitment to ensure that students are ready to learn	☐	☐	☐	☐	☐
ACBG14G g) Parental expectations for student achievement	☐	☐	☐	☐	☐
ACBG14H h) Parental support for student achievement	☐	☐	☐	☐	☐
ACBG14I i) Students' desire to do well in school	☐	☐	☐	☐	☐
ACBG14J j) Students' ability to reach school's academic goals	☐	☐	☐	☐	☐
ACBG14K k) Students' respect for classmates who excel academically	☐	☐	☐	☐	☐

School Discipline and Safety

15

To what degree is each of the following a problem among <fourth grade> students in your school?

Check **one** circle for each line.

	Not a problem	Minor problem	Moderate problem	Serious problem
ACBG15A a) Arriving late at school	☐	☐	☐	☐
ACBG15B b) Absenteeism (i.e., unjustified absences)	☐	☐	☐	☐
ACBG15C c) Classroom disturbance	☐	☐	☐	☐
ACBG15D d) Cheating	☐	☐	☐	☐
ACBG15E e) Profanity	☐	☐	☐	☐
ACBG15F f) Vandalism	☐	☐	☐	☐
ACBG15G g) Theft	☐	☐	☐	☐
ACBG15H h) Intimidation or verbal abuse among students (including texting, emailing, etc.)	☐	☐	☐	☐
ACBG15I i) Physical fights among students	☐	☐	☐	☐
ACBG15J j) Intimidation or verbal abuse of teachers or staff (including texting, emailing, etc.)	☐	☐	☐	☐

16

To what degree is each of the following a problem among teachers in your school?

Check **one** circle for each line.

	Not a problem	Minor problem	Moderate problem	Serious problem
ACBG16A a) Arriving late or leaving early	☐	☐	☐	☐
ACBG16B b) Absenteeism	☐	☐	☐	☐

School Readiness

17

About how many of the students in your school can do the following when they begin the <first grade> of primary/elementary school?

Check **one** circle for each line.

Less than 25%
25–50%
51–75%
More than 75%

- ACBG17A a) Recognize most of the letters of the alphabet ----- ☐ ☐ ☐ ☐
- ACBG17B b) Read some words ----- ☐ ☐ ☐ ☐
- ACBG17C c) Read sentences ----- ☐ ☐ ☐ ☐
- ACBG17D d) Write letters of the alphabet -- ☐ ☐ ☐ ☐
- ACBG17E e) Write their names ----- ☐ ☐ ☐ ☐
- ACBG17F f) Write words other than their names ----- ☐ ☐ ☐ ☐
- ACBG17G g) Count up to 100 or higher ---- ☐ ☐ ☐ ☐
- ACBG17H h) Recognize written numbers from 1–10 ----- ☐ ☐ ☐ ☐
- ACBG17I i) Recognize written numbers higher than 10 ----- ☐ ☐ ☐ ☐
- ACBG17J j) Write numbers from 1–10 ---- ☐ ☐ ☐ ☐
- ACBG17K k) Do simple addition ----- ☐ ☐ ☐ ☐
- ACBG17L l) Do simple subtraction ----- ☐ ☐ ☐ ☐

Principal Experience and Education

18

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

ACBG18

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

19

By the end of this school year, how many years will you have been a principal at this school?

ACBG19

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

20

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

ACBG20

Check **one** circle only.

- Did not complete <Bachelor's or equivalent level—ISCED Level 6> --- ☐
- <Bachelor's or equivalent level—ISCED Level 6> --- ☐
- <Master's or equivalent level—ISCED Level 7> --- ☐
- <Doctor or equivalent level—ISCED Level 8> --- ☐

21

Do you hold the following qualifications or credentials in educational leadership?

Check **one** circle for each line.

- ACBG21A a) <Certificate or license> ----- ☐ ☐
- ACBG21B b) <Master's or equivalent level—ISCED Level 7> ----- ☐ ☐
- ACBG21C c) <Doctor or equivalent level—ISCED Level 8> ----- ☐ ☐

Thank You

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



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<Grade 4>



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International Association
for the Evaluation of
Educational Achievement



SECTION 1.6: **CURRICULUM QUESTIONNAIRE** **GRADE 4**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQG-01	GEN01	What is your country's name for the grade(s) tested in TIMSS 2019, in English (e.g., grade 4, grade 8)?
CQG-02A	GEN02A	In your country, what is the stated official policy or regulation on students' age of entry to primary school (ISCED Level 1)?
CQG-02B	GEN02B	If the official policy [on age of entry] allows some parental discretion or choice, please describe the usual practice.
CQG-03A	GEN03A	Has the stated official policy [on age of entry] changed in the last 10 years?
CQG-03B	GEN03B	If Yes...How did the policy change, and what is the status of implementation?
CQG-04	GEN04	What are the ages (or grades) of compulsory education in your country?
CQG-05	GEN05	Beginning with ISCED Level 1, what grades of schooling are provided to students through ISCED Level 3 (upper secondary)?
CQG-06	GEN06	Does your country have a policy on the promotion and retention of students across grades 1–8?
CQG-06T	GEN06T	Does your country have a policy on the promotion and retention of students across grades 1–8? Please describe:
CQG-07	GEN07	Does your country have a nationally mandated number of school days per year?
CQG-07T	GEN07T	Does your country have a nationally mandated number of school days per year? Please describe:
CQG-08A	GEN08A	State the official language(s) and describe the major language subgroups.
CQG-08B	GEN08B	Describe the languages of instruction for mathematics and science in the fourth and eighth grades. For example, is the instruction in these grades for these subjects presented to the students in their native language or in a second language?
CQG-09Aa	GEN09AA	Does your country provide universal ECED or PPE coverage? ECED programs for children under age 3
CQG-09Ab	GEN09AB	Does your country provide universal ECED or PPE coverage? PPE programs for children age 3 or older
CQG-09B	GEN09B	How many years can children attend [ECED or PPE] programs altogether?
CQG-09BT	GEN09BT	How many years can children attend [ECED or PPE] programs altogether? Comments:
CQG-09Ca	GEN09CA	Does your country provide targeted ECED or PPE coverage? ECED programs for children under age 3
CQG-09Cb	GEN09CB	Does your country provide targeted ECED or PPE coverage? PPE programs for children age 3 or older
CQG-09CT	GEN09CT	Does your country provide targeted ECED or PPE coverage? Please describe:
CQG-10Aa	GEN10AA	Does your country have national curriculum guidance documents for ECED or PPE programs? ECED programs for children under age 3
CQG-10Ab	GEN10AB	Does your country have national curriculum guidance documents for ECED or PPE programs? PPE programs for children age 3 or older
CQG-10BaA	GEN10BAA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Socio-emotional development
CQG-10BaB	GEN10BAB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Socio-emotional development
CQG-10BbA	GEN10BBA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Physical development and health education
CQG-10BbB	GEN10BBB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Physical development and health education
CQG-10BcA	GEN10BCA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Oral language development and communication skills
CQG-10BcB	GEN10BCB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Oral language development and communication skills
CQG-10BdA	GEN10BDA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Reading and literacy skills
CQG-10BdB	GEN10BDB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Reading and literacy skills
CQG-10BeA	GEN10BEA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Mathematics and numeracy skills

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQG-10BeB	GEN10BEB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Mathematics and numeracy skills
CQG-10BfA	GEN10BFA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Science including understanding the natural world (e.g., weather)
CQG-10BfB	GEN10BFB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Science including understanding the natural world (e.g., weather)
CQG-10BgA	GEN10BGA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Other
CQG-10BgB	GEN10BGB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Other
CQG-10BgT	GEN10BGT	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED and PPE programs: Other, please specify below
CQG-10BT	GEN10BT	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED and PPE programs: Comments:
CQG-11A	GEN11A	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations that have consequences for individual students, such as entry to a higher school system, entry to a university, and/or exiting or graduating from secondary school?
CQG-11B	GEN11B	If Yes...Please describe the grades at which the exams are given, the subjects that are assessed, and the purpose of each exam.
CQG-12A	GEN12A	What is the main preparation route(s) for teachers of students in the fourth grade?
CQG-12Ba	GEN12BA	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Supervised practicum during the teacher education program.
CQG-12BaT	GEN12BAT	If Yes...How long is this period?
CQG-12Bb	GEN12BB	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Passing a qualifying examination (e.g., licensing, certification).
CQG-12Bc	GEN12BC	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Completion of a probationary teaching period.
CQG-12BcT	GEN12BCT	If Yes...How long is this period?
CQG-12Bd	GEN12BD	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Completion of a mentoring or induction program.
CQG-12Be	GEN12BE	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Other
CQG-12BeT	GEN12BET	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Other, please specify below
CQG-12C	GEN12C	Are there additional requirements for teachers of mathematics and science in the fourth grade?
CQG-12D	GEN12D	If Yes...What are they?
CQG-12E	GEN12E	In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the fourth grade?
CQG-12F	GEN12F	If Yes...How did the policy change, and what is the status of implementation?
CQG-13A	GEN13A	Is the main preparation route(s) for teachers of students in the eighth grade different from the main preparation route(s) at the fourth grade?
CQG-13B	GEN13B	If Yes...If the main preparation route(s) for teachers of students in the eighth grade is different, what is their main preparation route?
CQG-13Ca	GEN13CA	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Supervised practicum during the teacher education program.
CQG-13CaT	GEN13CAT	If Yes...How long is this period?
CQG-13Cb	GEN13CB	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Passing a qualifying examination (e.g., licensing, certification).

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQG-13c	GEN13CC	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Completion of a probationary teaching period.
CQG-13CcT	GEN13CCT	If Yes...How long is this period?
CQG-13Cd	GEN13CD	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Completion of a mentoring or induction program
CQG-13Ce	GEN13CE	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Other
CQG-13CeT	GEN13CET	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Other, please specify below:
CQG-13D	GEN13D	If there are additional requirements for teachers of mathematics and science in the eighth grade that are different than in the fourth grade, what are they?
CQG-13E	GEN13E	In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the eighth grade?
CQG-13F	GEN13F	If Yes...How did the policy change, and what is the status of implementation?
CQG-14A	GEN14A	What is the main preparation route(s) for principals of schools with fourth grade students?
CQG-14Ba	GEN14BA	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Teaching experience
CQG-14Bb	GEN14BB	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Completion of a specialized school leadership training program
CQG-14Bc	GEN14BC	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Other
CQG-14BcT	GEN14BCT	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Other, please specify below
CQG-14C	GEN14C	In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with fourth grade students?
CQG-14D	GEN14D	If Yes...How did the policy change, and what is the status of implementation?
CQG-15A	GEN15A	Is the main preparation route(s) for principals of schools with eighth grade students different from the main preparation route(s) for principals of schools with fourth grade students?
CQG-15B	GEN15B	If the main preparation route(s) for principals of schools with eighth grade students is different, what is their main preparation route?
CQG-15Ca	GEN15CA	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Teaching experience
CQG-15Cc	GEN15CB	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Completion of a specialized school leadership training program
CQG-15Cc	GEN15CC	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Other
CQG-15CcT	GEN15CCT	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Other, please specify below:
CQG-15D	GEN15D	In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with eighth grade students?
CQG-15E	GEN15E	If Yes...How did the policy change, and what is the status of implementation?
CQM4-01	MA401	Does your country have a national curriculum that covers mathematics instruction at the fourth grade of primary/elementary school?
CQM4-01TA	MA401TA	If Yes...Comments:
CQM4-01TB	MA401TB	If No...What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers mathematics instruction at the fourth grade of primary/elementary school?
CQM4-02A	MA402A	In what year was the 2018/2019 mathematics curriculum introduced?

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQM4-02AT	MA402AT	In what year was the 2018/2019 mathematics curriculum introduced? Comments (e.g., status of implementation:
CQM4-02B	MA402B	Is the mathematics curriculum currently being revised?
CQM4-02BTA	MA402BTA	If Yes...Please explain:
CQM4-02BTB	MA402BTB	If No...Comments:
CQM4-03	MA403	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the fourth grade of primary/elementary school?
CQM4-03TA	MA403TA	If Yes...Please specify the percentage:
CQM4-03TB	MA403TB	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the fourth grade of primary/elementary school? Comments:
CQM4-04a	MA404A	How is the mathematics curriculum implementation evaluated? Visits by inspectors
CQM4-04b	MA404B	How is the mathematics curriculum implementation evaluated? Research programs
CQM4-04c	MA404C	How is the mathematics curriculum implementation evaluated? School self-evaluation
CQM4-04d	MA404D	How is the mathematics curriculum implementation evaluated? National or regional examinations
CQM4-04e	MA404E	How is the mathematics curriculum implementation evaluated? Other
CQM4-04eT	MA404ET	How is the mathematics curriculum implementation evaluated? Other, please specify below:
CQM4-04T	MA404T	How is the mathematics curriculum implementation evaluated? Comments:
CQM4-05A	MA405A	Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 4 mathematics instruction?
CQM4-05AT	MA405AT	If Yes...What are the statements/policies?
CQM4-05B	MA405B	Does the national curriculum contain statements/policies about student use of digital devices (e.g., computers, tablets, calculators) in grade 4 mathematics tests or examinations?
CQM4-05BTA	MA405BTA	If Yes...What are the statements/policies?
CQM4-05BTB	MA405BTB	Does the national curriculum contain statements/policies about student use of digital devices (e.g., computers, tablets, calculators) in grade 4 mathematics tests or examinations? Comments:
CQM4-06	MA406	At what grade(s) are students first taught by mathematics subject specialists rather than general classroom teachers?
CQM4-07Aa	MA407AA	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Number: Concepts of whole numbers, including place value and ordering
CQM4-07AaP to CQM4-07Aa12	MA407AAP to MA407AA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Concepts of whole numbers, including place value and ordering
CQM4-07Ab	MA407AB	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Number: Adding, subtracting, multiplying, and dividing with whole numbers
CQM4-07AbP to CQM4-07Ab12	MA407ABP to MA407AB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Adding, subtracting, multiplying, and dividing with whole numbers
CQM4-07Ac	MA407AC	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Number: Concepts of multiples and factors; odd and even numbers
CQM4-07AcP to CQM4-07Ac12	MA407ACP to MA407AC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Number: Concepts of multiples and factors; odd and even numbers
CQM4-07Ad	MA407AD	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Number: Number sentences (finding the missing number, representing problem situations with number sentences)

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQM4-07AdP to CQM4-07Ad12	MA407ADP to MA407AD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Number sentences (finding the missing number, representing problem situations with number sentences)
CQM4-07Ae	MA407AE	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Number: Number patterns (extending number patterns and finding missing terms)
CQM4-07AeP to CQM4-07Ae12	MA407AEP to MA407AE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Number patterns (extending number patterns and finding missing terms)
CQM4-07Af	MA407AF	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Number: Concepts of fractions, including representing, comparing and ordering, adding and subtracting simple fractions
CQM4-07AfP to CQM4-07Af12	MA407AFP to MA407AF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Concepts of fractions, including representing, comparing and ordering, adding and subtracting simple fractions
CQM4-07Ag	MA407AG	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Number: Concepts of decimals, including place value and ordering, adding and subtracting with decimals
CQM4-07AgP to CQM4-07Ag12	MA407AGP to MA407AG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Concepts of decimals, including place value and ordering, adding and subtracting with decimals
CQM4-07AT	MA407AT	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number topics: Comments:
CQM4-07Ba	MA407BA	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Measurement and Geometry: Solving problems involving length, including measuring and estimating
CQM4-07BaP to CQM4-07Ba12	MA407BAP to MA407BA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry: Solving problems involving length, including measuring and estimating
CQM4-07Bb	MA407BB	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Measurement and Geometry: Solving problems involving mass, volume, and time
CQM4-07BbP to CQM4-07Bb12	MA407BBP to MA407BB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry: Solving problems involving mass, volume, and time
CQM4-07Bc	MA407BC	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Measurement and Geometry: Finding and estimating perimeter, area, and volume
CQM4-07BcP to CQM4-07Bc12	MA407BCP to MA407BC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry: Finding and estimating perimeter, area, and volume
CQM4-07Bd	MA407BD	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Measurement and Geometry: Parallel and perpendicular lines

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQM4-07BdP to CQM4-07Bd12	MA407BDP to MA407BD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry: Parallel and perpendicular lines
CQM4-07Be	MA407BE	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Measurement and Geometry: Comparing and drawing angles
CQM4-07BeP to CQM4-07Be12	MA407BEP to MA407BE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry: Comparing and drawing angles
CQM4-07Bf	MA407BF	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Measurement and Geometry: Elementary properties of common geometric shapes
CQM4-07BfP to CQM4-07Bf12	MA407BFP to MA407BF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry: Elementary properties of common geometric shapes
CQM4-07Bg	MA407BG	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Measurement and Geometry: Three-dimensional shapes, including relationships with their two-dimensional representations
CQM4-07BgP to CQM4-07Bg12	MA407BGP to MA407BG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry: Three-dimensional shapes, including relationships with their two-dimensional representations
CQM4-07BT	MA407BT	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Measurement and Geometry topics: Comments:
CQM4-07Ca	MA407CA	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Data: Reading and interpreting data from tables, pictographs, bar graphs, line graphs, and pie charts
CQM4-07CaP to CQM4-07Ca12	MA407CAP to MA407CA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data: Reading and interpreting data from tables, pictographs, bar graphs, line graphs, and pie charts
CQM4-07Cb	MA407CB	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Data: Organizing and representing data to help answer questions
CQM4-07CbP to CQM4-07Cb12	MA407CBP to MA407CB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data: Organizing and representing data to help answer questions
CQM4-07Cc	MA407CC	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Data: Drawing conclusions from data displays
CQM4-07CcP to CQM4-07Cc12	MA407CCP to MA407CC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data: Drawing conclusions from data displays
CQM4-07CT	MA407CT	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data topics: Comments:

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS4-01	SC401	Does your country have a national curriculum that covers science instruction at the fourth grade of primary/elementary school?
CQS4-01TA	SC401TA	If Yes...Comments:
CQS4-01TB	SC401TB	If No...What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers science instruction at the fourth grade of primary/elementary school?
CQS4-02A	SC402A	In what year was the 2018/2019 science curriculum introduced?
CQS4-02AT	SC402AT	In what year was the 2018/2019 science curriculum introduced? Comments (e.g., status of implementation):
CQS4-02B	SC402B	Is the science curriculum currently being revised?
CQS4-02BTA	SC402BTA	If Yes...Please explain:
CQS4-02BTB	SC402BTB	If No...Comments:
CQS4-03	SC403	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the fourth grade of primary/elementary school?
CQS4-03TA	SC403TA	If Yes...Please specify the percentage
CQS4-03TB	SC403TB	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the fourth grade of primary/elementary school? Comments:
CQS4-04a	SC404A	How is the science curriculum implementation evaluated? Visits by inspectors
CQS4-04b	SC404B	How is the science curriculum implementation evaluated? Research programs
CQS4-04c	SC404C	How is the science curriculum implementation evaluated? School self-evaluation
CQS4-04d	SC404D	How is the science curriculum implementation evaluated? National or regional examinations
CQS4-04e	SC404E	How is the science curriculum implementation evaluated? Other
CQS4-04eT	SC404ET	How is the science curriculum implementation evaluated? Other, please specify below:
CQS4-04T	SC404T	How is the science curriculum implementation evaluated? Comments:
CQS4-05	SC405	Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 4 science instruction?
CQS4-05T	SC405T	If Yes...What are the statements/policies?
CQS4-06	SC406	At what grade(s) are students first taught by science subject specialists rather than general classroom teachers?
CQS4-07Aa	SC407AA	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Life Science: Physical and behavioral characteristics of living things and major groups of living things (e.g., mammals, birds, insects, flowering plants)
CQS4-07AaP to CQS4-07Aa12	SC407AAP to SC407AA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science: Physical and behavioral characteristics of living things and major groups of living things (e.g., mammals, birds, insects, flowering plants)
CQS4-07Ab	SC407AB	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Life Science: Major body structures and their functions in humans, other animals, and plants
CQS4-07AbP to CQS4-07Ab12	SC407ABP to SC407AB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science: Major body structures and their functions in humans, other animals, and plants
CQS4-07Ac	SC407AC	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Life Science: Life cycles of common plants and animals (e.g., flowering plants, butterflies, frogs)
CQS4-07AcP to CQS4-07Ac12	SC407ACP to SC407AC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science: Life cycles of common plants and animals (e.g., flowering plants, butterflies, frogs)

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS4-07Ad	SC407AD	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Life Science: Characteristics of plants and animals that are inherited
CQS4-07AdP to CQS4-07Ad12	SC407ADP to SC407AD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science: Characteristics of plants and animals that are inherited
CQS4-07Ae	SC407AE	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Life Science: Interactions between organisms and their environments (e.g., physical features and behaviors that help living things survive in their environments)
CQS4-07AeP to CQS4-07Ae12	SC407AEP to SC407AE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science: Interactions between organisms and their environments (e.g., physical features and behaviors that help living things survive in their environments)
CQS4-07Af	SC407AF	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Life Science: Relationships in ecosystems (e.g., simple food chains, predator-prey relationships, competition)
CQS4-07AfP to CQS4-07Af12	SC407AFP to SC407AF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science: Relationships in ecosystems (e.g., simple food chains, predator-prey relationships, competition)
CQS4-07Ag	SC407AG	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Life Science: Human health (transmission and prevention of diseases, everyday behaviors that promote good health)
CQS4-07AgP to CQS4-07Ag12	SC407AGP to SC407AG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science: Human health (transmission and prevention of diseases, everyday behaviors that promote good health)
CQS4-07AT	SC407AT	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Life Science topics: Comments:
CQS4-07Ba	SC407BA	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: States of matter (solid, liquid, gas) and their properties (volume, shape)
CQS4-07BaP to CQS4-07Ba12	SC407BAP to SC407BA12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: States of matter (solid, liquid, gas) and their properties (volume, shape)
CQS4-07Bb	SC407BB	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Classifying materials based on physical properties (e.g., weight/mass, volume, state of matter, conductivity of heat or electricity)
CQS4-07BbP to CQS4-07Bb12	SC407BBP to SC407BB12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Classifying materials based on physical properties (e.g., weight/mass, volume, state of matter, conductivity of heat or electricity)
CQS4-07Bc	SC407BC	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Mixtures, including methods for separating a mixture into its components (e.g., sifting, filtering, evaporation, using a magnet)
CQS4-07BcP to CQS4-07Bc12	SC407BCP to SC407BC12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Mixtures, including methods for separating a mixture into its components (e.g., sifting, filtering, evaporation, using a magnet)

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS4-07Bd	SC407BD	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Properties of magnets (e.g., like poles repel and opposite poles attract, magnets can attract some objects)
CQS4-07BdP to CQS4-07Bd12	SC407BDP to SC407BD12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Properties of magnets (e.g., like poles repel and opposite poles attract, magnets can attract some objects)
CQS4-07Be	SC407BE	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Physical changes in everyday life (e.g., changes of state, dissolving)
CQS4-07BeP to CQS4-07Be12	SC407BEP to SC407BE12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Physical changes in everyday life (e.g., changes of state, dissolving)
CQS4-07Bf	SC407BF	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Chemical changes in everyday life (e.g., decaying, burning, rusting, cooking)
CQS4-07BfP to CQS4-07Bf12	SC407BFP to SC407BF12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Chemical changes in everyday life (e.g., decaying, burning, rusting, cooking)
CQS4-07Bg	SC407BG	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Common sources of energy (e.g., the Sun, wind, oil) and uses of energy (heating and cooling homes, providing light)
CQS4-07BgP to CQS4-07Bg12	SC407BGP to SC407BG12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Common sources of energy (e.g., the Sun, wind, oil) and uses of energy (heating and cooling homes, providing light)
CQS4-07Bh	SC407BH	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Light and sound in everyday life (e.g., shadows and reflections, vibrating objects make sound)
CQS4-07BhP to CQS4-07Bh12	SC407BHP to SC407BH12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Light and sound in everyday life (e.g., shadows and reflections, vibrating objects make sound)
CQS4-07Bi	SC407BI	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Heat transfer (e.g., energy flows from a hot object to a colder object)
CQS4-07BiP to CQS4-07Bi12	SC407BIP to SC407BI12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Heat transfer (e.g., energy flows from a hot object to a colder object)
CQS4-07Bj	SC407BJ	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Electricity and simple electrical circuits (e.g., a circuit must be complete to work correctly)
CQS4-07BjP to CQS4-07Bj12	SC407BJP to SC407BJ12	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Electricity and simple electrical circuits (e.g., a circuit must be complete to work correctly)
CQS4-07Bk	SC407BK	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Forces that cause objects to move (e.g., gravity, pushing/pulling) or change their motion (e.g., friction)
CQS4-07BkP to CQS4-07Bk12	SC407BKP to SC407BK12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Forces that cause objects to move (e.g., gravity, pushing/pulling) or change their motion (e.g., friction)

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

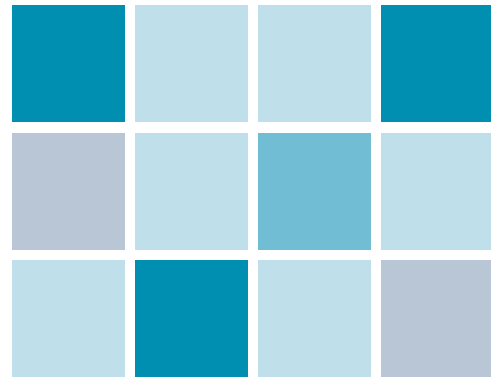
TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS4-07BI	SC407BL	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Physical Science: Simple machines (e.g., levers, pulleys, wheels, ramps) that help make motion easier
CQS4-07BIP to CQS4-07BI12	SC407BLP to SC407BL12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science: Simple machines (e.g., levers, pulleys, wheels, ramps) that help make motion easier
CQS4-07BT	SC407BT	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physical Science topics: Comments:
CQS4-07Ca	SC407CA	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Earth Science: Physical makeup of Earth's surface (e.g., land and water in unequal proportions, sources of fresh and salt water)
CQS4-07CaP to CQS4-07Ca12	SC407CAP to SC407CA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Physical makeup of Earth's surface (e.g., land and water in unequal proportions, sources of fresh and salt water)
CQS4-07Cb	SC407CB	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Earth Science: Earth's resources used in everyday life (e.g., water, wind, soil, forests, oil, natural gas, minerals)
CQS4-07CbP to CQS4-07Cb12	SC407CBP to SC407CB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Earth's resources used in everyday life (e.g., water, wind, soil, forests, oil, natural gas, minerals)
CQS4-07Cc	SC407CC	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Earth Science: Changes in Earth's surface over time (e.g., mountain building, weathering, erosion)
CQS4-07CcP to CQS4-07Cc12	SC407CCP to SC407CC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Changes in Earth's surface over time (e.g., mountain building, weathering, erosion)
CQS4-07Cd	SC407CD	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Earth Science: Fossils and what they can tell us about past conditions on Earth
CQS4-07CdP to CQS4-07Cd12	SC407CDP to SC407CD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Fossils and what they can tell us about past conditions on Earth
CQS4-07Ce	SC407CE	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Earth Science: Weather and climate (e.g., daily, seasonal, and locational variations versus long term trends)
CQS4-07CeP to CQS4-07Ce12	SC407CEP to SC407CE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Weather and climate (e.g., daily, seasonal, and locational variations versus long term trends)
CQS4-07Cf	SC407CF	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Earth Science: Objects in the Solar System (the Sun, the Earth, the Moon, and other planets) and their movements
CQS4-07CfP to CQS4-07Cf12	SC407CFP to SC407CF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Objects in the Solar System (the Sun, the Earth, the Moon, and other planets) and their movements

Exhibit 1.6: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 4)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS4-07Cg	SC407CG	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Earth Science: Earth's motion and related patterns observed on Earth (e.g., day and night, seasons)
CQS4-07CgP to CQS4-07Cg12	SC407CGP to SC407CG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Earth's motion and related patterns observed on Earth (e.g., day and night, seasons)
CQS4-07CT	SC407CT	According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science topics: Comments:



TIMSS 2019 Curriculum Questionnaire Fourth Grade



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TIMSS 2019 Curriculum Questionnaire

Please enter your user ID and password (Checksum).

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Password:

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade

TIMSS 2019 Curriculum Questionnaire – Fourth Grade

The TIMSS 2019 Curriculum Questionnaire is designed to collect basic information about the structure of the education system as well as the organization, content, and implementation of the mathematics and/or science curricula in each country.

The questionnaire should be completed by the National Research Coordinators, drawing on the expertise of curriculum specialists and educators. Please submit this questionnaire no later than **October 30, 2019**.

To begin the questionnaire, please click on the "Next" button. When navigating through the questionnaire, make sure to confirm your responses by clicking on the "Next" or "Previous" button. To go to a particular section or item, please click on the corresponding link in the "Table of Contents." When you have completed the questionnaire, please make sure to click the "Submit" button to submit your answers.

Please note that the General Module is the same across the fourth and eighth grades, and therefore National Research Coordinators of countries participating in TIMSS 2019 at both the fourth and eighth grade are advised to complete the General Module at only one of the grade levels. The Mathematics and Science Modules should be completed at both grade levels.

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

If you have any technical questions on how to complete this questionnaire, please contact the IEA Hamburg (TIMSS email account): timss@iea-hamburg.de

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - GENERAL MODULE

GENERAL MODULE

To be completed by all countries participating in TIMSS

Please note: if you already have completed the General Module of the Grade 8 Curriculum Questionnaire, please skip the General Module using the Table of Contents.

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Grade Structure and Student Flow

Grade Structure and Student Flow

GEN01

G1. What is your country's name for the grade(s) tested in TIMSS 2019, in English (e.g., grade 4, grade 8)?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Grade Structure and Student Flow

GEN02A

G2. A. In your country, what is the stated official policy or regulation on students' age of entry to primary school (ISCED Level 1)?

Examples: "Children begin school during the calendar year of their 6th birthday"; "Children must be 6 years old by the end of June to begin school the following September."

GEN02B

B. If the official policy allows some parental discretion or choice, please describe the usual practice.

Example: "Even though the official policy is that students can begin school in the year when they turn 6 years old, children typically begin primary school at age 7 because their parents feel they will benefit from being more mature."

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GEN03A

G3. A. Has the stated official policy changed in the last 10 years?

*Check **one** circle only.*

☐ Yes
 ☐ No

If Yes....

B. How did the policy change, and what is the status of implementation?

GEN03B

GEN04

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Grade Structure and Student Flow

G4. What are the ages (or grades) of compulsory education in your country?

Example: "Ages 6-16 (or Grades 1-9)."

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Grade Structure and Student Flow

GEN05

G5. Beginning with ISCED Level 1, what grades of schooling are provided to students through ISCED Level 3 (upper secondary)?

Example: "Grades 1-12."

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Grade Structure and Student Flow

GEN06

G6. Does your country have a policy on the promotion and retention of students across grades 1-8?

Example: "Automatic promotion for grades 1-5, dependent on academic progress for grades 6-8."

Check **one** circle only.

☐ Yes

☐ No

GEN06T

Please describe:

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GEN07

GEN07T

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Grade Structure and Student Flow

G7. Does your country have a nationally mandated number of school days per year?

Check *one* circle only.

☐ Yes
 ☐ No

Please describe:

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Languages of Instruction

GEN08A

Languages of Instruction

GEN08B

G8. A. State the official language(s) and describe the major language subgroups.

B. Describe the languages of instruction for mathematics and science in the fourth and eighth grades. For example, is the instruction in these grades for these subjects presented to the students in their native language or in a second language?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Early Childhood Education

Early Childhood Education

Early childhood education (ISCED Level 0) is subdivided into:

- Early childhood educational development (ECED) programs for children under age 3; and
- Pre-primary education (PPE) programs including Kindergarten for children age 3 or older.

G9. A. Does your country provide universal ECED or PPE coverage?

Programs with **universal** coverage are accessible and available to all children, although in some cases parents may choose not to enroll their children.

Check **one** circle for each line.

- | | Yes | No |
|---|-----------------------|-----------------------|
| GEN09AA a) ECED programs for children under age 3 | ☐ | ☐ |
| GEN09AB b) PPE programs for children age 3 or older | ☐ | ☐ |

B. How many years can children attend these programs altogether?

Check **one** circle only.

- ☐ 1 year
☐ 2 years
☐ 3 years
☐ 4 or more years

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GEN09CA

GEN09CB

GEN09CT

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Early Childhood Education

C. Does your country provide **targeted** ECED or PPE coverage?

Programs with **targeted** coverage are only available for certain subgroups (e.g., for children from low-income families, for children where the language spoken at home is different from the national language).

Check **one** circle for each line.

Yes

No

a) ECED programs for children under age 3

☐

☐

b) PPE programs for children age 3 or older

☐

☐

Please describe:

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Early Childhood Education

Early childhood education (ISCED Level 0) is subdivided into:

- **Early childhood educational development (ECED)** programs for children under age 3; and
- **Pre-primary education (PPE)** programs including Kindergarten for children age 3 or older.

G10. A. Does your country have national curriculum guidance documents for ECED or PPE programs?

Check **one** circle for each line.

	Yes	No
a) ECED programs for children under age 3	☐	☐
b) PPE programs for children age 3 or older	☐	☐

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Early Childhood Education

If Yes....

B. Do the curriculum guidance documents cover any of the following topic areas?

Check **one** circle for ECED programs, AND **one** circle for PPE programs.

		ECED programs		PPE programs	
		Yes	No	Yes	No
a)	Socio-emotional development	☐	☐	☐	☐
b)	Physical development and health education	☐	☐	☐	☐
c)	Oral language development and communication skills	☐	☐	☐	☐
d)	Reading and literacy skills	☐	☐	☐	☐
e)	Mathematics and numeracy skills	☐	☐	☐	☐
f)	Science including understanding the natural world (e.g., weather)	☐	☐	☐	☐
g)	Other	☐	☐	☐	☐
Please specify below:					

Comments:

GEN11A

GEN11B

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Examinations

Examinations

G11. A. Does an educational authority in your country (e.g., National Ministry of Education) administer examinations that have consequences for individual students, such as entry to a higher school system, entry to a university, and/or exiting or graduating from secondary school?

Check one circle only.

☐ Yes
 ☐ No

If Yes....

B. Please describe the grades at which the exams are given, the subjects that are assessed, and the purpose of each exam.

Example: "There is an exam including language and mathematics given at the end of grade 8 to determine placement for entry to secondary school."

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Teacher Preparation

GEN12A

Teacher Preparation

G12. A. What is the main preparation route(s) for teachers of students in the fourth grade?

Example: "Most teachers receive their education through a university degree program. Some have attended a teacher college program, but that is becoming less common."

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GEN12BA

GEN12BAT

GEN12BB

GEN12BC

GEN12BCT

GEN12BD

GEN12BE

GEN12BET

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Teacher Preparation

B. According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade?

Check **one** circle for each line.

Yes

No

a) Supervised practicum during the teacher education program.

☐

☐

If Yes...

How long is this period?

b) Passing a qualifying examination (e.g., licensing, certification).

☐

☐

c) Completion of a probationary teaching period.

☐

☐

If Yes...

How long is this period?

d) Completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance).

☐

☐

e) Other

☐

☐

Please specify below:

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Teacher Preparation

GEN12C

C. Are there additional requirements for teachers of mathematics and science in the fourth grade?

Check *one* circle only.

- ☐ Yes
☐ No

GEN12D

If Yes....

D. What are they?

GEN12E

E. In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the fourth grade?

Check *one* circle only.

- ☐ Yes
☐ No

GEN12F

If Yes....

F. How did the policy change, and what is the status of implementation?

Example: "A master's degree will be required in 2020; an oral examination has been required since 2018."

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GEN13A

GEN13B

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Teacher Preparation

G13. A. Is the main preparation route(s) for teachers of students in the eighth grade different from the main preparation route(s) at the fourth grade?

Check *one* circle only.

☐ Yes
 ☐ No

If Yes....

B. If the main preparation route(s) for teachers of students in the eighth grade is different, what is their main preparation route?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Teacher Preparation

C. If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade?

Check **one** circle for each line.

	Yes	No
GEN13CA a) Supervised practicum during the teacher education program.	☐	☐
GEN13CAT If Yes... How long is this period?		
GEN13CB b) Passing a qualifying examination (e.g., licensing, certification).	☐	☐
GEN13CC c) Completion of a probationary teaching period.	☐	☐
GEN13CCT If Yes... How long is this period?		
GEN13CD d) Completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance).	☐	☐
GEN13CE e) Other	☐	☐
GEN13CET Please specify below:		

GEN13D **D. If there are additional requirements for teachers of mathematics and science in the eighth grade that are different than in the fourth grade, what are they?**

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GEN13E

GEN13F

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Teacher Preparation

(Continued)

E. In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the eighth grade?

*Check **one** circle only.*

☐ Yes
 ☐ No

If Yes....

F. How did the policy change, and what is the status of implementation?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Principal Preparation

Principal Preparation

GEN14A

G14. A. What is the main preparation route(s) for principals of schools with fourth grade students?

Example: "In addition to receiving their teaching qualifications, most principals have a degree in educational leadership."

B. According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students?

Check *one* circle for each line.

	Yes	No
a) Teaching experience	☐	☐
b) Completion of a specialized school leadership training program (including a school leadership degree program)	☐	☐
c) Other Please specify below:	☐	☐

GEN14BA

GEN14BB

GEN14BC

GEN14BCT

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Principal Preparation

GEN14C

C. In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with fourth grade students?

Check **one** circle only.

☐ Yes

☐ No

GEN14D

If Yes,....

D. How did the policy change, and what is the status of implementation?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Principal Preparation

GEN15A

G15. A. Is the main preparation route(s) for principals of schools with eighth grade students different from the main preparation route(s) for principals of schools with fourth grade students?

Check **one** circle only.

- ☐ Yes
☐ No

GEN15B

If Yes....

B. If the main preparation route(s) for principals of schools with eighth grade students is different, what is their main preparation route?

Example: "In addition to receiving their teaching qualifications, most principals have a degree in educational leadership."

C. According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students?

Check **one** circle for each line.

GEN15CA

a) Teaching experience

Yes	No
☐	☐

GEN15CB

b) Completion of a specialized school leadership training program (including a school leadership degree program)

☐	☐
-----------------------	-----------------------

GEN15CC

c) Other
Please specify below:

☐	☐
-----------------------	-----------------------

GEN15CCT

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GEN15D

GEN15E

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Principal Preparation

D. In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with eighth grade students?

Check *one* circle only.

☐ Yes
☐ No

If Yes....

E. How did the policy change, and what is the status of implementation?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - MATHEMATICS MODULE - GRADE 4

MATHEMATICS MODULE - GRADE 4

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

This mathematics module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the fourth 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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MA402A

MA402AT

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - About the Fourth Grade Mathematics Curriculum

M2. A. In what year was the 2018/2019 mathematics curriculum introduced?

Comments (e.g., status of implementation):

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - About the Fourth Grade Mathematics Curriculum

MA402B

B. Is the mathematics curriculum currently being revised?

Check one circle only.

☐ Yes

☐ No

MA402BTA

If Yes...
Please explain:

MA402BTB

If No...
Comments:

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MA403

MA403TA

MA403TB

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Curriculum Specifications

Curriculum Specifications

This mathematics module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the fourth 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.

M3. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the fourth grade of primary/elementary school?

Check **one** circle only.

- ☐ Yes
☐ No

If Yes...
Please specify the percentage:

Comments:

MA404A

MA404B

MA404C

MA404D

MA404E

MA404ET

MA404T

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Curriculum Specifications

M4. How is the mathematics curriculum implementation evaluated?

Check **one** circle for each line.

	Yes	No
a) Visits by inspectors	☐	☐
b) Research programs	☐	☐
c) School self-evaluation	☐	☐
d) National or regional examinations	☐	☐
e) Other	☐	☐
Please specify below:		

Comments:

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SECTION 1.6: CURRICULUM QUESTIONNAIRE – GRADE 4

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Use of Digital Devices

MA405A

MA405AT

Use of Digital Devices

This mathematics module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the fourth 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.

M5. A. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 4 mathematics instruction?

*Check **one** circle only.*

☐ Yes
 ☐ No

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

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Use of Digital Devices

MA405B

B. Does the national curriculum contain statements/policies about student use of digital devices (e.g., computers, tablets, calculators) in grade 4 mathematics tests or examinations?

Check one circle only.

☐ Yes☐ No

If Yes...

What are the statements/policies?

MA405BTA

MA405BTB

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Specialist Mathematics Teachers

MA406

Specialist Mathematics Teachers

M6. At what grade(s) are students first taught by mathematics subject specialists rather than general classroom teachers?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Mathematics Topics Covered

Fourth Grade Mathematics Topics Covered

This mathematics module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the fourth 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.

M7. (i) According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4?

Be sure to include curriculum expectations for all grades up to and including grade 4. Grades represent years of formal schooling. For example, if "Year 5" in your country corresponds to the fourth year of formal schooling, please choose grade 4.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., odd and even numbers in part A topic (c)], please explain in the comment field.

		(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
		Check one circle for each line.			Check the corresponding grade(s) for each topic.												
		All or almost all students	Only the more able students	Not included in the curriculum through grade 4	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
MA407AA	a) Concepts of whole numbers, including place value and ordering	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA407AB	b) Adding, subtracting, multiplying, and dividing with whole numbers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA407AC	c) Concepts of multiples and factors; odd and even numbers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA407AD	d) Number sentences (finding the missing number, representing problem situations with number sentences)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA407AE	e) Number patterns (extending number patterns and finding missing terms)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA407AF	f) Concepts of fractions, including representing, comparing and ordering, adding and subtracting simple fractions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA407AG	g) Concepts of decimals, including place value and ordering, adding and subtracting with decimals	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Mathematics Topics Covered

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Mathematics Topics Covered

M7. (continued)

(i) According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4?

Be sure to include curriculum expectations for all grades up to and including grade 4. Grades represent years of formal schooling. For example, if "Year 5" in your country corresponds to the fourth year of formal schooling, please choose grade 4.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., odd and even numbers in part A topic (c)], please explain in the comment field.

	(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)													
	Check one circle for each line.			Check the corresponding grade(s) for each topic.													
	All or almost all students	Only the more able students	Not included in the curriculum through grade 4	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	
MA407BA	B. Measurement and Geometry																
a) Solving problems involving length, including measuring and estimating	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
MA407BB	b) Solving problems involving mass, volume, and time	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
MA407BC	c) Finding and estimating perimeter, area, and volume	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
MA407BD	d) Parallel and perpendicular lines	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
MA407BE	e) Comparing and drawing angles	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
MA407BF	f) Elementary properties of common geometric shapes	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
MA407BG	g) Three-dimensional shapes, including relationships with their two-dimensional representations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Mathematics Topics Covered

M7. (continued)

(i) According to the national mathematics curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4?

Be sure to include curriculum expectations for all grades up to and including grade 4. Grades represent years of formal schooling. For example, if "Year 5" in your country corresponds to the fourth year of formal schooling, please choose grade 4.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., odd and even numbers in part A topic (c)], please explain in the comment field.

	(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 4	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
C. Data																
a) Reading and interpreting data from tables, pictographs, bar graphs, line graphs, and pie charts	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
b) Organizing and representing data to help answer questions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
c) Drawing conclusions from data displays	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - SCIENCE MODULE - GRADE 4

SCIENCE MODULE - GRADE 4

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

This science module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the fourth 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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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - About the Fourth Grade Science Curriculum

About the Fourth Grade Science Curriculum

This science module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the fourth 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.

SC401

S1. Does your country have a national curriculum that covers science instruction at the fourth grade of primary/elementary school?

Check one circle only.

☐ Yes

☐ No

SC401TA

If Yes...
Comments:

SC401TB

If No...
What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers science instruction at the fourth grade of primary/elementary school?

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SC402A

SC402AT

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - About the Fourth Grade Science Curriculum

S2. A. In what year was the 2018/2019 science curriculum introduced?

Comments (e.g., status of implementation):

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - About the Fourth Grade Science Curriculum

SC402B

B. Is the science curriculum currently being revised?

Check one circle only.

☐ Yes

☐ No

SC402BTA

If Yes...
Please explain:

SC402BTB

If No...
Comments:

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Curriculum Specifications

SC403

SC403TA

SC403TB

Curriculum Specifications

This science module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the fourth 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.

S3. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the fourth grade of primary/elementary school?

Check one circle only.

☐ Yes
 ☐ No

If Yes...
Please specify the percentage:

Comments:

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Curriculum Specifications

SC404A

SC404B

SC404C

SC404D

SC404E

SC404ET

S4. How is the science curriculum implementation evaluated?

Check one circle for each line.

	Yes	No
a) Visits by inspectors	☐	☐
b) Research programs	☐	☐
c) School self-evaluation	☐	☐
d) National or regional examinations	☐	☐
e) Other	☐	☐
Please specify below:		

SC404T

Comments:

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Use of Digital Devices

Use of Digital Devices

This science module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the fourth 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.

SC405

S5. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 4 science instruction?

Check *one* circle only.

☐ Yes

☐ No

SC405T

If Yes...

What are the statements/policies?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Specialist Science Teachers

Specialist Science Teachers

SC406

S6. At what grade(s) are students first taught by science subject specialists rather than general classroom teachers?

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Science Topics Covered

Fourth Grade Science Topics Covered

This science module refers to the national curriculum that was in effect for the fourth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the fourth 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.

S7. (i) According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4?

Be sure to include curriculum expectations for all grades up to and including grade 4. Grades represent years of formal schooling. For example, if "Year 5" in your country corresponds to the fourth year of formal schooling, please choose grade 4.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., birds in part A topic (a)], please explain in the comment field.

		(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)													
		Check one circle for each line.			Check the corresponding grade(s) for each topic													
		All or almost all students	Only the more able students	Not included in the curriculum through grade 4	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	
SC407AA	a) Physical and behavioral characteristics of living things and major groups of living things (e.g., mammals, birds, insects, flowering plants)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407AAP-12
SC407AB	b) Major body structures and their functions in humans, other animals, and plants	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407ABP-12
SC407AC	c) Life cycles of common plants and animals (e.g., flowering plants, butterflies, frogs)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407ACP-12
SC407AD	d) Characteristics of plants and animals that are inherited	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407ADP-12
SC407AE	e) Interactions between organisms and their environments (e.g., physical features and behaviors that help living things survive in their environments)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407AEP-12
SC407AF	f) Relationships in ecosystems (e.g., simple food chains, predator-prey relationships, competition)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407AFP-12
SC407AG	g) Human health (transmission and prevention of diseases, everyday behaviors that promote good health)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407AGP-12

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Science Topics Covered

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Science Topics Covered

S7. (continued)

(i) According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4?

Be sure to include curriculum expectations for all grades up to and including grade 4. Grades represent years of formal schooling. For example, if "Year 5" in your country corresponds to the fourth year of formal schooling, please choose grade 4.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., birds in part A topic (a)], please explain in the comment field.

		(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)													
		Check one circle for each line.			Check the corresponding grade(s) for each topic													
		All or almost all students	Only the more able students	Not included in the curriculum through grade 4	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	
B. Physical Science																		
SC407BA	a) States of matter (solid, liquid, gas) and their properties (volume, shape)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BAP-12
SC407BB	b) Classifying materials based on physical properties (e.g., weight/mass, volume, state of matter, conductivity of heat or electricity)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BBP-12
SC407BC	c) Mixtures, including methods for separating a mixture into its components (e.g., sifting, filtering, evaporation, using a magnet)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BCP-12
SC407BD	d) Properties of magnets (e.g., like poles repel and opposite poles attract, magnets can attract some objects)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BDP-12
SC407BE	e) Physical changes in everyday life (e.g., changes of state, dissolving)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BEP-12
SC407BF	f) Chemical changes in everyday life (e.g., decaying, burning, rusting, cooking)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BFP-12
SC407BG	g) Common sources of energy (e.g., the Sun, wind, oil) and uses of energy (heating and cooling homes, providing light)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BGP-12
SC407BH	h) Light and sound in everyday life (e.g., shadows and reflections, vibrating objects make sound)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BHP-12

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Science Topics Covered

SC407BI	i) Heat transfer (e.g., energy flows from a hot object to a colder object)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BIP-12
SC407BJ	j) Electricity and simple electrical circuits (e.g., a circuit must be complete to work correctly)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BJP-12
SC407BK	k) Forces that cause objects to move (e.g., gravity, pushing/pulling) or change their motion (e.g., friction)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BKP-12
SC407BL	l) Simple machines (e.g., levers, pulleys, wheels, ramps) that help make motion easier	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC407BLP-12

Comments:

SC407BT

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Science Topics Covered

S7. (continued)

(i) According to the national science curriculum, what proportion of grade 4 students should have been taught each of the following topics or skills by the end of grade 4?

Be sure to include curriculum expectations for all grades up to and including grade 4. Grades represent years of formal schooling. For example, if "Year 5" in your country corresponds to the fourth year of formal schooling, please choose grade 4.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., birds in part A topic (a)], please explain in the comment field.

		(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)													
		Check one circle for each line.			Check the corresponding grade(s) for each topic													
		All or almost all students	Only the more able students	Not included in the curriculum through grade 4	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	
C. Earth Science																		
SC407CA	a) Physical makeup of Earth's surface (e.g., land and water in unequal proportions, sources of fresh and salt water)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
SC407CB	b) Earth's resources used in everyday life (e.g., water, wind, soil, forests, oil, natural gas, minerals)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
SC407CC	c) Changes in Earth's surface over time (e.g., mountain building, weathering, erosion)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
SC407CD	d) Fossils and what they can tell us about past conditions on Earth	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
SC407CE	e) Weather and climate (e.g., daily, seasonal, and locational variations versus long term trends)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
SC407CF	f) Objects in the Solar System (the Sun, the Earth, the Moon, and other planets) and their movements	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
SC407CG	g) Earth's motion and related patterns observed on Earth (e.g., day and night, seasons)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade - Fourth Grade Science Topics Covered

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TIMSS 2019 Curriculum Questionnaire – Fourth Grade

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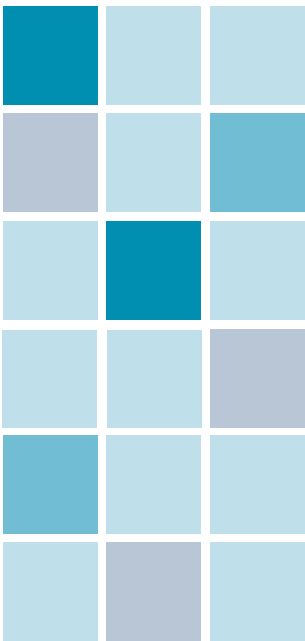
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SECTION 2.1: **STUDENT QUESTIONNAIRE—** **GENERAL/INTEGRATED** **SCIENCE VERSION** **GRADE 8**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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Exhibit 2.1: International Context Variables for the TIMSS 2019 Student Questionnaire—General/Integrated Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-01	BSBG01	Are you a girl or a boy?	BSBG01	
SQG-02a	BSBG02A	When were you born? Month	BSBG02A	
SQG-02b	BSBG02B	When were you born? Year	BSBG02B	
SQG-03	BSBG03	How often do you speak <language of test> at home?	BSBG03	
SQG-04	BSBG04	About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)	BSBG04	
SQG-05a	BSBG05A	Do you have any of these things at your home? A computer or tablet	BSBG06A, BSBG06B	Modified wording in 2019
SQG-05b	BSBG05B	Do you have any of these things at your home? Study desk/table for your use	BSBG06C	
SQG-05c	BSBG05C	Do you have any of these things at your home? Your own room	BSBG06D	
SQG-05d	BSBG05D	Do you have any of these things at your home? Internet connection	BSBG06E	
SQG-05e	BSBG05E	Do you have any of these things at your home? Your own mobile phone	BSBG06F	
SQG-05f	BSBG05F	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06H	
SQG-05g	BSBG05G	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06I	
SQG-05h	BSBG05H	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06J	
SQG-05i	BSBG05I	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06K	
SQG-06A	BSBG06A	What is the highest level of education completed by your <parents/guardians>? <Parent/Guardian A>	BSBG07A	Modified wording and response options in 2019
SQG-06B	BSBG06B	What is the highest level of education completed by your <parents/guardians>? <Parent/Guardian B>	BSBG07B	Modified wording and response options in 2019
SQG-07	BSBG07	How far in your education do you expect to go?	BSBG08	
SQG-08A	BSBG08A	Were your <parents/guardians> born in <country>? <Parent/Guardian A>	BSBG09A	Modified wording and response options in 2019
SQG-08B	BSBG08B	Were your <parents/guardians> born in <country>? <Parent/Guardian B>	BSBG09B	Modified wording and response options in 2019
SQG-09A	BSBG09A	Were you born in <country>?	BSBG10A	
SQG-09B	BSBG09B	If you were not born in <country>, how old were you when you came to <country>?	BSBG10B	
SQG-10	BSBG10	About how often are you absent from school?	BSBG11	Modified response options in 2019
SQG-11a	BSBG11A	How often do you feel this way when you arrive at school? I feel tired		
SQG-11b	BSBG11B	How often do you feel this way when you arrive at school? I feel hungry		
SQG-12a	BSBG12A	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Access the textbook or other course materials	BSBG14A	
SQG-12b	BSBG12B	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Access assignments posted online by my teacher	BSBG14B	

Exhibit 2.1: International Context Variables for the TIMSS 2019 Student Questionnaire—General/Integrated Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-12c	BSBG12C	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Collaborate with classmates on assignments or projects	BSBG14C	
SQG-12d	BSBG12D	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Communicate with the teacher	BSBG14D	
SQG-12e	BSBG12E	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Find information, articles, or tutorials to aid in understanding mathematics or science	BSBG14E BSBG14F	Modified wording in 2019
SQG-12f	BSBG12F	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Access learning games or activities related to mathematics or science		
SQG-13a	BSBG13A	What do you think about your school? Tell how much you agree with these statements. I like being in school	BSBG15A	
SQG-13b	BSBG13B	What do you think about your school? Tell how much you agree with these statements. I feel safe when I am at school	BSBG15B	
SQG-13c	BSBG13C	What do you think about your school? Tell how much you agree with these statements. I feel like I belong at this school	BSBG15C	
SQG-13d	BSBG13D	What do you think about your school? Tell how much you agree with these statements. Teachers at my school are fair to me	BSBG15E	
SQG-13e	BSBG13E	What do you think about your school? Tell how much you agree with these statements. I am proud to go to this school	BSBG15F	
SQG-14a	BSBG14A	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Said mean things about my physical appearance (e.g., my hair, my size)		
SQG-14b	BSBG14B	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Spread lies about me	BSBG16C	
SQG-14c	BSBG14C	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared my secrets with others		
SQG-14d	BSBG14D	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Refused to talk to me		
SQG-14e	BSBG14E	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Insulted a member of my family		
SQG-14f	BSBG14F	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Stole something from me	BSBG16D	
SQG-14g	BSBG14G	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Made me do things I didn't want to do	BSBG16F	

Exhibit 2.1: International Context Variables for the TIMSS 2019 Student Questionnaire—General/Integrated Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-14h	BSBG14H	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Sent me nasty or hurtful messages online		
SQG-14i	BSBG14I	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared nasty or hurtful things about me online		
SQG-14j	BSBG14J	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared embarrassing photos of me online		
SQG-14k	BSBG14K	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Threatened me	BSBG16I	
SQG-14l	BSBG14L	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Physically hurt me		
SQG-14m	BSBG14M	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Excluded me from their group (e.g., parties, messaging)		
SQG-14n	BSBG14N	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Damaged something of mine on purpose		
SQM-15	BSBM15	In mathematics lessons, how often do you work problems on your own?		
SQM-16a	BSBM16A	How much do you agree with these statements about learning mathematics? I enjoy learning mathematics	BSBM17A	
SQM-16b	BSBM16B	How much do you agree with these statements about learning mathematics? I wish I did not have to study mathematics	BSBM17B	
SQM-16c	BSBM16C	How much do you agree with these statements about learning mathematics? Mathematics is boring	BSBM17C	
SQM-16d	BSBM16D	How much do you agree with these statements about learning mathematics? I learn many interesting things in mathematics	BSBM17D	
SQM-16e	BSBM16E	How much do you agree with these statements about learning mathematics? I like mathematics	BSBM17E	
SQM-16f	BSBM16F	How much do you agree with these statements about learning mathematics? I like any schoolwork that involves numbers	BSBM17F	
SQM-16g	BSBM16G	How much do you agree with these statements about learning mathematics? I like to solve mathematics problems	BSBM17G	
SQM-16h	BSBM16H	How much do you agree with these statements about learning mathematics? I look forward to mathematics class	BSBM17H	
SQM-16i	BSBM16I	How much do you agree with these statements about learning mathematics? Mathematics is one of my favorite subjects	BSBM17I	
SQM-17a	BSBM17A	How much do you agree with these statements about your mathematics lessons? I know what my teacher expects me to do	BSBM18A	
SQM-17b	BSBM17B	How much do you agree with these statements about your mathematics lessons? My teacher is easy to understand	BSBM18B	
SQM-17c	BSBM17C	How much do you agree with these statements about your mathematics lessons? My teacher has clear answers to my questions	BSBM18E	

Exhibit 2.1: International Context Variables for the TIMSS 2019 Student Questionnaire—General/Integrated Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQM-17d	BSBM17D	How much do you agree with these statements about your mathematics lessons? My teacher is good at explaining mathematics	BSBM18F	
SQM-17e	BSBM17E	How much do you agree with these statements about your mathematics lessons? My teacher does a variety of things to help us learn	BSBM18H	
SQM-17f	BSBM17F	How much do you agree with these statements about your mathematics lessons? My teacher links new lessons to what I already know		
SQM-17g	BSBM17G	How much do you agree with these statements about your mathematics lessons? My teacher explains a topic again when we don't understand		
SQM-18a	BSBM18A	How often do these things happen in your mathematics lessons? Students don't listen to what the teacher says		
SQM-18b	BSBM18B	How often do these things happen in your mathematics lessons? There is disruptive noise		
SQM-18c	BSBM18C	How often do these things happen in your mathematics lessons? It is too disorderly for students to work well		
SQM-18d	BSBM18D	How often do these things happen in your mathematics lessons? My teacher has to wait a long time for students to quiet down		
SQM-18e	BSBM18E	How often do these things happen in your mathematics lessons? Students interrupt the teacher		
SQM-18f	BSBM18F	How often do these things happen in your mathematics lessons? My teacher has to keep telling us to follow the classroom rules		
SQM-19a	BSBM19A	How much do you agree with these statements about mathematics? I usually do well in mathematics	BSBM19A	
SQM-19b	BSBM19B	How much do you agree with these statements about mathematics? Mathematics is more difficult for me than for many of my classmates	BSBM19B	
SQM-19c	BSBM19C	How much do you agree with these statements about mathematics? Mathematics is not one of my strengths	BSBM19C	
SQM-19d	BSBM19D	How much do you agree with these statements about mathematics? I learn things quickly in mathematics	BSBM19D	
SQM-19e	BSBM19E	How much do you agree with these statements about mathematics? Mathematics makes me nervous	BSBM19E	
SQM-19f	BSBM19F	How much do you agree with these statements about mathematics? I am good at working out difficult mathematics problems	BSBM19F	
SQM-19g	BSBM19G	How much do you agree with these statements about mathematics? My teacher tells me I am good at mathematics	BSBM19G	
SQM-19h	BSBM19H	How much do you agree with these statements about mathematics? Mathematics is harder for me than any other subject	BSBM19H	
SQM-19i	BSBM19I	How much do you agree with these statements about mathematics? Mathematics makes me confused	BSBM19I	
SQM-20a	BSBM20A	How much do you agree with these statements about mathematics? I think learning mathematics will help me in my daily life	BSBM20A	
SQM-20b	BSBM20B	How much do you agree with these statements about mathematics? I need mathematics to learn other school subjects	BSBM20B	
SQM-20c	BSBM20C	How much do you agree with these statements about mathematics? I need to do well in mathematics to get into the <university> of my choice	BSBM20C	
SQM-20d	BSBM20D	How much do you agree with these statements about mathematics? I need to do well in mathematics to get the job I want	BSBM20D	

Exhibit 2.1: International Context Variables for the TIMSS 2019 Student Questionnaire—General/Integrated Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQM-20e	BSBM20E	How much do you agree with these statements about mathematics? I would like a job that involves using mathematics	BSBM20E	
SQM-20f	BSBM20F	How much do you agree with these statements about mathematics? It is important to learn about mathematics to get ahead in the world	BSBM20F	
SQM-20g	BSBM20G	How much do you agree with these statements about mathematics? Learning mathematics will give me more job opportunities when I am an adult	BSBM20G	
SQM-20h	BSBM20H	How much do you agree with these statements about mathematics? My parents think that it is important that I do well in mathematics	BSBM20H	
SQM-20i	BSBM20I	How much do you agree with these statements about mathematics? It is important to do well in mathematics	BSBM20I	
SQIS-21	BSBS21	In science lessons, how often does your teacher ask you to conduct science experiments?		
SQIS-22a	BSBS22A	How much do you agree with these statements about learning science? I enjoy learning science	BSBS21A	
SQIS-22b	BSBS22B	How much do you agree with these statements about learning science? I wish I did not have to study science	BSBS21B	
SQIS-22c	BSBS22C	How much do you agree with these statements about learning science? Science is boring	BSBS21C	
SQIS-22d	BSBS22D	How much do you agree with these statements about learning science? I learn many interesting things in science	BSBS21D	
SQIS-22e	BSBS22E	How much do you agree with these statements about learning science? I like science	BSBS21E	
SQIS-22f	BSBS22F	How much do you agree with these statements about learning science? I look forward to learning science in school	BSBS21F	
SQIS-22g	BSBS22G	How much do you agree with these statements about learning science? Science teaches me how things in the world work	BSBS21G	
SQIS-22h	BSBS22H	How much do you agree with these statements about learning science? I like to conduct science experiments	BSBS21H	
SQIS-22i	BSBS22I	How much do you agree with these statements about learning science? Science is one of my favorite subjects	BSBS21I	
SQIS-23a	BSBS23A	How much do you agree with these statements about your science lessons? I know what my teacher expects me to do	BSBS22A	
SQIS-23b	BSBS23B	How much do you agree with these statements about your science lessons? My teacher is easy to understand	BSBS22B	
SQIS-23c	BSBS23C	How much do you agree with these statements about your science lessons? My teacher has clear answers to my questions	BSBS22E	
SQIS-23d	BSBS23D	How much do you agree with these statements about your science lessons? My teacher is good at explaining science	BSBS22F	
SQIS-23e	BSBS23E	How much do you agree with these statements about your science lessons? My teacher does a variety of things to help us learn	BSBS22H	
SQIS-23f	BSBS23F	How much do you agree with these statements about your science lessons? My teacher links new lessons to what I already know		
SQIS-23g	BSBS23G	How much do you agree with these statements about your science lessons? My teacher explains a topic again when we don't understand		
SQIS-24a	BSBS24A	How much do you agree with these statements about science? I usually do well in science	BSBS23A	

Exhibit 2.1: International Context Variables for the TIMSS 2019 Student Questionnaire—General/Integrated Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQIS-24b	BSBS24B	How much do you agree with these statements about science? Science is more difficult for me than for many of my classmates	BSBS23B	
SQIS-24c	BSBS24C	How much do you agree with these statements about science? Science is not one of my strengths	BSBS23C	
SQIS-24d	BSBS24D	How much do you agree with these statements about science? I learn things quickly in science	BSBS23D	
SQIS-24e	BSBS24E	How much do you agree with these statements about science? I am good at working out difficult science problems	BSBS23E	
SQIS-24f	BSBS24F	How much do you agree with these statements about science? My teacher tells me I am good at science	BSBS23F	
SQIS-24g	BSBS24G	How much do you agree with these statements about science? Science is harder for me than any other subject	BSBS23G	
SQIS-24h	BSBS24H	How much do you agree with these statements about science? Science makes me confused	BSBS23H	
SQIS-25a	BSBS25A	How much do you agree with these statements about science? I think learning science will help me in my daily life	BSBS24A	
SQIS-25b	BSBS25B	How much do you agree with these statements about science? I need science to learn other school subjects	BSBS24B	
SQIS-25c	BSBS25C	How much do you agree with these statements about science? I need to do well in science to get into the <university> of my choice	BSBS24C	
SQIS-25d	BSBS25D	How much do you agree with these statements about science? I need to do well in science to get the job I want	BSBS24D	
SQIS-25e	BSBS25E	How much do you agree with these statements about science? I would like a job that involves using science	BSBS24E	
SQIS-25f	BSBS25F	How much do you agree with these statements about science? It is important to learn about science to get ahead in the world	BSBS24F	
SQIS-25g	BSBS25G	How much do you agree with these statements about science? Learning science will give me more job opportunities when I am an adult	BSBS24G	
SQIS-25h	BSBS25H	How much do you agree with these statements about science? My parents think that it is important that I do well in science	BSBS24H	
SQIS-25i	BSBS25I	How much do you agree with these statements about science? It is important to do well in science	BSBS24I	
SQIS-26Aa	BSBM26AA	How often does your teacher give you homework in the following subjects? Mathematics	BSBM25AA	
SQIS-26Ab	BSBS26AB	How often does your teacher give you homework in the following subjects? Science	BSBS25AB	
SQIS-26Ba	BSBM26BA	When your teacher gives you homework in the following subjects, about how many minutes do you usually spend on your homework? Mathematics	BSBM25BA	
SQIS-26Bb	BSBS26BB	When your teacher gives you homework in the following subjects, about how many minutes do you usually spend on your homework? Science	BSBS25BB	
SQIS-27Aa	BSBM27AA	During the last 12 months, have you attended extra lessons or tutoring not provided by the school in the following subjects? Mathematics	BSBM26AA	
SQIS-27Ab	BSBS27AB	During the last 12 months, have you attended extra lessons or tutoring not provided by the school in the following subjects? Science	BSBS26AB	
SQIS-27Ba	BSBM27BA	For how many of the last 12 months have you attended extra lessons or tutoring? Mathematics	BSBM26BA	

Exhibit 2.1: International Context Variables for the TIMSS 2019 Student Questionnaire—General/Integrated Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQIS-27Bb	BSBS27BB	For how many of the last 12 months have you attended extra lessons or tutoring? Science	BSBS26BB	



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2019

Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Student Questionnaire

<Grade 8>

<TIMSS National Research Center Name>

<Address>

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BOSTON COLLEGE

Directions

In this booklet, you will find questions about yourself. Some questions ask for facts while other questions ask for your opinion.

Each question is followed by a number of answers. Shade in the circle next to or under the answer of your choice as shown in Examples 1, 2, and 3.

Example 1

Do you go to school?

Fill **one** circle only.

Yes -- ☒

No -- ☐

Example 2

How often do you do these things?

Fill **one** circle for each line.

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
a) I talk with my friends	☒	☐	☐	☐
b) I play sports	☐	☒	☐	☐
c) I ride a skateboard	☐	☐	☒	☐

Example 3

What do you think? Tell how much you agree with these statements.

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) Watching movies is fun	☐	☒	☐	☐
b) I like eating ice cream	☒	☐	☐	☐
c) I do not like waking up early	☐	☐	☒	☐
d) I enjoy doing chores	☐	☐	☐	☒

- Read each question carefully, and pick the answer you think is best.
- Fill in the circle next to or under your answer.
- If you decide to change your answer, draw an **X** through your first answer, like this: ~~☐~~. Then, fill in the circle next to or under your new answer.
- Ask for help if you do not understand something or are not sure how to answer.

About you

1

Are you a girl or a boy?

BSBG01

Fill **one** circle only.

Girl -- ☐

Boy -- ☐

2

When were you born?

BSBG02A

Fill the circles next to the month and year you were born.

BSBG02B

a) Month

b) Year

January -- ☐

2001 -- ☐

February -- ☐

2002 -- ☐

March -- ☐

2003 -- ☐

April -- ☐

2004 -- ☐

May -- ☐

2005 -- ☐

June -- ☐

2006 -- ☐

July -- ☐

2007 -- ☐

August -- ☐

2008 -- ☐

September -- ☐

2009 -- ☐

October -- ☐

Other -- ☐

November -- ☐

December -- ☐

3

How often do you speak <language of test> at home?

BSBG03

Fill **one** circle only.

Always -- ☐

Almost always -- ☐

Sometimes -- ☐

Never -- ☐

4

About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)

BSBG04

Fill **one** circle only.

None or very few
(0–10 books) -- ☐

Enough to fill one shelf
(11–25 books) -- ☐

Enough to fill one bookcase
(26–100 books) -- ☐

Enough to fill two bookcases
(101–200 books) -- ☐

Enough to fill three or more bookcases
(more than 200) -- ☐

5

Do you have any of these things at your home?

Fill **one** circle for each line.

		Yes	No
		↓	↓
BSBG05A	a) A computer or tablet	☐	☐
BSBG05B	b) Study desk/table for your use	☐	☐
BSBG05C	c) Your own room.....	☐	☐
BSBG05D	d) Internet connection	☐	☐
BSBG05E	e) Your own mobile phone	☐	☐
BSBG05F	f) <country-specific indicator of wealth>	☐	☐
BSBG05G	g) <country-specific indicator of wealth>	☐	☐
BSBG05H	h) <country-specific indicator of wealth>	☐	☐
BSBG05I	i) <country-specific indicator of wealth>	☐	☐

The following questions are about your <Parent/Guardian A> and <Parent/Guardian B>. <If you have only one parent/guardian, answer for Parent/Guardian A. If you have two parents/guardians, choose one for Parent/Guardian A and the other for Parent/Guardian B.>

6

What is the highest level of education completed by your <parents/guardians>?

A. <Parent/Guardian A>

BSBG06A

Fill **one** circle only.

Some <Primary education—ISCED Level 1 or
Lower secondary education—ISCED Level 2>
or did not go to school -- ☐

<Lower secondary education—ISCED Level 2> -- ☐

<Upper secondary education—ISCED Level 3> -- ☐

<Post-secondary, non-tertiary
education—ISCED Level 4> -- ☐

<Short-cycle tertiary education—ISCED Level 5> -- ☐

<Bachelor's or equivalent level—ISCED Level 6> -- ☐

<Postgraduate degree: Master's—ISCED
Level 7 or Doctor—ISCED Level 8> -- ☐

I don't know -- ☐

Not applicable -- ☐

6 (continued)

What is the highest level of education completed by your <parents/guardians>?

B. <Parent/Guardian B>

BSBG06B

Fill **one** circle only.

- Some <Primary education—ISCED Level 1 or
Lower secondary education—ISCED Level 2>
or did not go to school -- ☐
- <Lower secondary education—ISCED Level 2> -- ☐
- <Upper secondary education—ISCED Level 3> -- ☐
- <Post-secondary, non-tertiary
education—ISCED Level 4> -- ☐
- <Short-cycle tertiary education—ISCED Level 5> -- ☐
- <Bachelor's or equivalent level—ISCED Level 6> -- ☐
- <Postgraduate degree: Master's—ISCED
Level 7 or Doctor—ISCED Level 8> -- ☐
- I don't know -- ☐
- Not applicable -- ☐

7**How far in your education do you expect to go?**

BSBG07

*Fill **one** circle only.*Finish <Lower secondary
education—ISCED Level 2> ☐Finish <Upper secondary
education—ISCED Level 3> ☐Finish <Post-secondary, non-tertiary
education—ISCED Level 4> ☐Finish <Short-cycle tertiary
education—ISCED Level 5> ☐Finish <Bachelor's or equivalent
level—ISCED Level 6> ☐Finish <Postgraduate degree:
Master's—ISCED Level 7 or
Doctor—ISCED Level 8> ☐**8****Were your <parents/guardians> born in <country>?****A. <Parent/Guardian A>**

BSBG08A

*Fill **one** circle only.*Yes -- ☐No -- ☐I don't know -- ☐Not applicable -- ☐**B. <Parent/Guardian B>**

BSBG08B

*Fill **one** circle only.*Yes -- ☐No -- ☐I don't know -- ☐Not applicable -- ☐

9

A. Were you born in <country>?

BSBG09A

Fill **one** circle only.

Yes -- ☐

(If Yes, go to #10)

No -- ☐

If No,

B. If you were not born in <country>, how old were you when you came to <country>?

BSBG09B

Fill **one** circle only.

Older than 10 years old -- ☐

5 to 10 years old -- ☐

Younger than 5 years old -- ☐

10

About how often are you absent from school?

BSBG10

Fill **one** circle only.

Once a week -- ☐

Once every two weeks -- ☐

Once a month -- ☐

Once every two months -- ☐

Never or almost never -- ☐

9

<Grade 8> Student Questionnaire

11

How often do you feel this way when you arrive at school?

Fill **one** circle for each line.

		Every day	Almost every day	Sometimes	Never
BSBG11A	a) I feel tired	☐	☐	☐	☐
BSBG11B	b) I feel hungry	☐	☐	☐	☐

12

Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)?

Fill **one** circle for each line.

		Yes	No
BSBG12A	a) Access the textbook or other course materials	☐	☐
BSBG12B	b) Access assignments posted online by my teacher	☐	☐
BSBG12C	c) Collaborate with classmates on assignments or projects	☐	☐
BSBG12D	d) Communicate with the teacher	☐	☐
BSBG12E	e) Find information, articles, or tutorials to aid in understanding mathematics or science	☐	☐
BSBG12F	f) Access learning games or activities related to mathematics or science	☐	☐

Your School

13

What do you think about your school? Tell how much you agree with these statements.

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBG13A	a) I like being in school	☐	☐	☐	☐
BSBG13B	b) I feel safe when I am at school	☐	☐	☐	☐
BSBG13C	c) I feel like I belong at this school	☐	☐	☐	☐
BSBG13D	d) Teachers at my school are fair to me	☐	☐	☐	☐
BSBG13E	e) I am proud to go to this school	☐	☐	☐	☐

14

During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet?

Fill **one** circle for each line.

		At least once a week	Once or twice a month	A few times a year	Never
BSBG14A	a) Said mean things about my physical appearance (e.g., my hair, my size) -----	☐	☐	☐	☐
BSBG14B	b) Spread lies about me -----	☐	☐	☐	☐
BSBG14C	c) Shared my secrets with others -----	☐	☐	☐	☐
BSBG14D	d) Refused to talk to me -----	☐	☐	☐	☐
BSBG14E	e) Insulted a member of my family ---	☐	☐	☐	☐
BSBG14F	f) Stole something from me -----	☐	☐	☐	☐
BSBG14G	g) Made me do things I didn't want to do -----	☐	☐	☐	☐
BSBG14H	h) Sent me nasty or hurtful messages online -----	☐	☐	☐	☐
BSBG14I	i) Shared nasty or hurtful things about me online-----	☐	☐	☐	☐
BSBG14J	j) Shared embarrassing photos of me online-----	☐	☐	☐	☐
BSBG14K	k) Threatened me -----	☐	☐	☐	☐
BSBG14L	l) Physically hurt me -----	☐	☐	☐	☐
BSBG14M	m) Excluded me from their group (e.g., parties, messaging) -----	☐	☐	☐	☐
BSBG14N	n) Damaged something of mine on purpose -----	☐	☐	☐	☐

Mathematics in School

15

In mathematics lessons, how often do you work problems on your own?

BSBM15

Fill **one** circle only.

Every or almost every lesson -- ☐

About half the lessons -- ☐

Some lessons -- ☐

Never -- ☐

16

How much do you agree with these statements about learning mathematics?

*Fill **one** circle for each line.*

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM16A	a) I enjoy learning mathematics	☐	☐	☐	☐
BSBM16B	b) I wish I did not have to study mathematics	☐	☐	☐	☐
BSBM16C	c) Mathematics is boring	☐	☐	☐	☐
BSBM16D	d) I learn many interesting things in mathematics	☐	☐	☐	☐
BSBM16E	e) I like mathematics	☐	☐	☐	☐
BSBM16F	f) I like any schoolwork that involves numbers	☐	☐	☐	☐
BSBM16G	g) I like to solve mathematics problems	☐	☐	☐	☐
BSBM16H	h) I look forward to mathematics class	☐	☐	☐	☐
BSBM16I	i) Mathematics is one of my favorite subjects	☐	☐	☐	☐

17

How much do you agree with these statements about
your mathematics lessons?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM17A	a) I know what my teacher expects me to do	☐	☐	☐	☐
BSBM17B	b) My teacher is easy to understand ..	☐	☐	☐	☐
BSBM17C	c) My teacher has clear answers to my questions	☐	☐	☐	☐
BSBM17D	d) My teacher is good at explaining mathematics	☐	☐	☐	☐
BSBM17E	e) My teacher does a variety of things to help us learn	☐	☐	☐	☐
BSBM17F	f) My teacher links new lessons to what I already know	☐	☐	☐	☐
BSBM17G	g) My teacher explains a topic again when we don't understand	☐	☐	☐	☐

18

How often do these things happen in your
mathematics lessons?

Fill **one** circle for each line.

		Every or almost every lesson	About half the lessons	Some lessons	Never
		↓	↓	↓	↓
BSBM18A	a) Students don't listen to what the teacher says -----	☐	☐	☐	☐
BSBM18B	b) There is disruptive noise -----	☐	☐	☐	☐
BSBM18C	c) It is too disorderly for students to work well -----	☐	☐	☐	☐
BSBM18D	d) My teacher has to wait a long time for students to quiet down -----	☐	☐	☐	☐
BSBM18E	e) Students interrupt the teacher -----	☐	☐	☐	☐
BSBM18F	f) My teacher has to keep telling us to follow the classroom rules -----	☐	☐	☐	☐

19

How much do you agree with these statements about mathematics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM19A	a) I usually do well in mathematics ---	☐	☐	☐	☐
BSBM19B	b) Mathematics is more difficult for me than for many of my classmates -----	☐	☐	☐	☐
BSBM19C	c) Mathematics is not one of my strengths -----	☐	☐	☐	☐
BSBM19D	d) I learn things quickly in mathematics -----	☐	☐	☐	☐
BSBM19E	e) Mathematics makes me nervous -----	☐	☐	☐	☐
BSBM19F	f) I am good at working out difficult mathematics problems ----	☐	☐	☐	☐
BSBM19G	g) My teacher tells me I am good at mathematics -----	☐	☐	☐	☐
BSBM19H	h) Mathematics is harder for me than any other subject -----	☐	☐	☐	☐
BSBM19I	i) Mathematics makes me confused -----	☐	☐	☐	☐

20

How much do you agree with these statements about mathematics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM20A	a) I think learning mathematics will help me in my daily life	☐	☐	☐	☐
BSBM20B	b) I need mathematics to learn other school subjects	☐	☐	☐	☐
BSBM20C	c) I need to do well in mathematics to get into the <university> of my choice	☐	☐	☐	☐
BSBM20D	d) I need to do well in mathematics to get the job I want	☐	☐	☐	☐
BSBM20E	e) I would like a job that involves using mathematics	☐	☐	☐	☐
BSBM20F	f) It is important to learn about mathematics to get ahead in the world	☐	☐	☐	☐
BSBM20G	g) Learning mathematics will give me more job opportunities when I am an adult	☐	☐	☐	☐
BSBM20H	h) My parents think that it is important that I do well in mathematics	☐	☐	☐	☐
BSBM20I	i) It is important to do well in mathematics	☐	☐	☐	☐

Science in School

21

In science lessons, how often does your teacher ask you to conduct science experiments?

BSBS21

Fill **one** circle only.

At least once a week -- ☐

Once or twice a month -- ☐

A few times a year -- ☐

Never -- ☐

22

How much do you agree with these statements about learning science?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBS22A	a) I enjoy learning science	☐	☐	☐	☐
BSBS22B	b) I wish I did not have to study science	☐	☐	☐	☐
BSBS22C	c) Science is boring	☐	☐	☐	☐
BSBS22D	d) I learn many interesting things in science	☐	☐	☐	☐
BSBS22E	e) I like science	☐	☐	☐	☐
BSBS22F	f) I look forward to learning science in school	☐	☐	☐	☐
BSBS22G	g) Science teaches me how things in the world work	☐	☐	☐	☐
BSBS22H	h) I like to conduct science experiments	☐	☐	☐	☐
BSBS22I	i) Science is one of my favorite subjects	☐	☐	☐	☐

23

How much do you agree with these statements about
your science lessons?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBS23A	a) I know what my teacher expects me to do	☐	☐	☐	☐
BSBS23B	b) My teacher is easy to understand --	☐	☐	☐	☐
BSBS23C	c) My teacher has clear answers to my questions	☐	☐	☐	☐
BSBS23D	d) My teacher is good at explaining science	☐	☐	☐	☐
BSBS23E	e) My teacher does a variety of things to help us learn	☐	☐	☐	☐
BSBS23F	f) My teacher links new lessons to what I already know	☐	☐	☐	☐
BSBS23G	g) My teacher explains a topic again when we don't understand	☐	☐	☐	☐

24

How much do you agree with these statements about science?

Fill *one* circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBS24A	a) I usually do well in science	☐	☐	☐	☐
BSBS24B	b) Science is more difficult for me than for many of my classmates ----	☐	☐	☐	☐
BSBS24C	c) Science is not one of my strengths	☐	☐	☐	☐
BSBS24D	d) I learn things quickly in science	☐	☐	☐	☐
BSBS24E	e) I am good at working out difficult science problems	☐	☐	☐	☐
BSBS24F	f) My teacher tells me I am good at science	☐	☐	☐	☐
BSBS24G	g) Science is harder for me than any other subject	☐	☐	☐	☐
BSBS24H	h) Science makes me confused	☐	☐	☐	☐

25

How much do you agree with these statements about science?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBS25A	a) I think learning science will help me in my daily life	☐	☐	☐	☐
BSBS25B	b) I need science to learn other school subjects	☐	☐	☐	☐
BSBS25C	c) I need to do well in science to get into the <university> of my choice -	☐	☐	☐	☐
BSBS25D	d) I need to do well in science to get the job I want	☐	☐	☐	☐
BSBS25E	e) I would like a job that involves using science	☐	☐	☐	☐
BSBS25F	f) It is important to learn about science to get ahead in the world	☐	☐	☐	☐
BSBS25G	g) Learning science will give me more job opportunities when I am an adult	☐	☐	☐	☐
BSBS25H	h) My parents think that it is important that I do well in science	☐	☐	☐	☐
BSBS25I	i) It is important to do well in science	☐	☐	☐	☐

Homework

26

A. How often does your teacher give you homework in the following subjects?

Fill *one* circle for each line.

		Every day	3 or 4 times a week	1 or 2 times a week	Less than once a week	Never
BSBM26AA	a) Mathematics	-----○	-----○	-----○	-----○	-----○
BSBS26AB	b) Science	-----○	-----○	-----○	-----○	-----○

B. When your teacher gives you homework in the following subjects, about how many minutes do you usually spend on your homework?

Fill *one* circle for each line.

		My teacher never gives me homework in...	1–15 minutes	16–30 minutes	31–60 minutes	61–90 minutes	More than 90 minutes
BSBM26BA	a) Mathematics	-----○	-----○	-----○	-----○	-----○	-----○
BSBS26BB	b) Science	-----○	-----○	-----○	-----○	-----○	-----○

27

A. During the last 12 months, have you attended extra lessons or tutoring not provided by the school in the following subjects?

Fill **one** circle for each line.

		Yes, to excel in class	Yes, to keep up in class	No
BSBM27AA	a) Mathematics	☐	☐	☐
BSBS27AB	b) Science	☐	☐	☐

B. For how many of the last 12 months have you attended extra lessons or tutoring?

Fill **one** circle for each line.

		Did not attend	Less than 4 months	4–8 months	More than 8 months
BSBM27BA	a) Mathematics	☐	☐	☐	☐
BSBS27BB	b) Science	☐	☐	☐	☐



Thank You!

Thank you for filling out the questionnaire!



BOSTON
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<Grade 8>



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International Association
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SECTION 2.2: **STUDENT QUESTIONNAIRE—** **SEPARATE SCIENCE VERSION** **GRADE 8**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-01	BSBG01	Are you a girl or a boy?	BSBG01	
SQG-02a	BSBG02A	When were you born? Month	BSBG02A	
SQG-02b	BSBG02B	When were you born? Year	BSBG02B	
SQG-03	BSBG03	How often do you speak <language of test> at home?	BSBG03	
SQG-04	BSBG04	About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)	BSBG04	
SQG-05a	BSBG05A	Do you have any of these things at your home? A computer or tablet	BSBG06A, BSBG06B	Modified wording in 2019
SQG-05b	BSBG05B	Do you have any of these things at your home? Study desk/table for your use	BSBG06C	
SQG-05c	BSBG05C	Do you have any of these things at your home? Your own room	BSBG06D	
SQG-05d	BSBG05D	Do you have any of these things at your home? Internet connection	BSBG06E	
SQG-05e	BSBG05E	Do you have any of these things at your home? Your own mobile phone	BSBG06F	
SQG-05f	BSBG05F	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06H	
SQG-05g	BSBG05G	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06I	
SQG-05h	BSBG05H	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06J	
SQG-05i	BSBG05I	Do you have any of these things at your home? <country-specific indicator of wealth>	BSBG06K	
SQG-06A	BSBG06A	What is the highest level of education completed by your <parents/guardians>? <Parent/Guardian A>	BSBG07A	Modified wording and response options in 2019
SQG-06B	BSBG06B	What is the highest level of education completed by your <parents/guardians>? <Parent/Guardian B>	BSBG07B	Modified wording and response options in 2019
SQG-07	BSBG07	How far in your education do you expect to go?	BSBG08	
SQG-08A	BSBG08A	Were your <parents/guardians> born in <country>? <Parent/Guardian A>	BSBG09A	Modified wording and response options in 2019
SQG-08B	BSBG08B	Were your <parents/guardians> born in <country>? <Parent/Guardian B>	BSBG09B	Modified wording and response options in 2019
SQG-09A	BSBG09A	Were you born in <country>?	BSBG10A	
SQG-09B	BSBG09B	If you were not born in <country>, how old were you when you came to <country>?	BSBG10B	
SQG-10	BSBG10	About how often are you absent from school?	BSBG11	Modified response options in 2019
SQG-11a	BSBG11A	How often do you feel this way when you arrive at school? I feel tired		
SQG-11b	BSBG11B	How often do you feel this way when you arrive at school? I feel hungry		
SQG-12a	BSBG12A	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Access the textbook or other course materials	BSBG14A	
SQG-12b	BSBG12B	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Access assignments posted online by my teacher	BSBG14B	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-12c	BSBG12C	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Collaborate with classmates on assignments or projects	BSBG14C	
SQG-12d	BSBG12D	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Communicate with the teacher	BSBG14D	
SQG-12e	BSBG12E	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Find information, articles, or tutorials to aid in understanding mathematics or science	BSBG14E BSBG14F	Modified wording in 2019
SQG-12f	BSBG12F	Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)? Access learning games or activities related to mathematics or science		
SQG-13a	BSBG13A	What do you think about your school? Tell how much you agree with these statements. I like being in school	BSBG15A	
SQG-13b	BSBG13B	What do you think about your school? Tell how much you agree with these statements. I feel safe when I am at school	BSBG15B	
SQG-13c	BSBG13C	What do you think about your school? Tell how much you agree with these statements. I feel like I belong at this school	BSBG15C	
SQG-13d	BSBG13D	What do you think about your school? Tell how much you agree with these statements. Teachers at my school are fair to me	BSBG15E	
SQG-13e	BSBG13E	What do you think about your school? Tell how much you agree with these statements. I am proud to go to this school	BSBG15F	
SQG-14a	BSBG14A	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Said mean things about my physical appearance (e.g., my hair, my size)		
SQG-14b	BSBG14B	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Spread lies about me	BSBG16C	
SQG-14c	BSBG14C	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared my secrets with others		
SQG-14d	BSBG14D	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Refused to talk to me		
SQG-14e	BSBG14E	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Insulted a member of my family		
SQG-14f	BSBG14F	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Stole something from me	BSBG16D	
SQG-14g	BSBG14G	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Made me do things I didn't want to do	BSBG16F	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQG-14h	BSBG14H	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Sent me nasty or hurtful messages online		
SQG-14i	BSBG14I	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared nasty or hurtful things about me online		
SQG-14j	BSBG14J	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Shared embarrassing photos of me online		
SQG-14k	BSBG14K	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Threatened me	BSBG16I	
SQG-14l	BSBG14L	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Physically hurt me		
SQG-14m	BSBG14M	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Excluded me from their group (e.g., parties, messaging)		
SQG-14n	BSBG14N	During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet? Damaged something of mine on purpose		
SQM-15	BSBM15	In mathematics lessons, how often do you work problems on your own?		
SQM-16a	BSBM16A	How much do you agree with these statements about learning mathematics? I enjoy learning mathematics	BSBM17A	
SQM-16b	BSBM16B	How much do you agree with these statements about learning mathematics? I wish I did not have to study mathematics	BSBM17B	
SQM-16c	BSBM16C	How much do you agree with these statements about learning mathematics? Mathematics is boring	BSBM17C	
SQM-16d	BSBM16D	How much do you agree with these statements about learning mathematics? I learn many interesting things in mathematics	BSBM17D	
SQM-16e	BSBM16E	How much do you agree with these statements about learning mathematics? I like mathematics	BSBM17E	
SQM-16f	BSBM16F	How much do you agree with these statements about learning mathematics? I like any schoolwork that involves numbers	BSBM17F	
SQM-16g	BSBM16G	How much do you agree with these statements about learning mathematics? I like to solve mathematics problems	BSBM17G	
SQM-16h	BSBM16H	How much do you agree with these statements about learning mathematics? I look forward to mathematics class	BSBM17H	
SQM-16i	BSBM16I	How much do you agree with these statements about learning mathematics? Mathematics is one of my favorite subjects	BSBM17I	
SQM-17a	BSBM17A	How much do you agree with these statements about your mathematics lessons? I know what my teacher expects me to do	BSBM18A	
SQM-17b	BSBM17B	How much do you agree with these statements about your mathematics lessons? My teacher is easy to understand	BSBM18B	
SQM-17c	BSBM17C	How much do you agree with these statements about your mathematics lessons? My teacher has clear answers to my questions	BSBM18E	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQM-17d	BSBM17D	How much do you agree with these statements about your mathematics lessons? My teacher is good at explaining mathematics	BSBM18F	
SQM-17e	BSBM17E	How much do you agree with these statements about your mathematics lessons? My teacher does a variety of things to help us learn	BSBM18H	
SQM-17f	BSBM17F	How much do you agree with these statements about your mathematics lessons? My teacher links new lessons to what I already know		
SQM-17g	BSBM17G	How much do you agree with these statements about your mathematics lessons? My teacher explains a topic again when we don't understand		
SQM-18a	BSBM18A	How often do these things happen in your mathematics lessons? Students don't listen to what the teacher says		
SQM-18b	BSBM18B	How often do these things happen in your mathematics lessons? There is disruptive noise		
SQM-18c	BSBM18C	How often do these things happen in your mathematics lessons? It is too disorderly for students to work well		
SQM-18d	BSBM18D	How often do these things happen in your mathematics lessons? My teacher has to wait a long time for students to quiet down		
SQM-18e	BSBM18E	How often do these things happen in your mathematics lessons? Students interrupt the teacher		
SQM-18f	BSBM18F	How often do these things happen in your mathematics lessons? My teacher has to keep telling us to follow the classroom rules		
SQM-19a	BSBM19A	How much do you agree with these statements about mathematics? I usually do well in mathematics	BSBM19A	
SQM-19b	BSBM19B	How much do you agree with these statements about mathematics? Mathematics is more difficult for me than for many of my classmates	BSBM19B	
SQM-19c	BSBM19C	How much do you agree with these statements about mathematics? Mathematics is not one of my strengths	BSBM19C	
SQM-19d	BSBM19D	How much do you agree with these statements about mathematics? I learn things quickly in mathematics	BSBM19D	
SQM-19e	BSBM19E	How much do you agree with these statements about mathematics? Mathematics makes me nervous	BSBM19E	
SQM-19f	BSBM19F	How much do you agree with these statements about mathematics? I am good at working out difficult mathematics problems	BSBM19F	
SQM-19g	BSBM19G	How much do you agree with these statements about mathematics? My teacher tells me I am good at mathematics	BSBM19G	
SQM-19h	BSBM19H	How much do you agree with these statements about mathematics? Mathematics is harder for me than any other subject	BSBM19H	
SQM-19i	BSBM19I	How much do you agree with these statements about mathematics? Mathematics makes me confused	BSBM19I	
SQM-20a	BSBM20A	How much do you agree with these statements about mathematics? I think learning mathematics will help me in my daily life	BSBM20A	
SQM-20b	BSBM20B	How much do you agree with these statements about mathematics? I need mathematics to learn other school subjects	BSBM20B	
SQM-20c	BSBM20C	How much do you agree with these statements about mathematics? I need to do well in mathematics to get into the <university> of my choice	BSBM20C	
SQM-20d	BSBM20D	How much do you agree with these statements about mathematics? I need to do well in mathematics to get the job I want	BSBM20D	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQM-20e	BSBM20E	How much do you agree with these statements about mathematics? I would like a job that involves using mathematics	BSBM20E	
SQM-20f	BSBM20F	How much do you agree with these statements about mathematics? It is important to learn about mathematics to get ahead in the world	BSBM20F	
SQM-20g	BSBM20G	How much do you agree with these statements about mathematics? Learning mathematics will give me more job opportunities when I am an adult	BSBM20G	
SQM-20h	BSBM20H	How much do you agree with these statements about mathematics? My parents think that it is important that I do well in mathematics	BSBM20H	
SQM-20i	BSBM20I	How much do you agree with these statements about mathematics? It is important to do well in mathematics	BSBM20I	
SQSS-21	BSBB21	Are you studying biology in school this year?	BSBB21	
SQSS-22	BSBB22	In biology lessons, how often does your teacher ask you to conduct biology experiments?		
SQSS-23a	BSBB23A	How much do you agree with these statements about learning biology? I enjoy learning biology	BSBB22A	
SQSS-23b	BSBB23B	How much do you agree with these statements about learning biology? I wish I did not have to study biology	BSBB22B	
SQSS-23c	BSBB23C	How much do you agree with these statements about learning biology? Biology is boring	BSBB22C	
SQSS-23d	BSBB23D	How much do you agree with these statements about learning biology? I learn many interesting things in biology	BSBB22D	
SQSS-23e	BSBB23E	How much do you agree with these statements about learning biology? I like biology	BSBB22E	
SQSS-23f	BSBB23F	How much do you agree with these statements about learning biology? I look forward to learning biology in school	BSBB22F	
SQSS-23g	BSBB23G	How much do you agree with these statements about learning biology? Biology teaches me how things in the world work	BSBB22G	
SQSS-23h	BSBB23H	How much do you agree with these statements about learning biology? I like to conduct biology experiments	BSBB22H	
SQSS-23i	BSBB23I	How much do you agree with these statements about learning biology? Biology is one of my favorite subjects	BSBB22I	
SQSS-24a	BSBB24A	How much do you agree with these statements about your biology lessons? I know what my teacher expects me to do	BSBB23A	
SQSS-24b	BSBB24B	How much do you agree with these statements about your biology lessons? My teacher is easy to understand	BSBB23B	
SQSS-24c	BSBB24C	How much do you agree with these statements about your biology lessons? My teacher has clear answers to my questions	BSBB23E	
SQSS-24d	BSBB24D	How much do you agree with these statements about your biology lessons? My teacher is good at explaining biology	BSBB23F	
SQSS-24e	BSBB24E	How much do you agree with these statements about your biology lessons? My teacher does a variety of things to help us learn	BSBB23H	
SQSS-24f	BSBB24F	How much do you agree with these statements about your biology lessons? My teacher links new lessons to what I already know		
SQSS-24g	BSBB24G	How much do you agree with these statements about your biology lessons? My teacher explains a topic again when we don't understand		

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQSS-25a	BSBB25A	How much do you agree with these statements about biology? I usually do well in biology	BSBB24A	
SQSS-25b	BSBB25B	How much do you agree with these statements about biology? Biology is more difficult for me than for many of my classmates	BSBB24B	
SQSS-25c	BSBB25C	How much do you agree with these statements about biology? Biology is not one of my strengths	BSBB24C	
SQSS-25d	BSBB25D	How much do you agree with these statements about biology? I learn things quickly in biology	BSBB24D	
SQSS-25e	BSBB25E	How much do you agree with these statements about biology? I am good at working out difficult biology problems	BSBB24E	
SQSS-25f	BSBB25F	How much do you agree with these statements about biology? My teacher tells me I am good at biology	BSBB24F	
SQSS-25g	BSBB25G	How much do you agree with these statements about biology? Biology is harder for me than any other subject	BSBB24G	
SQSS-25h	BSBB25H	How much do you agree with these statements about biology? Biology makes me confused	BSBB24H	
SQSS-26	BSBE26	Are you studying earth science in school this year?	BSBE25	
SQSS-27	BSBE27	In earth science lessons, how often does your teacher ask you to conduct earth science experiments?		
SQSS-28a	BSBE28A	How much do you agree with these statements about learning earth science? I enjoy learning earth science	BSBE26A	
SQSS-28b	BSBE28B	How much do you agree with these statements about learning earth science? I wish I did not have to study earth science	BSBE26B	
SQSS-28c	BSBE28C	How much do you agree with these statements about learning earth science? Earth science is boring	BSBE26C	
SQSS-28d	BSBE28D	How much do you agree with these statements about learning earth science? I learn many interesting things in earth science	BSBE26D	
SQSS-28e	BSBE28E	How much do you agree with these statements about learning earth science? I like earth science	BSBE26E	
SQSS-28f	BSBE28F	How much do you agree with these statements about learning earth science? I look forward to learning earth science in school	BSBE26F	
SQSS-28g	BSBE28G	How much do you agree with these statements about learning earth science? Earth science teaches me how things in the world work	BSBE26G	
SQSS-28h	BSBE28H	How much do you agree with these statements about learning earth science? I like to conduct earth science experiments	BSBE26H	
SQSS-28i	BSBE28I	How much do you agree with these statements about learning earth science? Earth science is one of my favorite subjects	BSBE26I	
SQSS-29a	BSBE29A	How much do you agree with these statements about your earth science lessons? I know what my teacher expects me to do	BSBE27A	
SQSS-29b	BSBE29B	How much do you agree with these statements about your earth science lessons? My teacher is easy to understand	BSBE27B	
SQSS-29c	BSBE29C	How much do you agree with these statements about your earth science lessons? My teacher has clear answers to my questions	BSBE27E	
SQSS-29d	BSBE29D	How much do you agree with these statements about your earth science lessons? My teacher is good at explaining earth science	BSBE27F	
SQSS-29e	BSBE29E	How much do you agree with these statements about your earth science lessons? My teacher does a variety of things to help us learn	BSBE27H	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQSS-29f	BSBE29F	How much do you agree with these statements about your earth science lessons? My teacher links new lessons to what I already know		
SQSS-29g	BSBE29G	How much do you agree with these statements about your earth science lessons? My teacher explains a topic again when we don't understand		
SQSS-30a	BSBE30A	How much do you agree with these statements about earth science? I usually do well in earth science	BSBE28A	
SQSS-30b	BSBE30B	How much do you agree with these statements about earth science? Earth science is more difficult for me than for many of my classmates	BSBE28B	
SQSS-30c	BSBE30C	How much do you agree with these statements about earth science? Earth science is not one of my strengths	BSBE28C	
SQSS-30d	BSBE30D	How much do you agree with these statements about earth science? I learn things quickly in earth science	BSBE28D	
SQSS-30e	BSBE30E	How much do you agree with these statements about earth science? I am good at working out difficult earth science problems	BSBE28E	
SQSS-30f	BSBE30F	How much do you agree with these statements about earth science? My teacher tells me I am good at earth science	BSBE28F	
SQSS-30g	BSBE30G	How much do you agree with these statements about earth science? Earth science is harder for me than any other subject	BSBE28G	
SQSS-30h	BSBE30H	How much do you agree with these statements about earth science? Earth science makes me confused	BSBE28H	
SQSS-31	BSBC31	Are you studying chemistry in school this year?	BSBC29	
SQSS-32	BSBC32	In chemistry lessons, how often does your teacher ask you to conduct chemistry experiments?		
SQSS-33a	BSBC33A	How much do you agree with these statements about learning chemistry? I enjoy learning chemistry	BSBC30A	
SQSS-33b	BSBC33B	How much do you agree with these statements about learning chemistry? I wish I did not have to study chemistry	BSBC30B	
SQSS-33c	BSBC33C	How much do you agree with these statements about learning chemistry? Chemistry is boring	BSBC30C	
SQSS-33d	BSBC33D	How much do you agree with these statements about learning chemistry? I learn many interesting things in chemistry	BSBC30D	
SQSS-33e	BSBC33E	How much do you agree with these statements about learning chemistry? I like chemistry	BSBC30E	
SQSS-33f	BSBC33F	How much do you agree with these statements about learning chemistry? I look forward to learning chemistry in school	BSBC30F	
SQSS-33g	BSBC33G	How much do you agree with these statements about learning chemistry? Chemistry teaches me how things in the world work	BSBC30G	
SQSS-33h	BSBC33H	How much do you agree with these statements about learning chemistry? I like to conduct chemistry experiments	BSBC30H	
SQSS-33i	BSBC33I	How much do you agree with these statements about learning chemistry? Chemistry is one of my favorite subjects	BSBC30I	
SQSS-34a	BSBC34A	How much do you agree with these statements about your chemistry lessons? I know what my teacher expects me to do	BSBC31A	
SQSS-34b	BSBC34B	How much do you agree with these statements about your chemistry lessons? My teacher is easy to understand	BSBC31B	
SQSS-34c	BSBC34C	How much do you agree with these statements about your chemistry lessons? My teacher has clear answers to my questions	BSBC31E	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQSS-34d	BSBC34D	How much do you agree with these statements about your chemistry lessons? My teacher is good at explaining chemistry	BSBC31F	
SQSS-34e	BSBC34E	How much do you agree with these statements about your chemistry lessons? My teacher does a variety of things to help us learn	BSBC31H	
SQSS-34f	BSBC34F	How much do you agree with these statements about your chemistry lessons? My teacher links new lessons to what I already know		
SQSS-34g	BSBC34G	How much do you agree with these statements about your chemistry lessons? My teacher explains a topic again when we don't understand		
SQSS-35a	BSBC35A	How much do you agree with these statements about chemistry? I usually do well in chemistry	BSBC32A	
SQSS-35b	BSBC35B	How much do you agree with these statements about chemistry? Chemistry is more difficult for me than for many of my classmates	BSBC32B	
SQSS-35c	BSBC35C	How much do you agree with these statements about chemistry? Chemistry is not one of my strengths	BSBC32C	
SQSS-35d	BSBC35D	How much do you agree with these statements about chemistry? I learn things quickly in chemistry	BSBC32D	
SQSS-35e	BSBC35E	How much do you agree with these statements about chemistry? I am good at working out difficult chemistry problems	BSBC32E	
SQSS-35f	BSBC35F	How much do you agree with these statements about chemistry? My teacher tells me I am good at chemistry	BSBC32F	
SQSS-35g	BSBC35G	How much do you agree with these statements about chemistry? Chemistry is harder for me than any other subject	BSBC32G	
SQSS-35h	BSBC35H	How much do you agree with these statements about chemistry? Chemistry makes me confused	BSBC32H	
SQSS-36	BSBP36	Are you studying physics in school this year?	BSBP33	
SQSS-37	BSBP37	In physics lessons, how often does your teacher ask you to conduct physics experiments?		
SQSS-38a	BSBP38A	How much do you agree with these statements about learning physics? I enjoy learning physics	BSBP34A	
SQSS-38b	BSBP38B	How much do you agree with these statements about learning physics? I wish I did not have to study physics	BSBP34B	
SQSS-38c	BSBP38C	How much do you agree with these statements about learning physics? Physics is boring	BSBP34C	
SQSS-38d	BSBP38D	How much do you agree with these statements about learning physics? I learn many interesting things in physics	BSBP34D	
SQSS-38e	BSBP38E	How much do you agree with these statements about learning physics? I like physics	BSBP34E	
SQSS-38f	BSBP38F	How much do you agree with these statements about learning physics? I look forward to learning physics in school	BSBP34F	
SQSS-38g	BSBP38G	How much do you agree with these statements about learning physics? Physics teaches me how things in the world work	BSBP34G	
SQSS-38h	BSBP38H	How much do you agree with these statements about learning physics? I like to conduct physics experiments	BSBP34H	
SQSS-38i	BSBP38I	How much do you agree with these statements about learning physics? Physics is one of my favorite subjects	BSBP34I	
SQSS-39a	BSBP39A	How much do you agree with these statements about your physics lessons? I know what my teacher expects me to do	BSBP35A	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQSS-39b	BSBP39B	How much do you agree with these statements about your physics lessons? My teacher is easy to understand	BSBP35B	
SQSS-39c	BSBP39C	How much do you agree with these statements about your physics lessons? My teacher has clear answers to my questions	BSBP35E	
SQSS-39d	BSBP39D	How much do you agree with these statements about your physics lessons? My teacher is good at explaining physics	BSBP35F	
SQSS-39e	BSBP39E	How much do you agree with these statements about your physics lessons? My teacher does a variety of things to help us learn	BSBP35H	
SQSS-39f	BSBP39F	How much do you agree with these statements about your physics lessons? My teacher links new lessons to what I already know		
SQSS-39g	BSBP39G	How much do you agree with these statements about your physics lessons? My teacher explains a topic again when we don't understand		
SQSS-40a	BSBP40A	How much do you agree with these statements about physics? I usually do well in physics	BSBP36A	
SQSS-40b	BSBP40B	How much do you agree with these statements about physics? Physics is more difficult for me than for many of my classmates	BSBP36B	
SQSS-40c	BSBP40C	How much do you agree with these statements about physics? Physics is not one of my strengths	BSBP36C	
SQSS-40d	BSBP40D	How much do you agree with these statements about physics? I learn things quickly in physics	BSBP36D	
SQSS-40e	BSBP40E	How much do you agree with these statements about physics? I am good at working out difficult physics problems	BSBP36E	
SQSS-40f	BSBP40F	How much do you agree with these statements about physics? My teacher tells me I am good at physics	BSBP36F	
SQSS-40g	BSBP40G	How much do you agree with these statements about physics? Physics is harder for me than any other subject	BSBP36G	
SQSS-40h	BSBP40H	How much do you agree with these statements about physics? Physics makes me confused	BSBP36H	
SQSS-41a	BSBS41A	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? I think learning science will help me in my daily life	BSBS37A	
SQSS-41b	BSBS41B	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? I need science to learn other school subjects	BSBS37B	
SQSS-41c	BSBS41C	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? I need to do well in science to get into the <university> of my choice	BSBS37C	
SQSS-41d	BSBS41D	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? I need to do well in science to get the job I want	BSBS37D	
SQSS-41e	BSBS41E	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? I would like a job that involves using science	BSBS37E	
SQSS-41f	BSBS41F	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? It is important to learn about science to get ahead in the world	BSBS37F	

Exhibit 2.2: International Context Variables for the TIMSS 2019 Student Questionnaire—Separate Science Version (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
SQSS-41g	BSBS41G	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? Learning science will give me more job opportunities when I am an adult	BSBS37G	
SQSS-41h	BSBS41H	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? My parents think that it is important that I do well in science	BSBS37H	
SQSS-41i	BSBS41I	How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)? It is important to do well in science	BSBS37I	
SQSS-42Aa	BSBM42AA	How often does your teacher give you homework in each of the following subjects? Mathematics	BSBM38AA	
SQSS-42Ab	BSBB42AB	How often does your teacher give you homework in the following subjects? Biology	BSBB38AB	
SQSS-42Ac	BSBE42AC	How often does your teacher give you homework in the following subjects? Earth science	BSBE38AC	
SQSS-42Ad	BSBC42AD	How often does your teacher give you homework in the following subjects? Chemistry	BSBC38AD	
SQSS-42Ae	BSBP42AE	How often does your teacher give you homework in the following subjects? Physics	BSBP38AE	
SQSS-42Ba	BSBM42BA	When your teacher gives you homework in each of the following subjects, about how many minutes do you usually spend on your homework? Mathematics	BSBM38BA	
SQSS-42Bb	BSBB42BB	When your teacher gives you homework in each of the following subjects, about how many minutes do you usually spend on your homework? Biology	BSBB38BB	
SQSS-42Bc	BSBE42BC	When your teacher gives you homework in each of the following subjects, about how many minutes do you usually spend on your homework? Earth science	BSBE38BC	
SQSS-42Bd	BSBC42BD	When your teacher gives you homework in each of the following subjects, about how many minutes do you usually spend on your homework? Chemistry	BSBC38BD	
SQSS-42Be	BSBP42BE	When your teacher gives you homework in each of the following subjects, about how many minutes do you usually spend on your homework? Physics	BSBP38BE	
SQSS-43Aa	BSBM43AA	During the last 12 months, have you attended extra lessons or tutoring not provided by the school in the following subjects? Mathematics	BSBM39AA	
SQSS-43Ab	BSBS43AB	During the last 12 months, have you attended extra lessons or tutoring not provided by the school in the following subjects? Science (including biology, earth science, chemistry, and physics)	BSBS39AB	
SQSS-43Ba	BSBM43BA	For how many of the last 12 months have you attended extra lessons or tutoring? Mathematics	BSBM39BA	
SQSS-43Bb	BSBS43BB	For how many of the last 12 months have you attended extra lessons or tutoring? Science (including biology, earth science, chemistry, and physics)	BSBS39BB	



Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Student Questionnaire

Separate Science Subjects

<Grade 8>

<TIMSS National Research Center Name>

<Address>

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

Directions

In this booklet, you will find questions about yourself. Some questions ask for facts while other questions ask for your opinion.

Each question is followed by a number of answers. Shade in the circle next to or under the answer of your choice as shown in Examples 1, 2, and 3.

Example 1

Do you go to school?

Fill **one** circle only.

Yes -- ☒

No -- ☐

Example 2

How often do you do these things?

Fill **one** circle for each line.

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
a) I talk with my friends	☒	☐	☐	☐
b) I play sports	☐	☒	☐	☐
c) I ride a skateboard	☐	☐	☒	☐

Example 3

What do you think? Tell how much you agree with these statements.

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) Watching movies is fun	☐	☒	☐	☐
b) I like eating ice cream	☒	☐	☐	☐
c) I do not like waking up early	☐	☐	☒	☐
d) I enjoy doing chores	☐	☐	☐	☒

- Read each question carefully, and pick the answer you think is best.
- Fill in the circle next to or under your answer.
- If you decide to change your answer, draw an **X** through your first answer, like this: ~~☐~~. Then, fill in the circle next to or under your new answer.
- Ask for help if you do not understand something or are not sure how to answer.

About you

1

Are you a girl or a boy?

BSBG01

Fill **one** circle only.

Girl -- ☐

Boy -- ☐

2

When were you born?

BSBG02A

Fill the circles next to the month and year you were born.

BSBG02B

a) Month

b) Year

January -- ☐

2001 -- ☐

February -- ☐

2002 -- ☐

March -- ☐

2003 -- ☐

April -- ☐

2004 -- ☐

May -- ☐

2005 -- ☐

June -- ☐

2006 -- ☐

July -- ☐

2007 -- ☐

August -- ☐

2008 -- ☐

September -- ☐

2009 -- ☐

October -- ☐

Other -- ☐

November -- ☐

December -- ☐

3**How often do you speak <language of test> at home?**

BSBG03

*Fill **one** circle only.*Always -- ☐Almost always -- ☐Sometimes -- ☐Never -- ☐**4****About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)**

BSBG04

*Fill **one** circle only.*None or very few
(0–10 books) -- ☐Enough to fill one shelf
(11–25 books) -- ☐Enough to fill one bookcase
(26–100 books) -- ☐Enough to fill two bookcases
(101–200 books) -- ☐Enough to fill three or more bookcases
(more than 200) -- ☐

5

Do you have any of these things at your home?

*Fill **one** circle for each line.*

		Yes	No
		↓	↓
BSBG05A	a) A computer or tablet	☐	☐
BSBG05B	b) Study desk/table for your use	☐	☐
BSBG05C	c) Your own room.....	☐	☐
BSBG05D	d) Internet connection	☐	☐
BSBG05E	e) Your own mobile phone	☐	☐
BSBG05F	f) <country-specific indicator of wealth>	☐	☐
BSBG05G	g) <country-specific indicator of wealth>	☐	☐
BSBG05H	h) <country-specific indicator of wealth>	☐	☐
BSBG05I	i) <country-specific indicator of wealth>	☐	☐

5

<Grade 8> Student Questionnaire

The following questions are about your <Parent/Guardian A> and <Parent/Guardian B>. <If you have only one parent/guardian, answer for Parent/Guardian A. If you have two parents/guardians, choose one for Parent/Guardian A and the other for Parent/Guardian B.>

6

What is the highest level of education completed by your <parents/guardians>?

A. <Parent/Guardian A>

BSBG06A

Fill **one** circle only.

Some <Primary education—ISCED Level 1 or
Lower secondary education—ISCED Level 2>
or did not go to school -- ☐

<Lower secondary education—ISCED Level 2> -- ☐

<Upper secondary education—ISCED Level 3> -- ☐

<Post-secondary, non-tertiary
education—ISCED Level 4> -- ☐

<Short-cycle tertiary education—ISCED Level 5> -- ☐

<Bachelor's or equivalent level—ISCED Level 6> -- ☐

<Postgraduate degree: Master's—ISCED
Level 7 or Doctor—ISCED Level 8> -- ☐

I don't know -- ☐

Not applicable -- ☐

6 (continued)

What is the highest level of education completed by your <parents/guardians>?

B. <Parent/Guardian B>

BSBG06B

Fill **one** circle only.

Some <Primary education—ISCED Level 1 or
Lower secondary education—ISCED Level 2>
or did not go to school -- ☐

<Lower secondary education—ISCED Level 2> -- ☐

<Upper secondary education—ISCED Level 3> -- ☐

<Post-secondary, non-tertiary
education—ISCED Level 4> -- ☐

<Short-cycle tertiary education—ISCED Level 5> -- ☐

<Bachelor's or equivalent level—ISCED Level 6> -- ☐

<Postgraduate degree: Master's—ISCED
Level 7 or Doctor—ISCED Level 8> -- ☐

I don't know -- ☐

Not applicable -- ☐

7

How far in your education do you expect to go?

BSBG07

Fill one circle only.

Finish <Lower secondary
education—ISCED Level 2> -----○

Finish <Upper secondary
education—ISCED Level 3> -----○

Finish <Post-secondary, non-tertiary
education—ISCED Level 4> -----○

Finish <Short-cycle tertiary
education—ISCED Level 5> -----○

Finish <Bachelor's or equivalent
level—ISCED Level 6> -----○

Finish <Postgraduate degree:
Master's—ISCED Level 7 or
Doctor—ISCED Level 8> -----○

8

Were your <parents/guardians> born in <country>?

A. <Parent/Guardian A>

BSBG08A

Fill one circle only.

Yes --○

No --○

I don't know --○

Not applicable --○

B. <Parent/Guardian B>

BSBG08B

Fill one circle only.

Yes --○

No --○

I don't know --○

Not applicable --○

9

A. Were you born in <country>?

BSBG09A

Fill **one** circle only.

Yes -- ☐

(If Yes, go to #10)

No -- ☐

If No,

B. If you were not born in <country>, how old were you when you came to <country>?

BSBG09B

Fill **one** circle only.

Older than 10 years old -- ☐

5 to 10 years old -- ☐

Younger than 5 years old -- ☐

10

About how often are you absent from school?

BSBG10

Fill **one** circle only.

Once a week -- ☐

Once every two weeks -- ☐

Once a month -- ☐

Once every two months -- ☐

Never or almost never -- ☐

9

<Grade 8> Student Questionnaire

11**How often do you feel this way when you arrive at school?***Fill **one** circle for each line.*

		Every day	Almost every day	Sometimes	Never
BSBG11A	a) I feel tired	☐	☐	☐	☐
BSBG11B	b) I feel hungry	☐	☐	☐	☐

12**Do you use the Internet to do any of the following tasks for schoolwork (including classroom tasks, homework, studying outside of class)?***Fill **one** circle for each line.*

		Yes	No
BSBG12A	a) Access the textbook or other course materials	☐	☐
BSBG12B	b) Access assignments posted online by my teacher	☐	☐
BSBG12C	c) Collaborate with classmates on assignments or projects	☐	☐
BSBG12D	d) Communicate with the teacher	☐	☐
BSBG12E	e) Find information, articles, or tutorials to aid in understanding mathematics or science	☐	☐
BSBG12F	f) Access learning games or activities related to mathematics or science	☐	☐

Your School

13

What do you think about your school? Tell how much you agree with these statements.

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBG13A	a) I like being in school	☐	☐	☐	☐
BSBG13B	b) I feel safe when I am at school	☐	☐	☐	☐
BSBG13C	c) I feel like I belong at this school	☐	☐	☐	☐
BSBG13D	d) Teachers at my school are fair to me	☐	☐	☐	☐
BSBG13E	e) I am proud to go to this school	☐	☐	☐	☐

14

During this school year, how often have other students from your school done any of the following things to you, including through texting or the Internet?

Fill **one** circle for each line.

		At least once a week	Once or twice a month	A few times a year	Never
BSBG14A	a) Said mean things about my physical appearance (e.g., my hair, my size) -----	☐	☐	☐	☐
BSBG14B	b) Spread lies about me -----	☐	☐	☐	☐
BSBG14C	c) Shared my secrets with others -----	☐	☐	☐	☐
BSBG14D	d) Refused to talk to me -----	☐	☐	☐	☐
BSBG14E	e) Insulted a member of my family ---	☐	☐	☐	☐
BSBG14F	f) Stole something from me -----	☐	☐	☐	☐
BSBG14G	g) Made me do things I didn't want to do -----	☐	☐	☐	☐
BSBG14H	h) Sent me nasty or hurtful messages online -----	☐	☐	☐	☐
BSBG14I	i) Shared nasty or hurtful things about me online-----	☐	☐	☐	☐
BSBG14J	j) Shared embarrassing photos of me online-----	☐	☐	☐	☐
BSBG14K	k) Threatened me -----	☐	☐	☐	☐
BSBG14L	l) Physically hurt me -----	☐	☐	☐	☐
BSBG14M	m) Excluded me from their group (e.g., parties, messaging) -----	☐	☐	☐	☐
BSBG14N	n) Damaged something of mine on purpose -----	☐	☐	☐	☐

Mathematics in School

15

In mathematics lessons, how often do you work problems on your own?

BSBM15

Fill *one* circle only.

Every or almost every lesson -- ☐

About half the lessons -- ☐

Some lessons -- ☐

Never -- ☐

16

How much do you agree with these statements about learning mathematics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM16A	a) I enjoy learning mathematics -----	☐	☐	☐	☐
BSBM16B	b) I wish I did not have to study mathematics -----	☐	☐	☐	☐
BSBM16C	c) Mathematics is boring -----	☐	☐	☐	☐
BSBM16D	d) I learn many interesting things in mathematics -----	☐	☐	☐	☐
BSBM16E	e) I like mathematics -----	☐	☐	☐	☐
BSBM16F	f) I like any schoolwork that involves numbers -----	☐	☐	☐	☐
BSBM16G	g) I like to solve mathematics problems -----	☐	☐	☐	☐
BSBM16H	h) I look forward to mathematics class -----	☐	☐	☐	☐
BSBM16I	i) Mathematics is one of my favorite subjects -----	☐	☐	☐	☐

17

How much do you agree with these statements about your mathematics lessons?

Fill *one* circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM17A	a) I know what my teacher expects me to do	☐	☐	☐	☐
BSBM17B	b) My teacher is easy to understand --	☐	☐	☐	☐
BSBM17C	c) My teacher has clear answers to my questions	☐	☐	☐	☐
BSBM17D	d) My teacher is good at explaining mathematics	☐	☐	☐	☐
BSBM17E	e) My teacher does a variety of things to help us learn	☐	☐	☐	☐
BSBM17F	f) My teacher links new lessons to what I already know	☐	☐	☐	☐
BSBM17G	g) My teacher explains a topic again when we don't understand	☐	☐	☐	☐

15

<Grade 8> Student Questionnaire

18

How often do these things happen in your
mathematics lessons?

Fill **one** circle for each line.

		Every or almost every lesson	About half the lessons	Some lessons	Never
		↓	↓	↓	↓
BSBM18A	a) Students don't listen to what the teacher says -----	☐	☐	☐	☐
BSBM18B	b) There is disruptive noise -----	☐	☐	☐	☐
BSBM18C	c) It is too disorderly for students to work well -----	☐	☐	☐	☐
BSBM18D	d) My teacher has to wait a long time for students to quiet down -----	☐	☐	☐	☐
BSBM18E	e) Students interrupt the teacher -----	☐	☐	☐	☐
BSBM18F	f) My teacher has to keep telling us to follow the classroom rules -----	☐	☐	☐	☐

19

How much do you agree with these statements about mathematics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM19A	a) I usually do well in mathematics ---	☐	☐	☐	☐
BSBM19B	b) Mathematics is more difficult for me than for many of my classmates -----	☐	☐	☐	☐
BSBM19C	c) Mathematics is not one of my strengths -----	☐	☐	☐	☐
BSBM19D	d) I learn things quickly in mathematics -----	☐	☐	☐	☐
BSBM19E	e) Mathematics makes me nervous -----	☐	☐	☐	☐
BSBM19F	f) I am good at working out difficult mathematics problems -----	☐	☐	☐	☐
BSBM19G	g) My teacher tells me I am good at mathematics -----	☐	☐	☐	☐
BSBM19H	h) Mathematics is harder for me than any other subject -----	☐	☐	☐	☐
BSBM19I	i) Mathematics makes me confused -----	☐	☐	☐	☐

20

How much do you agree with these statements about mathematics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBM20A	a) I think learning mathematics will help me in my daily life	☐	☐	☐	☐
BSBM20B	b) I need mathematics to learn other school subjects	☐	☐	☐	☐
BSBM20C	c) I need to do well in mathematics to get into the <university> of my choice	☐	☐	☐	☐
BSBM20D	d) I need to do well in mathematics to get the job I want	☐	☐	☐	☐
BSBM20E	e) I would like a job that involves using mathematics	☐	☐	☐	☐
BSBM20F	f) It is important to learn about mathematics to get ahead in the world	☐	☐	☐	☐
BSBM20G	g) Learning mathematics will give me more job opportunities when I am an adult	☐	☐	☐	☐
BSBM20H	h) My parents think that it is important that I do well in mathematics	☐	☐	☐	☐
BSBM20I	i) It is important to do well in mathematics	☐	☐	☐	☐

Biology in School

21

Are you studying biology in school this year?

BSBB21

Fill **one** circle only.

Yes -- ☐

No -- ☐ 

(If No, go to #26)

22

In biology lessons, how often does your teacher ask you to conduct biology experiments?

BSBB22

Fill **one** circle only.

At least once a week -- ☐

Once or twice a month -- ☐

A few times a year -- ☐

Never -- ☐

23

How much do you agree with these statements about learning biology?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBB23A	a) I enjoy learning biology	☐	☐	☐	☐
BSBB23B	b) I wish I did not have to study biology	☐	☐	☐	☐
BSBB23C	c) Biology is boring	☐	☐	☐	☐
BSBB23D	d) I learn many interesting things in biology	☐	☐	☐	☐
BSBB23E	e) I like biology	☐	☐	☐	☐
BSBB23F	f) I look forward to learning biology in school	☐	☐	☐	☐
BSBB23G	g) Biology teaches me how things in the world work	☐	☐	☐	☐
BSBB23H	h) I like to conduct biology experiments	☐	☐	☐	☐
BSBB23I	i) Biology is one of my favorite subjects	☐	☐	☐	☐

24

How much do you agree with these statements about
your biology lessons?

Fill *one* circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBB24A a) I know what my teacher expects me to do	☐	☐	☐	☐
BSBB24B b) My teacher is easy to understand --	☐	☐	☐	☐
BSBB24C c) My teacher has clear answers to my questions	☐	☐	☐	☐
BSBB24D d) My teacher is good at explaining biology	☐	☐	☐	☐
BSBB24E e) My teacher does a variety of things to help us learn	☐	☐	☐	☐
BSBB24F f) My teacher links new lessons to what I already know	☐	☐	☐	☐
BSBB24G g) My teacher explains a topic again when we don't understand ---	☐	☐	☐	☐

25

How much do you agree with these statements about biology?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBB25A	a) I usually do well in biology	☐	☐	☐	☐
BSBB25B	b) Biology is more difficult for me than for many of my classmates ----	☐	☐	☐	☐
BSBB25C	c) Biology is not one of my strengths	☐	☐	☐	☐
BSBB25D	d) I learn things quickly in biology	☐	☐	☐	☐
BSBB25E	e) I am good at working out difficult biology problems	☐	☐	☐	☐
BSBB25F	f) My teacher tells me I am good at biology	☐	☐	☐	☐
BSBB25G	g) Biology is harder for me than any other subject	☐	☐	☐	☐
BSBB25H	h) Biology makes me confused	☐	☐	☐	☐

Earth Science in School

26

Are you studying earth science in school this year?

BSBE26

Fill **one** circle only.

Yes -- ☐

No -- ☒ →

(If No, go to #31)

27

In earth science lessons, how often does your teacher ask you to conduct earth science experiments?

BSBE27

Fill **one** circle only.

At least once a week -- ☐

Once or twice a month -- ☐

A few times a year -- ☐

Never -- ☐

28

How much do you agree with these statements about learning earth science?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBE28A	a) I enjoy learning earth science -----	☐	☐	☐	☐
BSBE28B	b) I wish I did not have to study earth science -----	☐	☐	☐	☐
BSBE28C	c) Earth science is boring -----	☐	☐	☐	☐
BSBE28D	d) I learn many interesting things in earth science -----	☐	☐	☐	☐
BSBE28E	e) I like earth science -----	☐	☐	☐	☐
BSBE28F	f) I look forward to learning earth science in school -----	☐	☐	☐	☐
BSBE28G	g) Earth science teaches me how things in the world work -----	☐	☐	☐	☐
BSBE28H	h) I like to conduct earth science experiments -----	☐	☐	☐	☐
BSBE28I	i) Earth science is one of my favorite subjects -----	☐	☐	☐	☐

29

How much do you agree with these statements about
your earth science lessons?

Fill *one* circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBE29A	a) I know what my teacher expects me to do	☐	☐	☐	☐
BSBE29B	b) My teacher is easy to understand ..	☐	☐	☐	☐
BSBE29C	c) My teacher has clear answers to my questions	☐	☐	☐	☐
BSBE29D	d) My teacher is good at explaining earth science	☐	☐	☐	☐
BSBE29E	e) My teacher does a variety of things to help us learn	☐	☐	☐	☐
BSBE29F	f) My teacher links new lessons to what I already know	☐	☐	☐	☐
BSBE29G	g) My teacher explains a topic again when we don't understand ---	☐	☐	☐	☐

30

How much do you agree with these statements about earth science?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBE30A	a) I usually do well in earth science --	☐	☐	☐	☐
BSBE30B	b) Earth science is more difficult for me than for many of my classmates -----	☐	☐	☐	☐
BSBE30C	c) Earth science is not one of my strengths -----	☐	☐	☐	☐
BSBE30D	d) I learn things quickly in earth science -----	☐	☐	☐	☐
BSBE30E	e) I am good at working out difficult earth science problems ----	☐	☐	☐	☐
BSBE30F	f) My teacher tells me I am good at earth science -----	☐	☐	☐	☐
BSBE30G	g) Earth science is harder for me than any other subject -----	☐	☐	☐	☐
BSBE30H	h) Earth science makes me confused -----	☐	☐	☐	☐

Chemistry in School

31

Are you studying chemistry in school this year?

BSBC31

Fill **one** circle only.

Yes -- ☐

No -- ☒ 

(If No, go to #36)

32

In chemistry lessons, how often does your teacher ask you to conduct chemistry experiments?

BSBC32

Fill **one** circle only.

At least once a week -- ☐

Once or twice a month -- ☐

A few times a year -- ☐

Never -- ☐

33

How much do you agree with these statements about learning chemistry?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBC33A	a) I enjoy learning chemistry	☐	☐	☐	☐
BSBC33B	b) I wish I did not have to study chemistry	☐	☐	☐	☐
BSBC33C	c) Chemistry is boring	☐	☐	☐	☐
BSBC33D	d) I learn many interesting things in chemistry	☐	☐	☐	☐
BSBC33E	e) I like chemistry	☐	☐	☐	☐
BSBC33F	f) I look forward to learning chemistry in school	☐	☐	☐	☐
BSBC33G	g) Chemistry teaches me how things in the world work	☐	☐	☐	☐
BSBC33H	h) I like to conduct chemistry experiments	☐	☐	☐	☐
BSBC33I	i) Chemistry is one of my favorite subjects	☐	☐	☐	☐

34

How much do you agree with these statements about
your chemistry lessons?

Fill *one* circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBC34A a) I know what my teacher expects me to do	☐	☐	☐	☐
BSBC34B b) My teacher is easy to understand --	☐	☐	☐	☐
BSBC34C c) My teacher has clear answers to my questions	☐	☐	☐	☐
BSBC34D d) My teacher is good at explaining chemistry	☐	☐	☐	☐
BSBC34E e) My teacher does a variety of things to help us learn	☐	☐	☐	☐
BSBC34F f) My teacher links new lessons to what I already know	☐	☐	☐	☐
BSBC34G g) My teacher explains a topic again when we don't understand ---	☐	☐	☐	☐

35

How much do you agree with these statements about chemistry?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBC35A	a) I usually do well in chemistry -----	☐	☐	☐	☐
BSBC35B	b) Chemistry is more difficult for me than for many of my classmates ----	☐	☐	☐	☐
BSBC35C	c) Chemistry is not one of my strengths -----	☐	☐	☐	☐
BSBC35D	d) I learn things quickly in chemistry -----	☐	☐	☐	☐
BSBC35E	e) I am good at working out difficult chemistry problems -----	☐	☐	☐	☐
BSBC35F	f) My teacher tells me I am good at chemistry -----	☐	☐	☐	☐
BSBC35G	g) Chemistry is harder for me than any other subject -----	☐	☐	☐	☐
BSBC35H	h) Chemistry makes me confused ----	☐	☐	☐	☐

Physics in School

36

Are you studying physics in school this year?

BSBP36

*Fill **one** circle only.*

Yes -- ☐

No -- ☒ 

(If No, go to #41)

37

In physics lessons, how often does your teacher ask you to conduct physics experiments?

BSBP37

*Fill **one** circle only.*

At least once a week -- ☐

Once or twice a month -- ☐

A few times a year -- ☐

Never -- ☐

38

How much do you agree with these statements about learning physics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBP38A	a) I enjoy learning physics	☐	☐	☐	☐
BSBP38B	b) I wish I did not have to study physics	☐	☐	☐	☐
BSBP38C	c) Physics is boring	☐	☐	☐	☐
BSBP38D	d) I learn many interesting things in physics	☐	☐	☐	☐
BSBP38E	e) I like physics	☐	☐	☐	☐
BSBP38F	f) I look forward to learning physics in school	☐	☐	☐	☐
BSBP38G	g) Physics teaches me how things in the world work	☐	☐	☐	☐
BSBP38H	h) I like to conduct physics experiments	☐	☐	☐	☐
BSBP38I	i) Physics is one of my favorite subjects	☐	☐	☐	☐

39

How much do you agree with these statements about
your physics lessons?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBP39A a) I know what my teacher expects me to do	☐	☐	☐	☐
BSBP39B b) My teacher is easy to understand --	☐	☐	☐	☐
BSBP39C c) My teacher has clear answers to my questions	☐	☐	☐	☐
BSBP39D d) My teacher is good at explaining physics	☐	☐	☐	☐
BSBP39E e) My teacher does a variety of things to help us learn	☐	☐	☐	☐
BSBP39F f) My teacher links new lessons to what I already know	☐	☐	☐	☐
BSBP39G g) My teacher explains a topic again when we don't understand ---	☐	☐	☐	☐

40

How much do you agree with these statements about physics?

Fill **one** circle for each line.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBP40A	a) I usually do well in physics -----	☐	☐	☐	☐
BSBP40B	b) Physics is more difficult for me than for many of my classmates ----	☐	☐	☐	☐
BSBP40C	c) Physics is not one of my strengths -----	☐	☐	☐	☐
BSBP40D	d) I learn things quickly in physics -----	☐	☐	☐	☐
BSBP40E	e) I am good at working out difficult physics problems -----	☐	☐	☐	☐
BSBP40F	f) My teacher tells me I am good at physics -----	☐	☐	☐	☐
BSBP40G	g) Physics is harder for me than any other subject -----	☐	☐	☐	☐
BSBP40H	h) Physics makes me confused -----	☐	☐	☐	☐

Learning Science

41

How much do you agree with these statements about science (including biology, earth science, chemistry, and physics)?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
BSBS41A a) I think learning science will help me in my daily life	☐	☐	☐	☐
BSBS41B b) I need science to learn other school subjects	☐	☐	☐	☐
BSBS41C c) I need to do well in science to get into the <university> of my choice -	☐	☐	☐	☐
BSBS41D d) I need to do well in science to get the job I want	☐	☐	☐	☐
BSBS41E e) I would like a job that involves using science	☐	☐	☐	☐
BSBS41F f) It is important to learn about science to get ahead in the world	☐	☐	☐	☐
BSBS41G g) Learning science will give me more job opportunities when I am an adult	☐	☐	☐	☐
BSBS41H h) My parents think that it is important that I do well in science	☐	☐	☐	☐
BSBS41I i) It is important to do well in science	☐	☐	☐	☐

Homework

42

A. How often does your teacher give you homework in each of the following subjects?

Fill **one** circle for each line.

	Every day	3 or 4 times a week	1 or 2 times a week	Less than once a week	Never
BSBM42AA a) Mathematics	☐	☐	☐	☐	☐
BSBB42AB b) Biology	☐	☐	☐	☐	☐
BSBE42AC c) Earth science	☐	☐	☐	☐	☐
BSBC42AD d) Chemistry	☐	☐	☐	☐	☐
BSBP42AE e) Physics	☐	☐	☐	☐	☐

B. When your teacher gives you homework in each of the following subjects, about how many minutes do you usually spend on your homework?

Fill **one** circle for each line.

	My teacher never gives me homework in...	1-15 minutes	16-30 minutes	31-60 minutes	61-90 minutes	More than 90 minutes
BSBM42BA a) Mathematics	☐	☐	☐	☐	☐	☐
BSBB42BB b) Biology	☐	☐	☐	☐	☐	☐
BSBE42BC c) Earth science	☐	☐	☐	☐	☐	☐
BSBC42BD d) Chemistry	☐	☐	☐	☐	☐	☐
BSBP42BE e) Physics	☐	☐	☐	☐	☐	☐

43

A. During the last 12 months, have you attended extra lessons or tutoring not provided by the school in the following subjects?

*Fill **one** circle for each line.*

	Yes, to excel in class	Yes, to keep up in class	No
BSBM43AA a) Mathematics	☐	☐	☐
BSBS43AB b) Science (including biology, earth science, chemistry, and physics)	☐	☐	☐

B. For how many of the last 12 months have you attended extra lessons or tutoring?

*Fill **one** circle for each line.*

	Did not attend	Less than 4 months	4–8 months	More than 8 months
BSBM43BA a) Mathematics	☐	☐	☐	☐
BSBS43BB b) Science (including biology, earth science, chemistry, and physics)	☐	☐	☐	☐

Thank You!

Thank you for filling out the questionnaire!



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<Grade 8>



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SECTION 2.3: **STUDENT QUESTIONNAIRE—** **eTIMSS SUPPLEMENT** **GRADE 8**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



IEA

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

Exhibit 2.3: International Context Variables for the TIMSS 2019 Student Questionnaire—eTIMSS Supplement (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
SQE-01A	BSBE01A	Did you like that this test was on a computer or tablet?
SQE-01Ba	BSBE01BA	Did you have any of these difficulties? It was hard to type
SQE-01Bb	BSBE01BB	Did you have any of these difficulties? I had trouble using the number pad
SQE-01Bc	BSBE01BC	Did you have any of these difficulties? Objects were hard to drag
SQE-01Bd	BSBE01BD	Did you have any of these difficulties? There was no good place to work out my answers
SQE-01Be	BSBE01BE	Did you have any of these difficulties? The computer or tablet was slow
SQE-01Bf	BSBE01BF	Did you have any of these difficulties? I had to start my test over because of a computer or tablet problem
SQE-02a	BSBE02A	At school this year, how often did you use a computer or tablet to do each of the following? Work on a school assignment such as a paper, report, or presentation
SQE-02b	BSBE02B	At school this year, how often did you use a computer or tablet to do each of the following? Mathematics schoolwork
SQE-02c	BSBE02C	At school this year, how often did you use a computer or tablet to do each of the following? Science schoolwork
SQE-02d	BSBE02D	At school this year, how often did you use a computer or tablet to do each of the following? Take a test or quiz
SQE-03a	BSBE03A	How much do you agree with these statements? I am good at using a computer
SQE-03b	BSBE03B	How much do you agree with these statements? I am good at typing
SQE-03c	BSBE03C	How much do you agree with these statements? I can use a touchscreen on a computer, tablet, or smartphone
SQE-03d	BSBE03D	How much do you agree with these statements? It is easy for me to find information on the Internet
SQE-03e	BSBE03E	How much do you agree with these statements? I can look up the meanings of words on the Internet
SQE-03f	BSBE03F	How much do you agree with these statements? I can write sentences and paragraphs using a computer
SQE-03g	BSBE03G	How much do you agree with these statements? I can edit text on a computer
SQE-04a	BSBE04A	How well do you know the meaning of each of the following terms? WiFi
SQE-04b	BSBE04B	How well do you know the meaning of each of the following terms? Firewall
SQE-04c	BSBE04C	How well do you know the meaning of each of the following terms? Instant messaging
SQE-04d	BSBE04D	How well do you know the meaning of each of the following terms? Cut and paste
SQE-04e	BSBE04E	How well do you know the meaning of each of the following terms? Spreadsheet
SQE-04f	BSBE04F	How well do you know the meaning of each of the following terms? Icon
SQE-04g	BSBE04G	How well do you know the meaning of each of the following terms? Drag and drop
SQE-04h	BSBE04H	How well do you know the meaning of each of the following terms? Scroll

BSBE01A

BSBE01BA

BSBE01BB

BSBE01BC

BSBE01BD

BSBE01BE

BSBE01BF

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eTIMSS Questionnaire

1

A. Did you like that this test was on a computer or tablet?

I liked it a lot

I liked it a little

I didn't like it very much

I didn't like it at all

B. Did you have any of these difficulties?

Click one circle for each row.

	Yes	No
a) It was hard to type	☐	☐
b) I had trouble using the number pad	☐	☐
c) Objects were hard to drag	☐	☐
d) There was no good place to work out my answers	☐	☐
e) The computer or tablet was slow	☐	☐
f) I had to start my test over because of a computer or tablet problem	☐	☐

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SECTION 2.3: STUDENT QUESTIONNAIRE—
eTIMSS SUPPLEMENT – GRADE 8
TIMSS 2019 USER GUIDE FOR THE INTERNATIONAL DATABASE 260

BSBE02A

BSBE02B

BSBE02C

BSBE02D

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eTIMSS Questionnaire

2

At school this year, how often did you use a computer or tablet to do each of the following?

Click *one* circle for each row.

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
a) Work on a school assignment such as a paper, report, or presentation	☐	☐	☐	☐
b) Mathematics schoolwork	☐	☐	☐	☐
c) Science schoolwork	☐	☐	☐	☐
d) Take a test or quiz	☐	☐	☐	☐

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eTIMSS Questionnaire

3 How much do you agree with these statements?

Click one circle for each row.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I am good at using a computer	☐	☐	☐	☐
b) I am good at typing	☐	☐	☐	☐
c) I can use a touchscreen on a computer, tablet, or smartphone	☐	☐	☐	☐
d) It is easy for me to find information on the Internet	☐	☐	☐	☐
e) I can look up the meanings of words on the Internet	☐	☐	☐	☐
f) I can write sentences and paragraphs using a computer	☐	☐	☐	☐
g) I can edit text on a computer	☐	☐	☐	☐



BSBE04A

BSBE04B

BSBE04C

BSBE04D

BSBE04E

BSBE04F

BSBE04G

BSBE04H

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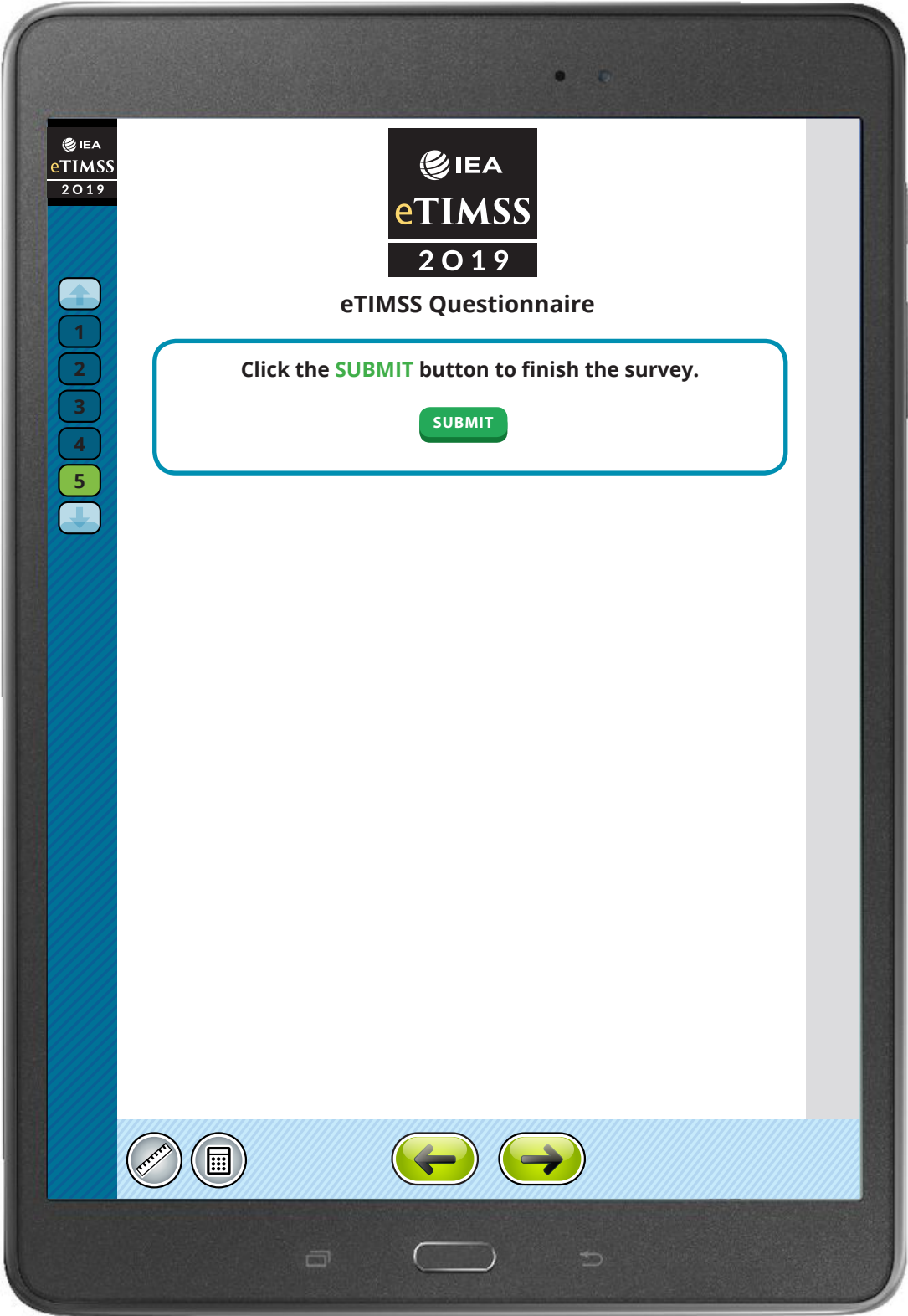
eTIMSS Questionnaire

4 How well do you know the meaning of each of the following terms?

Click one circle for each row.

	Very well	Well	A little	Not at all
a) WiFi	☐	☐	☐	☐
b) Firewall	☐	☐	☐	☐
c) Instant messaging	☐	☐	☐	☐
d) Cut and paste	☐	☐	☐	☐
e) Spreadsheet	☐	☐	☐	☐
f) Icon	☐	☐	☐	☐
g) Drag and drop	☐	☐	☐	☐
h) Scroll	☐	☐	☐	☐







SECTION 2.4: **TEACHER QUESTIONNAIRE—** **MATHEMATICS** **GRADE 8**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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Exhibit 2.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Mathematics (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-01	BTBG01	By the end of this school year, how many years will you have been teaching altogether?	BTBG01	
TQG-02	BTBG02	Are you female or male?	BTBG02	
TQG-03	BTBG03	How old are you?	BTBG03	
TQG-04	BTBG04	What is the highest level of formal education you have completed?	BTBG04	
TQG-05a	BTBG05A	During your <post-secondary> education, what was your major or main area(s) of study? Mathematics	BTBG05A	
TQG-05b	BTBG05B	During your <post-secondary> education, what was your major or main area(s) of study? Biology	BTBG05B	
TQG-05c	BTBG05C	During your <post-secondary> education, what was your major or main area(s) of study? Physics	BTBG05C	
TQG-05d	BTBG05D	During your <post-secondary> education, what was your major or main area(s) of study? Chemistry	BTBG05D	
TQG-05e	BTBG05E	During your <post-secondary> education, what was your major or main area(s) of study? <Earth Science>	BTBG05E	
TQG-05f	BTBG05F	During your <post-secondary> education, what was your major or main area(s) of study? Education–Mathematics	BTBG05F	
TQG-05g	BTBG05G	During your <post-secondary> education, what was your major or main area(s) of study? Education–Science	BTBG05G	
TQG-05h	BTBG05H	During your <post-secondary> education, what was your major or main area(s) of study? Education–General	BTBG05H	
TQG-05i	BTBG05I	During your <post-secondary> education, what was your major or main area(s) of study? Other	BTBG05I	
TQG-06a	BTBG06A	How would you characterize each of the following within your school? Teachers' understanding of the school's curricular goals	BTBG06A	
TQG-06b	BTBG06B	How would you characterize each of the following within your school? Teachers' degree of success in implementing the school's curriculum	BTBG06B	
TQG-06c	BTBG06C	How would you characterize each of the following within your school? Teachers' expectations for student achievement	BTBG06C	
TQG-06d	BTBG06D	How would you characterize each of the following within your school? Teachers' ability to inspire students	BTBG06E	
TQG-06e	BTBG06E	How would you characterize each of the following within your school? Parental involvement in school activities	BTBG06F	
TQG-06f	BTBG06F	How would you characterize each of the following within your school? Parental commitment to ensure that students are ready to learn	BTBG06G	
TQG-06g	BTBG06G	How would you characterize each of the following within your school? Parental expectations for student achievement	BTBG06H	
TQG-06h	BTBG06H	How would you characterize each of the following within your school? Parental support for student achievement	BTBG06I	
TQG-06i	BTBG06I	How would you characterize each of the following within your school? Students' desire to do well in school	BTBG06K	
TQG-06j	BTBG06J	How would you characterize each of the following within your school? Students' ability to reach school's academic goals	BTBG06L	
TQG-06k	BTBG06K	How would you characterize each of the following within your school? Students' respect for classmates who excel academically	BTBG06M	Modified wording in 2019
TQG-06l	BTBG06L	How would you characterize each of the following within your school? Collaboration between school leadership (including master teachers) and teachers to plan instruction	BTBG06O	Modified wording in 2019

Exhibit 2.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Mathematics (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-07a	BTBG07A	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school is located in a safe neighborhood	BTBG07A	
TQG-07b	BTBG07B	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. I feel safe at this school	BTBG07B	
TQG-07c	BTBG07C	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school's security policies and practices are sufficient	BTBG07C	
TQG-07d	BTBG07D	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students behave in an orderly manner	BTBG07D	
TQG-07e	BTBG07E	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students are respectful of the teachers	BTBG07E	
TQG-07f	BTBG07F	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students respect school property	BTBG07F	
TQG-07g	BTBG07G	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school has clear rules about student conduct	BTBG07G	
TQG-07h	BTBG07H	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school's rules are enforced in a fair and consistent manner	BTBG07H	
TQG-08a	BTBG08A	How often do you feel the following way about being a teacher? I am content with my profession as a teacher	BTBG10A	
TQG-08b	BTBG08B	How often do you feel the following way about being a teacher? I find my work full of meaning and purpose	BTBG10C	
TQG-08c	BTBG08C	How often do you feel the following way about being a teacher? I am enthusiastic about my job	BTBG10D	
TQG-08d	BTBG08D	How often do you feel the following way about being a teacher? My work inspires me	BTBG10E	
TQG-08e	BTBG08E	How often do you feel the following way about being a teacher? I am proud of the work I do	BTBG10F	
TQG-09a	BTBG09A	Indicate the extent to which you agree or disagree with each of the following statements. There are too many students in the classes	BTBG11A	
TQG-09b	BTBG09B	Indicate the extent to which you agree or disagree with each of the following statements. I have too much material to cover in class	BTBG11B	
TQG-09c	BTBG09C	Indicate the extent to which you agree or disagree with each of the following statements. I have too many teaching hours	BTBG11C	
TQG-09d	BTBG09D	Indicate the extent to which you agree or disagree with each of the following statements. I need more time to prepare for class	BTBG11D	
TQG-09e	BTBG09E	Indicate the extent to which you agree or disagree with each of the following statements. I need more time to assist individual students	BTBG11E	
TQG-09f	BTBG09F	Indicate the extent to which you agree or disagree with each of the following statements. I feel too much pressure from parents	BTBG11F	
TQG-09g	BTBG09G	Indicate the extent to which you agree or disagree with each of the following statements. I have difficulty keeping up with all of the changes to the curriculum	BTBG11G	

Exhibit 2.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Mathematics (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-09h	BTBG09H	Indicate the extent to which you agree or disagree with each of the following statements. I have too many administrative tasks	BTBG11H	
TQG-10	BTBG10	How many students are in this class?	BTBG12	
TQG-11	BTBG11	How many <eighth grade> students experience difficulties understanding spoken <language of test>?	BTBG13	
TQG-12a	BTBG12A	How often do you do the following in teaching this class? Relate the lesson to students' daily lives	BTBG14A	
TQG-12b	BTBG12B	How often do you do the following in teaching this class? Ask students to explain their answers	BTBG14B	
TQG-12c	BTBG12C	How often do you do the following in teaching this class? Ask students to complete challenging exercises that require them to go beyond the instruction	BTBG14C	
TQG-12d	BTBG12D	How often do you do the following in teaching this class? Encourage classroom discussions among students	BTBG14D	
TQG-12e	BTBG12E	How often do you do the following in teaching this class? Link new content to students' prior knowledge	BTBG14E	
TQG-12f	BTBG12F	How often do you do the following in teaching this class? Ask students to decide their own problem solving procedures	BTBG14F	
TQG-12g	BTBG12G	How often do you do the following in teaching this class? Encourage students to express their ideas in class	BTBG14G	
TQG-13a	BTBG13A	In your view, to what extent do the following limit how you teach this class? Students lacking prerequisite knowledge or skills	BTBG15A	
TQG-13b	BTBG13B	In your view, to what extent do the following limit how you teach this class? Students suffering from lack of basic nutrition	BTBG15B	
TQG-13c	BTBG13C	In your view, to what extent do the following limit how you teach this class? Students suffering from not enough sleep	BTBG15C	
TQG-13d	BTBG13D	In your view, to what extent do the following limit how you teach this class? Students absent from class		
TQG-13e	BTBG13E	In your view, to what extent do the following limit how you teach this class? Disruptive students	BTBG15D	
TQG-13f	BTBG13F	In your view, to what extent do the following limit how you teach this class? Uninterested students	BTBG15E	
TQG-13g	BTBG13G	In your view, to what extent do the following limit how you teach this class? Students with mental, emotional, or psychological impairment	BTBG15G	Modified wording in 2019
TQG-13h	BTBG13H	In your view, to what extent do the following limit how you teach this class? Students with difficulties understanding the language of instruction		
TQM-14	BTBM14	In a typical week, how much time do you spend teaching mathematics to the students in this class? (minutes)	BTBM16	
TQM-15a	BTBM15A	In teaching mathematics to this class, how often do you ask students to do the following? Listen to me explain new mathematics content	BTBM18A	
TQM-15b	BTBM15B	In teaching mathematics to this class, how often do you ask students to do the following? Listen to me explain how to solve problems	BTBM18B	
TQM-15c	BTBM15C	In teaching mathematics to this class, how often do you ask students to do the following? Memorize rules, procedures, and facts	BTBM18C	
TQM-15d	BTBM15D	In teaching mathematics to this class, how often do you ask students to do the following? Practice procedures on their own		

Exhibit 2.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Mathematics (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQM-15e	BTBM15E	In teaching mathematics to this class, how often do you ask students to do the following? Apply what they have learned to new problem situations on their own		
TQM-15f	BTBM15F	In teaching mathematics to this class, how often do you ask students to do the following? Work problems together in the whole class with direct guidance from me	BTBM18E	
TQM-15g	BTBM15G	In teaching mathematics to this class, how often do you ask students to do the following? Work in mixed ability groups	BTBM18I	
TQM-15h	BTBM15H	In teaching mathematics to this class, how often do you ask students to do the following? Work in same ability groups	BTBM18J	
TQM-16	BTBM16	Are the students in this class permitted to use calculators during mathematics lessons?	BTBM19A	
TQM-17A	BTBM17A	Do the students in this class have computers (including tablets) available to use during their mathematics lessons?	BTBM20A	
TQM-17Ba	BTBM17BA	What access do the students have to computers? Each student has a computer	BTBM20BA	
TQM-17Bb	BTBM17BB	What access do the students have to computers? The class has computers that students can share	BTBM20BB	
TQM-17Bc	BTBM17BC	What access do the students have to computers? The school has computers that the class can use sometimes	BTBM20BC	
TQM-17Ca	BTBM17CA	How often do you do activities on computers during mathematics lessons to support learning for: Whole class		
TQM-17Cb	BTBM17CB	How often do you do activities on computers during mathematics lessons to support learning for: Low-performing students		
TQM-17Cc	BTBM17CC	How often do you do activities on computers during mathematics lessons to support learning for: High-performing students		
TQM-17Cd	BTBM17CD	How often do you do activities on computers during mathematics lessons to support learning for: Students with special needs		
TQM-18Aa	BTBM18AA	When students in this class have been taught each of the following mathematics topics. Number: Computing with negative numbers	See TQM-21 in 2015 for sub-topics	
TQM-18Ab	BTBM18AB	When students in this class have been taught each of the following mathematics topics. Number: Concepts of fractions and decimals	See TQM-21 in 2015 for sub-topics	
TQM-18Ac	BTBM18AC	When students in this class have been taught each of the following mathematics topics. Number: Solving problems involving proportions and percents	See TQM-21 in 2015 for sub-topics	
TQM-18Ba	BTBM18BA	When students in this class have been taught each of the following mathematics topics. Algebra: Simplifying and evaluating algebraic expressions	See TQM-21 in 2015 for sub-topics	
TQM-18Bb	BTBM18BB	When students in this class have been taught each of the following mathematics topics. Algebra: Simple linear equations	See TQM-21 in 2015 for sub-topics	
TQM-18Bc	BTBM18BC	When students in this class have been taught each of the following mathematics topics. Algebra: Simple linear inequalities	See TQM-21 in 2015 for sub-topics	

Exhibit 2.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Mathematics (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQM-18Bd	BTBM18BD	When students in this class have been taught each of the following mathematics topics. Algebra: Simultaneous (two variables) equations	See TQM-21 in 2015 for sub-topics	
TQM-18Be	BTBM18BE	When students in this class have been taught each of the following mathematics topics. Algebra: Representation of linear and quadratic functions in tables, graphs, words, or equations	See TQM-21 in 2015 for sub-topics	
TQM-18Bf	BTBM18BF	When students in this class have been taught each of the following mathematics topics. Algebra: Properties of functions (slopes, intercepts, etc.)	See TQM-21 in 2015 for sub-topics	
TQM-18Bg	BTBM18BG	When students in this class have been taught each of the following mathematics topics. Algebra: Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns)	See TQM-21 in 2015 for sub-topics	
TQM-18Ca	BTBM18CA	When students in this class have been taught each of the following mathematics topics. Geometry: Geometric properties of angles, pairs of lines, and geometric shapes (triangles, quadrilaterals, and other common polygons)	See TQM-21 in 2015 for sub-topics	
TQM-18Cb	BTBM18CB	When students in this class have been taught each of the following mathematics topics. Geometry: Solving problems involving perimeters, circumferences, and areas	See TQM-21 in 2015 for sub-topics	
TQM-18Cc	BTBM18CC	When students in this class have been taught each of the following mathematics topics. Geometry: Solving problems involving the Pythagorean Theorem	See TQM-21 in 2015 for sub-topics	
TQM-18Cd	BTBM18CD	When students in this class have been taught each of the following mathematics topics. Geometry: Translation, reflection, and rotation	See TQM-21 in 2015 for sub-topics	
TQM-18Ce	BTBM18CE	When students in this class have been taught each of the following mathematics topics. Geometry: Congruent figures and similar triangles	See TQM-21 in 2015 for sub-topics	
TQM-18Cf	BTBM18CF	When students in this class have been taught each of the following mathematics topics. Geometry: Solving problems with three-dimensional shapes	See TQM-21 in 2015 for sub-topics	
TQM-18Da	BTBM18DA	When students in this class have been taught each of the following mathematics topics. Data and Probability: Reading and interpreting data from one or more sources to solve problems (interpolating, extrapolating, drawing conclusions)	See TQM-21 in 2015 for sub-topics	
TQM-18Db	BTBM18DB	When students in this class have been taught each of the following mathematics topics. Data and Probability: Identifying appropriate procedures for collecting data	See TQM-21 in 2015 for sub-topics	
TQM-18Dc	BTBM18DC	When students in this class have been taught each of the following mathematics topics. Data and Probability: Organizing and representing data to help answer questions	See TQM-21 in 2015 for sub-topics	
TQM-18Dd	BTBM18DD	When students in this class have been taught each of the following mathematics topics. Data and Probability: Calculating and interpreting statistics summarizing data distributions	See TQM-21 in 2015 for sub-topics	
TQM-18De	BTBM18DE	When students in this class have been taught each of the following mathematics topics. Data and Probability: Theoretical and empirical probability of simple events	See TQM-21 in 2015 for sub-topics	

Exhibit 2.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Mathematics (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQM-18Df	BTBM18DF	When students in this class have been taught each of the following mathematics topics. Data and Probability: Theoretical and empirical probability of compound events	See TQM-21 in 2015 for sub-topics	
TQM-19A	BTBM19A	How often do you usually assign mathematics homework to the students in this class?	BTBM22A	
TQM-19B	BTBM19B	When you assign mathematics homework to the students in this class, about how many minutes do you usually assign?	BTBM22B	
TQM-19Ca	BTBM19CA	How often do you do the following with the mathematics homework assignments for this class? Correct assignments and give feedback to students	BTBM22CA	
TQM-19Cb	BTBM19CB	How often do you do the following with the mathematics homework assignments for this class? Have students correct their own homework	BTBM22CB	
TQM-19Cc	BTBM19CC	How often do you do the following with the mathematics homework assignments for this class? Discuss the homework in class	BTBM22CC	
TQM-19Cd	BTBM19CD	How often do you do the following with the mathematics homework assignments for this class? Monitor whether or not the homework was completed	BTBM22CD	
TQM-19Ce	BTBM19CE	How often do you do the following with the mathematics homework assignments for this class? Use the homework to contribute towards students' grades or marks	BTBM22CE	
TQM-20a	BTBM20A	How much importance do you place on the following assessment strategies in mathematics? Observing students as they work		
TQM-20b	BTBM20B	How much importance do you place on the following assessment strategies in mathematics? Asking students to answer questions during class		
TQM-20c	BTBM20C	How much importance do you place on the following assessment strategies in mathematics? Short, regular written assessments		
TQM-20d	BTBM20D	How much importance do you place on the following assessment strategies in mathematics? Longer tests (e.g., unit tests or exams)		
TQM-20e	BTBM20E	How much importance do you place on the following assessment strategies in mathematics? Long-term projects		
TQM-21	BTBM21	About how often do <eighth grade> students in this class take mathematics tests on computers or tablets?		
TQM-22Aa	BTBM22AA	In the past two years, have you participated in professional development in any of the following? Mathematics content	BTBM24A	Modified format in 2019
TQM-22Ab	BTBM22AB	In the past two years, have you participated in professional development in any of the following? Mathematics pedagogy/instruction	BTBM24B	Modified format in 2019
TQM-22Ac	BTBM22AC	In the past two years, have you participated in professional development in any of the following? Mathematics curriculum	BTBM24C	Modified format in 2019
TQM-22Ad	BTBM22AD	In the past two years, have you participated in professional development in any of the following? Integrating technology into mathematics instruction	BTBM24D	Modified wording and format in 2019
TQM-22Ae	BTBM22AE	In the past two years, have you participated in professional development in any of the following? Improving students' critical thinking or problem solving skills	BTBM24E	Modified format in 2019
TQM-22Af	BTBM22AF	In the past two years, have you participated in professional development in any of the following? Mathematics assessment	BTBM24F	Modified format in 2019
TQM-22Ag	BTBM22AG	In the past two years, have you participated in professional development in any of the following? Addressing individual students' needs	BTBM24G	Modified format in 2019

Exhibit 2.4: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Mathematics (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQM-22Ba	BTBM22BA	Do you need future professional development in any of the following? Mathematics content		
TQM-22Bb	BTBM22BB	Do you need future professional development in any of the following? Mathematics pedagogy/instruction		
TQM-22Bc	BTBM22BC	Do you need future professional development in any of the following? Mathematics curriculum		
TQM-22Bd	BTBM22BD	Do you need future professional development in any of the following? Integrating technology into mathematics instruction		
TQM-22Be	BTBM22BE	Do you need future professional development in any of the following? Improving students' critical thinking or problem solving skills		
TQM-22Bf	BTBM22BF	Do you need future professional development in any of the following? Mathematics assessment		
TQM-22Bg	BTBM22BG	Do you need future professional development in any of the following? Addressing individual students' needs		
TQM-23	BTBM23	In the past two years, how many hours in total have you spent in formal <in- service/professional development> for mathematics?	BTBM25	



Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Teacher Questionnaire Mathematics

<Grade 8>

<TIMSS National Research Center Name>

<Address>

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International Study Center
Lynch School of Education
BOSTON COLLEGE

Teacher Questionnaire

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.

TIMSS 2019

About You

1

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

BTBG01

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

2

Are you female or male?

BTBG02

Check **one** circle only.

Female --- ☐

Male --- ☐

3

How old are you?

BTBG03

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?

BTBG04

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 -----	☐	☐
BTBG05B b) Biology -----	☐	☐
BTBG05C c) Physics -----	☐	☐
BTBG05D d) Chemistry -----	☐	☐
BTBG05E e) <Earth Science> -----	☐	☐
BTBG05F f) Education—Mathematics -----	☐	☐
BTBG05G g) Education—Science -----	☐	☐
BTBG05H h) Education—General -----	☐	☐
BTBG05I i) Other -----	☐	☐

School Emphasis on Academic Success

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	☐	☐	☐	☐	☐
BTBG06B	b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
BTBG06C	c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
BTBG06D	d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
BTBG06E	e) Parental involvement in school activities	☐	☐	☐	☐	☐
BTBG06F	f) Parental commitment to ensure that students are ready to learn	☐	☐	☐	☐	☐
BTBG06G	g) Parental expectations for student achievement	☐	☐	☐	☐	☐
BTBG06H	h) Parental support for student achievement	☐	☐	☐	☐	☐
BTBG06I	i) Students' desire to do well in school	☐	☐	☐	☐	☐
BTBG06J	j) Students' ability to reach school's academic goals	☐	☐	☐	☐	☐
BTBG06K	k) Students' respect for classmates who excel academically	☐	☐	☐	☐	☐
BTBG06L	l) Collaboration between school leadership (including master teachers) and teachers to plan instruction	☐	☐	☐	☐	☐

School Environment

7

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
BTBG07A	a) This school is located in a safe neighborhood	☐	☐	☐	☐
BTBG07B	b) I feel safe at this school	☐	☐	☐	☐
BTBG07C	c) This school's security policies and practices are sufficient	☐	☐	☐	☐
BTBG07D	d) The students behave in an orderly manner	☐	☐	☐	☐
BTBG07E	e) The students are respectful of the teachers	☐	☐	☐	☐
BTBG07F	f) The students respect school property	☐	☐	☐	☐
BTBG07G	g) This school has clear rules about student conduct	☐	☐	☐	☐
BTBG07H	h) This school's rules are enforced in a fair and consistent manner	☐	☐	☐	☐

About Being a Teacher

8

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

Check **one** circle for each line.

Very often
Often
Sometimes
Never or almost never

- 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 ----- ○ — ○ — ○ — ○

9

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

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

BTBG12D d) Encourage classroom discussions among students -----○-----○-----○-----○

BTBG12E e) Link new content to students' prior knowledge -----○-----○-----○-----○

BTBG12F f) Ask students to decide their own problem solving procedures -----○-----○-----○-----○

BTBG12G 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

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) Students with mental, emotional, or psychological impairment -----○-----○-----○

BTBG13H h) Students with difficulties understanding the language of instruction -----○-----○-----○

Teaching Mathematics to the TIMSS Class

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.

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

Using Calculators and Computers for Teaching Mathematics to the TIMSS Class

16

Are the 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, calculators are not permitted --- ☐

17

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

BTBM17A

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
BTBM17BA a) Each student has a computer -----	☐	☐
BTBM17BB b) The class has computers that students can share -----	☐	☐
BTBM17BC 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
BTBM17CA a) Whole class -----	☐	☐	☐	☐
BTBM17CB b) Low-performing students -----	☐	☐	☐	☐
BTBM17CC c) High-performing students -----	☐	☐	☐	☐
BTBM17CD d) Students with special needs -----	☐	☐	☐	☐

Mathematics Topics Taught to the TIMSS Class

18

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

- BTBM18AA a) Computing with negative numbers ----- ☐ — ☐ — ☐
- BTBM18AB b) Concepts of fractions and decimals ----- ☐ — ☐ — ☐
- BTBM18AC c) Solving problems involving proportions and percents ----- ☐ — ☐ — ☐

B. Algebra

- BTBM18BA a) Simplifying and evaluating algebraic expressions ----- ☐ — ☐ — ☐
- BTBM18BB b) Simple linear equations ----- ☐ — ☐ — ☐
- BTBM18BC c) Simple linear inequalities ----- ☐ — ☐ — ☐
- BTBM18BD d) Simultaneous (two variables) equations ----- ☐ — ☐ — ☐
- BTBM18BE e) Representation of linear and quadratic functions in tables, graphs, words, or equations ----- ☐ — ☐ — ☐
- BTBM18BF f) Properties of functions (slopes, intercepts, etc.) ----- ☐ — ☐ — ☐
- BTBM18BG g) Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns) ----- ☐ — ☐ — ☐

C. Geometry

- BTBM18CA a) Geometric properties of angles, pairs of lines, and geometric shapes (triangles, quadrilaterals, and other common polygons) ----- ☐ — ☐ — ☐
- BTBM18CB b) Solving problems involving perimeters, circumferences, and areas ----- ☐ — ☐ — ☐
- BTBM18CC c) Solving problems involving the Pythagorean Theorem ----- ☐ — ☐ — ☐
- BTBM18CD d) Translation, reflection, and rotation ----- ☐ — ☐ — ☐
- BTBM18CE e) Congruent figures and similar triangles ----- ☐ — ☐ — ☐
- BTBM18CF f) Solving problems with three-dimensional shapes ----- ☐ — ☐ — ☐

D. Data and Probability

- BTBM18DA a) Reading and interpreting data from one or more sources to solve problems (interpolating, extrapolating, drawing conclusions) ----- ☐ — ☐ — ☐
- BTBM18DB b) Identifying appropriate procedures for collecting data ----- ☐ — ☐ — ☐
- BTBM18DC c) Organizing and representing data to help answer questions ----- ☐ — ☐ — ☐
- BTBM18DD d) Calculating and interpreting statistics summarizing data distributions ----- ☐ — ☐ — ☐
- BTBM18DE e) Theoretical and empirical probability of simple events ----- ☐ — ☐ — ☐
- BTBM18DF f) Theoretical and empirical probability of compound events ----- ☐ — ☐ — ☐

Mathematics Homework for the TIMSS Class

19

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

BTBM19A

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 --- ☐

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.)

BTBM19B

Check **one** circle only.

15 minutes or less --- ☐

16–30 minutes --- ☐

31–60 minutes --- ☐

61–90 minutes --- ☐

More than 90 minutes --- ☐

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

BTBM19CA

a) Correct assignments and give feedback to students ----- ☐ ☐ ☐

BTBM19CB

b) Have students correct their own homework ----- ☐ ☐ ☐

BTBM19CC

c) Discuss the homework in class ----- ☐ ☐ ☐

BTBM19CD

d) Monitor whether or not the homework was completed ----- ☐ ☐ ☐

BTBM19CE

e) Use the homework to contribute towards students' grades or marks ----- ☐ ☐ ☐

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

BTBM20A

a) Observing students as they work ----- ☐ ☐ ☐

BTBM20B

b) Asking students to answer questions during class ----- ☐ ☐ ☐

BTBM20C

c) Short, regular written assessments ----- ☐ ☐ ☐

BTBM20D

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

BTBM20E

e) Long-term projects ----- ☐ ☐ ☐

21

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

BTBM21

Check **one** circle only.

More than once a month --- ☐

Once a month --- ☐

Twice a year -- ☐

Once a year --- ☐

Never --- ☐

Professional Development to Teach Mathematics

22

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

Check **one** circle for each line.

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

23

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?

BTBM23

Check **one** circle only.

None --- ☐

Less than 6 hours --- ☐

6–15 hours --- ☐

16–35 hours --- ☐

More than 35 hours --- ☐

Thank You

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



BOSTON
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<Grade 8>



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for the Evaluation of
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SECTION 2.5: **TEACHER QUESTIONNAIRE—** **SCIENCE** **GRADE 8**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



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Exhibit 2.5: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Science (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-01	BTBG01	By the end of this school year, how many years will you have been teaching altogether?	BTBG01	
TQG-02	BTBG02	Are you female or male?	BTBG02	
TQG-03	BTBG03	How old are you?	BTBG03	
TQG-04	BTBG04	What is the highest level of formal education you have completed?	BTBG04	
TQG-05a	BTBG05A	During your <post-secondary> education, what was your major or main area(s) of study? Mathematics	BTBG05A	
TQG-05b	BTBG05B	During your <post-secondary> education, what was your major or main area(s) of study? Biology	BTBG05B	
TQG-05c	BTBG05C	During your <post-secondary> education, what was your major or main area(s) of study? Physics	BTBG05C	
TQG-05d	BTBG05D	During your <post-secondary> education, what was your major or main area(s) of study? Chemistry	BTBG05D	
TQG-05e	BTBG05E	During your <post-secondary> education, what was your major or main area(s) of study? <Earth Science>	BTBG05E	
TQG-05f	BTBG05F	During your <post-secondary> education, what was your major or main area(s) of study? Education–Mathematics	BTBG05F	
TQG-05g	BTBG05G	During your <post-secondary> education, what was your major or main area(s) of study? Education–Science	BTBG05G	
TQG-05h	BTBG05H	During your <post-secondary> education, what was your major or main area(s) of study? Education–General	BTBG05H	
TQG-05i	BTBG05I	During your <post-secondary> education, what was your major or main area(s) of study? Other	BTBG05I	
TQG-06a	BTBG06A	How would you characterize each of the following within your school? Teachers' understanding of the school's curricular goals	BTBG06A	
TQG-06b	BTBG06B	How would you characterize each of the following within your school? Teachers' degree of success in implementing the school's curriculum	BTBG06B	
TQG-06c	BTBG06C	How would you characterize each of the following within your school? Teachers' expectations for student achievement	BTBG06C	
TQG-06d	BTBG06D	How would you characterize each of the following within your school? Teachers' ability to inspire students	BTBG06E	
TQG-06e	BTBG06E	How would you characterize each of the following within your school? Parental involvement in school activities	BTBG06F	
TQG-06f	BTBG06F	How would you characterize each of the following within your school? Parental commitment to ensure that students are ready to learn	BTBG06G	
TQG-06g	BTBG06G	How would you characterize each of the following within your school? Parental expectations for student achievement	BTBG06H	
TQG-06h	BTBG06H	How would you characterize each of the following within your school? Parental support for student achievement	BTBG06I	
TQG-06i	BTBG06I	How would you characterize each of the following within your school? Students' desire to do well in school	BTBG06K	
TQG-06j	BTBG06J	How would you characterize each of the following within your school? Students' ability to reach school's academic goals	BTBG06L	
TQG-06k	BTBG06K	How would you characterize each of the following within your school? Students' respect for classmates who excel academically	BTBG06M	Modified wording in 2019
TQG-06l	BTBG06L	How would you characterize each of the following within your school? Collaboration between school leadership (including master teachers) and teachers to plan instruction	BTBG06O	Modified wording in 2019

Exhibit 2.5: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Science (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-07a	BTBG07A	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school is located in a safe neighborhood	BTBG07A	
TQG-07b	BTBG07B	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. I feel safe at this school	BTBG07B	
TQG-07c	BTBG07C	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school's security policies and practices are sufficient	BTBG07C	
TQG-07d	BTBG07D	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students behave in an orderly manner	BTBG07D	
TQG-07e	BTBG07E	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students are respectful of the teachers	BTBG07E	
TQG-07f	BTBG07F	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. The students respect school property	BTBG07F	
TQG-07g	BTBG07G	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school has clear rules about student conduct	BTBG07G	
TQG-07h	BTBG07H	Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements. This school's rules are enforced in a fair and consistent manner	BTBG07H	
TQG-08a	BTBG08A	How often do you feel the following way about being a teacher? I am content with my profession as a teacher	BTBG10A	
TQG-08b	BTBG08B	How often do you feel the following way about being a teacher? I find my work full of meaning and purpose	BTBG10C	
TQG-08c	BTBG08C	How often do you feel the following way about being a teacher? I am enthusiastic about my job	BTBG10D	
TQG-08d	BTBG08D	How often do you feel the following way about being a teacher? My work inspires me	BTBG10E	
TQG-08e	BTBG08E	How often do you feel the following way about being a teacher? I am proud of the work I do	BTBG10F	
TQG-09a	BTBG09A	Indicate the extent to which you agree or disagree with each of the following statements. There are too many students in the classes	BTBG11A	
TQG-09b	BTBG09B	Indicate the extent to which you agree or disagree with each of the following statements. I have too much material to cover in class	BTBG11B	
TQG-09c	BTBG09C	Indicate the extent to which you agree or disagree with each of the following statements. I have too many teaching hours	BTBG11C	
TQG-09d	BTBG09D	Indicate the extent to which you agree or disagree with each of the following statements. I need more time to prepare for class	BTBG11D	
TQG-09e	BTBG09E	Indicate the extent to which you agree or disagree with each of the following statements. I need more time to assist individual students	BTBG11E	
TQG-09f	BTBG09F	Indicate the extent to which you agree or disagree with each of the following statements. I feel too much pressure from parents	BTBG11F	
TQG-09g	BTBG09G	Indicate the extent to which you agree or disagree with each of the following statements. I have difficulty keeping up with all of the changes to the curriculum	BTBG11G	

Exhibit 2.5: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Science (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQG-09h	BTBG09H	Indicate the extent to which you agree or disagree with each of the following statements. I have too many administrative tasks	BTBG11H	
TQG-10	BTBG10	How many students are in this class?	BTBG12	
TQG-11	BTBG11	How many <eighth grade> students experience difficulties understanding spoken <language of test>?	BTBG13	
TQG-12a	BTBG12A	How often do you do the following in teaching this class? Relate the lesson to students' daily lives	BTBG14A	
TQG-12b	BTBG12B	How often do you do the following in teaching this class? Ask students to explain their answers	BTBG14B	
TQG-12c	BTBG12C	How often do you do the following in teaching this class? Ask students to complete challenging exercises that require them to go beyond the instruction	BTBG14C	
TQG-12d	BTBG12D	How often do you do the following in teaching this class? Encourage classroom discussions among students	BTBG14D	
TQG-12e	BTBG12E	How often do you do the following in teaching this class? Link new content to students' prior knowledge	BTBG14E	
TQG-12f	BTBG12F	How often do you do the following in teaching this class? Ask students to decide their own problem solving procedures	BTBG14F	
TQG-12g	BTBG12G	How often do you do the following in teaching this class? Encourage students to express their ideas in class	BTBG14G	
TQG-13a	BTBG13A	In your view, to what extent do the following limit how you teach this class? Students lacking prerequisite knowledge or skills	BTBG15A	
TQG-13b	BTBG13B	In your view, to what extent do the following limit how you teach this class? Students suffering from lack of basic nutrition	BTBG15B	
TQG-13c	BTBG13C	In your view, to what extent do the following limit how you teach this class? Students suffering from not enough sleep	BTBG15C	
TQG-13d	BTBG13D	In your view, to what extent do the following limit how you teach this class? Students absent from class		
TQG-13e	BTBG13E	In your view, to what extent do the following limit how you teach this class? Disruptive students	BTBG15D	
TQG-13f	BTBG13F	In your view, to what extent do the following limit how you teach this class? Uninterested students	BTBG15E	
TQG-13g	BTBG13G	In your view, to what extent do the following limit how you teach this class? Students with mental, emotional, or psychological impairment	BTBG15G	Modified wording in 2019
TQG-13h	BTBG13H	In your view, to what extent do the following limit how you teach this class? Students with difficulties understanding the language of instruction		
TQS-14	BTBS14	In a typical week, how much time do you spend teaching science to the students in this class? (minutes)	BTBS16	
TQS-15a	BTBS15A	In teaching science to the students in this class, how often do you ask them to do the following? Listen to me explain new science content	BTBS18A	
TQS-15b	BTBS15B	In teaching science to the students in this class, how often do you ask them to do the following? Observe natural phenomena and describe what they see	BTBS18B	
TQS-15c	BTBS15C	In teaching science to the students in this class, how often do you ask them to do the following? Watch me demonstrate an experiment or investigation	BTBS18C	
TQS-15d	BTBS15D	In teaching science to the students in this class, how often do you ask them to do the following? Design or plan experiments or investigations	BTBS18D	

Exhibit 2.5: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Science (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-15e	BTBS15E	In teaching science to the students in this class, how often do you ask them to do the following? Conduct experiments or investigations	BTBS18E	
TQS-15f	BTBS15F	In teaching science to the students in this class, how often do you ask them to do the following? Present data from experiments or investigations	BTBS18F	
TQS-15g	BTBS15G	In teaching science to the students in this class, how often do you ask them to do the following? Interpret data from experiments or investigations	BTBS18G	
TQS-15h	BTBS15H	In teaching science to the students in this class, how often do you ask them to do the following? Use evidence from experiments or investigations to support conclusions	BTBS18H	
TQS-15i	BTBS15I	In teaching science to the students in this class, how often do you ask them to do the following? Read their textbooks or other resource materials	BTBS18I	
TQS-15j	BTBS15J	In teaching science to the students in this class, how often do you ask them to do the following? Have students memorize facts and principles	BTBS18J	
TQS-15k	BTBS15K	In teaching science to the students in this class, how often do you ask them to do the following? Use scientific formulas and laws to solve routine problems	BTBS18K	
TQS-15l	BTBS15L	In teaching science to the students in this class, how often do you ask them to do the following? Do field work outside of class	BTBS18L	
TQS-15m	BTBS15M	In teaching science to the students in this class, how often do you ask them to do the following? Work in mixed ability groups	BTBS18N	
TQS-15n	BTBS15N	In teaching science to the students in this class, how often do you ask them to do the following? Work in same ability groups	BTBS18O	
TQS-16A	BTBS16A	Do the students in this class have computers (including tablets) available to use during their science lessons?	BTBS19A	
TQS-16Ba	BTBS16BA	What access do the students have to computers? Each student has a computer	BTBS19BA	
TQS-16Bb	BTBS16BB	What access do the students have to computers? The class has computers that students can share	BTBS19BB	
TQS-16Bc	BTBS16BC	What access do the students have to computers? The school has computers that the class can use sometimes	BTBS19BC	
TQS-16Ca	BTBS16CA	How often do you do activities on computers during science lessons to support learning for: Whole class		
TQS-16Cb	BTBS16CB	How often do you do activities on computers during science lessons to support learning for: Low-performing students		
TQS-16Cc	BTBS16CC	How often do you do activities on computers during science lessons to support learning for: High-performing students		
TQS-16Cd	BTBS16CD	How often do you do activities on computers during science lessons to support learning for: Students with special needs		
TQS-17Aa	BTBS17AA	When students in this class have been taught each of the following science topics. Biology: Differences among major taxonomic groups of organisms (plants, animals, fungi, mammals, birds, reptiles, fish, amphibians, insects)	See TQM-20 in 2015 for sub-topics	
TQS-17Ab	BTBS17AB	When students in this class have been taught each of the following science topics. Biology: Major organs and organ systems in humans and other organisms (structure/function, life processes)	See TQM-20 in 2015 for sub-topics	
TQS-17Ac	BTBS17AC	When students in this class have been taught each of the following science topics. Biology: Cells, their structure and functions, including respiration and photosynthesis as cellular processes	See TQM-20 in 2015 for sub-topics	

Exhibit 2.5: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Science (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-17Ad	BTBS17AD	When students in this class have been taught each of the following science topics. Biology: Life cycles, sexual reproduction, and heredity (inherited versus acquired/learned characteristics)	See TQM-20 in 2015 for sub-topics	
TQS-17Ae	BTBS17AE	When students in this class have been taught each of the following science topics. Biology: Role of variation and adaptation in survival/extinction of species (including fossil evidence)	See TQM-20 in 2015 for sub-topics	
TQS-17Af	BTBS17AF	When students in this class have been taught each of the following science topics. Biology: Interdependence of populations of organisms in an ecosystem (e.g., carbon and water cycles, energy flow, food webs, competition, predation, human impacts on ecosystems)	See TQM-20 in 2015 for sub-topics	
TQS-17Ag	BTBS17AG	When students in this class have been taught each of the following science topics. Biology: Human health (e.g., causes, transmission, and prevention of common infectious diseases, immunity) and the importance of diet, exercise, and other lifestyle choices in maintaining health	See TQM-20 in 2015 for sub-topics	
TQS-17Ba	BTBS17BA	When students in this class have been taught each of the following science topics. Chemistry: Particulate structure, classification, and composition of matter (protons, neutrons, electrons, atoms, molecules, elements, compounds, mixtures)	See TQM-20 in 2015 for sub-topics	
TQS-17Bb	BTBS17BB	When students in this class have been taught each of the following science topics. Chemistry: The periodic table as an organizing principle for the known elements	See TQM-20 in 2015 for sub-topics	
TQS-17Bc	BTBS17BC	When students in this class have been taught each of the following science topics. Chemistry: Physical and chemical properties of matter	See TQM-20 in 2015 for sub-topics	
TQS-17Bd	BTBS17BD	When students in this class have been taught each of the following science topics. Chemistry: Mixtures and solutions (e.g., solvent, solute, concentration/dilution)	See TQM-20 in 2015 for sub-topics	
TQS-17Be	BTBS17BE	When students in this class have been taught each of the following science topics. Chemistry: Properties of common acids and bases (e.g., acids have pH less than 7, reactions with indicators produce color changes, acids and bases neutralize each other)	See TQM-20 in 2015 for sub-topics	
TQS-17Bf	BTBS17BF	When students in this class have been taught each of the following science topics. Chemistry: Characteristics of chemical reactions (e.g., transformation of reactants, evidence of chemical change)	See TQM-20 in 2015 for sub-topics	
TQS-17Bg	BTBS17BG	When students in this class have been taught each of the following science topics. Chemistry: Matter and energy in chemical reactions (conservation of matter, familiar exothermic and endothermic reactions, factors affecting reaction rates)	See TQM-20 in 2015 for sub-topics	
TQS-17Bh	BTBS17BH	When students in this class have been taught each of the following science topics. Chemistry: The role of electrons in chemical bonds	See TQM-20 in 2015 for sub-topics	
TQS-17Ca	BTBS17CA	When students in this class have been taught each of the following science topics. Physics: Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, changes in volume and/or pressure, physical changes)	See TQM-20 in 2015 for sub-topics	
TQS-17Cb	BTBS17CB	When students in this class have been taught each of the following science topics. Physics: Energy transformation and transfer (e.g., forms of energy, energy conservation, heat temperature, equilibrium)	See TQM-20 in 2015 for sub-topics	

Exhibit 2.5: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Science (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-17Cc	BTBS17CC	When students in this class have been taught each of the following science topics. Physics: Basic properties/behaviors of light (reflection, refraction, color, shadows, simple ray diagrams)	See TQM-20 in 2015 for sub-topics	
TQS-17Cd	BTBS17CD	When students in this class have been taught each of the following science topics. Physics: Basic properties/behaviors of sound (vibrations that produce sound, transmission through media, loudness, pitch)	See TQM-20 in 2015 for sub-topics	
TQS-17Ce	BTBS17CE	When students in this class have been taught each of the following science topics. Physics: Electric circuits (e.g., electrical conductors/insulators and the flow of electricity in series/parallel circuits)	See TQM-20 in 2015 for sub-topics	
TQS-17Cf	BTBS17CF	When students in this class have been taught each of the following science topics. Physics: Properties and uses of permanent magnets and electromagnets	See TQM-20 in 2015 for sub-topics	
TQS-17Cg	BTBS17CG	When students in this class have been taught each of the following science topics. Physics: Motion and forces (e.g., basic description of motion, common mechanical forces, properties of forces, effects of forces, simple machines, buoyancy, effects of density and pressure)	See TQM-20 in 2015 for sub-topics	
TQS-17Da	BTBS17DA	When students in this class have been taught each of the following science topics. Earth Science: Earth's structure and physical features (e.g., Earth's crust, mantle, and core; composition and relative distribution of water; composition of Earth's atmosphere)	See TQM-20 in 2015 for sub-topics	
TQS-17Db	BTBS17DB	When students in this class have been taught each of the following science topics. Earth Science: Earth's processes, cycles, and history (e.g., rock cycle, major geological events, formation of fossils and fossil fuels, water cycle, weather versus climate)	See TQM-20 in 2015 for sub-topics	
TQS-17Dc	BTBS17DC	When students in this class have been taught each of the following science topics. Earth Science: Earth's resources, their use, and conservation (e.g., renewable/nonrenewable resources, human use of land and water resources)	See TQM-20 in 2015 for sub-topics	
TQS-17Dd	BTBS17DD	When students in this class have been taught each of the following science topics. Earth Science: Earth in the Solar System and the universe (phenomena on Earth: seasons, eclipses, tides, phases of moon; members of the Solar System; physical features of Earth)	See TQM-20 in 2015 for sub-topics	
TQS-18A	BTBS18A	How often do you usually assign science homework to the students in this class?	BTBS21A	
TQS-18B	BTBS18B	When you assign science 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.)	BTBS21B	
TQS-18Ca	BTBS18CA	How often do you do the following with the science homework assignments for this class? Correct assignments and give feedback to students	BTBS21CA	
TQS-18Cb	BTBS18CB	How often do you do the following with the science homework assignments for this class? Have students correct their own homework	BTBS21CB	
TQS-18Cc	BTBS18CC	How often do you do the following with the science homework assignments for this class? Discuss the homework in class	BTBS21CC	
TQS-18Cd	BTBS18CD	How often do you do the following with the science homework assignments for this class? Monitor whether or not the homework was completed	BTBS21CD	
TQS-18Ce	BTBS18CE	How often do you do the following with the science homework assignments for this class? Use the homework to contribute towards students' grades or marks	BTBS21CE	

Exhibit 2.5: International Context Variables for the TIMSS 2019 Teacher Questionnaire—Science (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
TQS-19a	BTBS19A	How much importance do you place on the following assessment strategies in science? Observing students as they work		
TQS-19b	BTBS19B	How much importance do you place on the following assessment strategies in science? Asking students to answer questions during class		
TQS-19c	BTBS19C	How much importance do you place on the following assessment strategies in science? Short, regular written assessments		
TQS-19d	BTBS19D	How much importance do you place on the following assessment strategies in science? Longer tests (e.g., unit tests or exams)		
TQS-19e	BTBS19E	How much importance do you place on the following assessment strategies in science? Long-term projects		
TQS-20	BTBS20	About how often do <eighth grade> students in this class take science tests on computers or tablets?		
TQS-21Aa	BTBS21AA	In the past two years, have you participated in professional development in any of the following? Science content	BTBS23A	Modified format in 2019
TQS-21Ab	BTBS21AB	In the past two years, have you participated in professional development in any of the following? Science pedagogy/instruction	BTBS23B	Modified format in 2019
TQS-21Ac	BTBS21AC	In the past two years, have you participated in professional development in any of the following? Science curriculum	BTBS23C	Modified format in 2019
TQS-21Ad	BTBS21AD	In the past two years, have you participated in professional development in any of the following? Integrating technology into science instruction	BTBS23D	Modified wording and format in 2019
TQS-21Ae	BTBS21AE	In the past two years, have you participated in professional development in any of the following? Improving students' critical thinking or inquiry skills	BTBS23E	Modified format in 2019
TQS-21Af	BTBS21AF	In the past two years, have you participated in professional development in any of the following? Science assessment	BTBS23F	Modified format in 2019
TQS-21Ag	BTBS21AG	In the past two years, have you participated in professional development in any of the following? Addressing individual students' needs	BTBS23G	Modified format in 2019
TQS-21Ba	BTBS21BA	Do you need future professional development in any of the following? Science content		
TQS-21Bb	BTBS21BB	Do you need future professional development in any of the following? Science pedagogy/instruction		
TQS-21Bc	BTBS21BC	Do you need future professional development in any of the following? Science curriculum		
TQS-21Bd	BTBS21BD	Do you need future professional development in any of the following? Integrating technology into science instruction		
TQS-21Be	BTBS21BE	Do you need future professional development in any of the following? Improving students' critical thinking or inquiry skills		
TQS-21Bf	BTBS21BF	Do you need future professional development in any of the following? Science assessment		
TQS-21Bg	BTBS21BG	Do you need future professional development in any of the following? Addressing individual students' needs		
TQS-22	BTBS22	In the past two years, how many hours in total have you spent in formal <in-service/professional development> for science?	BTBS24	



Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Teacher Questionnaire Science

<Grade 8>

<TIMSS National Research Center Name>
<Address>

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

Teacher Questionnaire

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.

TIMSS 2019

About You

1

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

BTBG01

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

2

Are you female or male?

BTBG02

Check **one** circle only.

Female --- ☐

Male --- ☐

3

How old are you?

BTBG03

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?

BTBG04

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	☐	☐
BTBG05B b) Biology	☐	☐
BTBG05C c) Physics	☐	☐
BTBG05D d) Chemistry	☐	☐
BTBG05E e) <Earth Science>	☐	☐
BTBG05F f) Education—Mathematics	☐	☐
BTBG05G g) Education—Science	☐	☐
BTBG05H h) Education—General	☐	☐
BTBG05I i) Other	☐	☐

School Emphasis on Academic Success

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	☐	☐	☐	☐	☐
BTBG06B b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
BTBG06C c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
BTBG06D d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
BTBG06E e) Parental involvement in school activities	☐	☐	☐	☐	☐
BTBG06F f) Parental commitment to ensure that students are ready to learn	☐	☐	☐	☐	☐
BTBG06G g) Parental expectations for student achievement	☐	☐	☐	☐	☐
BTBG06H h) Parental support for student achievement	☐	☐	☐	☐	☐
BTBG06I i) Students' desire to do well in school	☐	☐	☐	☐	☐
BTBG06J j) Students' ability to reach school's academic goals	☐	☐	☐	☐	☐
BTBG06K k) Students' respect for classmates who excel academically	☐	☐	☐	☐	☐
BTBG06L l) Collaboration between school leadership (including master teachers) and teachers to plan instruction	☐	☐	☐	☐	☐

School Environment

7

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
BTBG07A a) This school is located in a safe neighborhood	☐	☐	☐	☐
BTBG07B b) I feel safe at this school	☐	☐	☐	☐
BTBG07C c) This school's security policies and practices are sufficient	☐	☐	☐	☐
BTBG07D d) The students behave in an orderly manner	☐	☐	☐	☐
BTBG07E e) The students are respectful of the teachers	☐	☐	☐	☐
BTBG07F f) The students respect school property	☐	☐	☐	☐
BTBG07G g) This school has clear rules about student conduct	☐	☐	☐	☐
BTBG07H h) This school's rules are enforced in a fair and consistent manner	☐	☐	☐	☐

About Being a Teacher

8

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

Check **one** circle for each line.

Very often
Often
Sometimes
Never or almost never

- 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 -----○-----○-----○-----○

9

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

- 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/Class with the TIMSS students>

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) Ask students to complete challenging exercises that require them to go beyond the instruction -----○-----○-----○-----○
- BTBG12D d) Encourage classroom discussions among students -----○-----○-----○-----○
- BTBG12E e) Link new content to students' prior knowledge -----○-----○-----○-----○
- BTBG12F f) Ask students to decide their own problem solving procedures -----○-----○-----○-----○
- BTBG12G 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

- 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) Students with mental, emotional, or psychological impairment -----○-----○-----○
- BTBG13H h) Students with difficulties understanding the language of instruction -----○-----○-----○

Teaching Science to the <TIMSS Class/Class with the TIMSS students>

14

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

BTBS14

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

15

In teaching science to the students in this class, how often do you ask them to do the following?

Check **one** circle for each line.

Every or almost every lesson

About half the lessons

Some lessons

Never

- BTBS15A a) Listen to me explain new science content ----- ☐ — ☐ — ☐ — ☐
- BTBS15B b) Observe natural phenomena and describe what they see --- ☐ — ☐ — ☐ — ☐
- BTBS15C c) Watch me demonstrate an experiment or investigation ----- ☐ — ☐ — ☐ — ☐
- BTBS15D d) Design or plan experiments or investigations ----- ☐ — ☐ — ☐ — ☐
- BTBS15E e) Conduct experiments or investigations ----- ☐ — ☐ — ☐ — ☐
- BTBS15F f) Present data from experiments or investigations ----- ☐ — ☐ — ☐ — ☐
- BTBS15G g) Interpret data from experiments or investigations ----- ☐ — ☐ — ☐ — ☐
- BTBS15H h) Use evidence from experiments or investigations to support conclusions ----- ☐ — ☐ — ☐ — ☐
- BTBS15I i) Read their textbooks or other resource materials ----- ☐ — ☐ — ☐ — ☐
- BTBS15J j) Have students memorize facts and principles ----- ☐ — ☐ — ☐ — ☐
- BTBS15K k) Use scientific formulas and laws to solve routine problems ----- ☐ — ☐ — ☐ — ☐
- BTBS15L l) Do field work outside of class-- ☐ — ☐ — ☐ — ☐
- BTBS15M m) Work in mixed ability groups -- ☐ — ☐ — ☐ — ☐
- BTBS15N n) Work in same ability groups --- ☐ — ☐ — ☐ — ☐

Using Computers for Teaching Science to the <TIMSS Class/Class with the TIMSS students>

16

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

BTBS16A

Check **one** circle only.

Yes --- ☐

No --- ☐

(If No, go to #17)

If Yes,

B. What access do the students have to computers?

Check **one** circle for each line.

	Yes	No
BTBS16BA a) Each student has a computer -----	☐	☐
BTBS16BB b) The class has computers that students can share -----	☐	☐
BTBS16BC c) The school has computers that the class can use sometimes -----	☐	☐

C. How often do you do activities on computers during science 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
BTBS16CA a) Whole class -----	☐	☐	☐	☐
BTBS16CB b) Low-performing students -----	☐	☐	☐	☐
BTBS16CC c) High-performing students -----	☐	☐	☐	☐
BTBS16CD d) Students with special needs -----	☐	☐	☐	☐

Science Topics Taught to the <TIMSS Class/Class with the TIMSS students>

17

The following list includes the main topics addressed by the TIMSS science 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. Biology

- BTBS17AA a) Differences among major taxonomic groups of organisms (plants, animals, fungi, mammals, birds, reptiles, fish, amphibians, insects) ----- ☐ — ☐ — ☐
- BTBS17AB b) Major organs and organ systems in humans and other organisms (structure/function, life processes) ----- ☐ — ☐ — ☐
- BTBS17AC c) Cells, their structure and functions, including respiration and photosynthesis as cellular processes ----- ☐ — ☐ — ☐
- BTBS17AD d) Life cycles, sexual reproduction, and heredity (inherited versus acquired/learned characteristics) ----- ☐ — ☐ — ☐
- BTBS17AE e) Role of variation and adaptation in survival/extinction of species (including fossil evidence) ----- ☐ — ☐ — ☐
- BTBS17AF f) Interdependence of populations of organisms in an ecosystem (e.g., carbon and water cycles, energy flow, food webs, competition, predation, human impacts on ecosystems) ----- ☐ — ☐ — ☐
- BTBS17AG g) Human health (e.g., causes, transmission, and prevention of common infectious diseases, immunity) and the importance of diet, exercise, and other lifestyle choices in maintaining health ----- ☐ — ☐ — ☐

B. Chemistry

- BTBS17BA a) Particulate structure, classification, and composition of matter (protons, neutrons, electrons, atoms, molecules, elements, compounds, mixtures) ----- ☐ — ☐ — ☐
- BTBS17BB b) The periodic table as an organizing principle for the known elements ----- ☐ — ☐ — ☐
- BTBS17BC c) Physical and chemical properties of matter ----- ☐ — ☐ — ☐
- BTBS17BD d) Mixtures and solutions (e.g., solvent, solute, concentration/dilution) ----- ☐ — ☐ — ☐
- BTBS17BE e) Properties of common acids and bases (e.g., acids have pH less than 7, reactions with indicators produce color changes, acids and bases neutralize each other) ----- ☐ — ☐ — ☐
- BTBS17BF f) Characteristics of chemical reactions (e.g., transformation of reactants, evidence of chemical change) ----- ☐ — ☐ — ☐
- BTBS17BG g) Matter and energy in chemical reactions (conservation of matter, familiar exothermic and endothermic reactions, factors affecting reaction rates) ----- ☐ — ☐ — ☐
- BTBS17BH h) The role of electrons in chemical bonds ----- ☐ — ☐ — ☐

17 (continued)

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

C. Physics

- BTBS17CA a) Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, changes in volume and/or pressure, physical changes) ----- ○ — ○ — ○
- BTBS17CB b) Energy transformation and transfer (e.g., forms of energy, energy conservation, heat, temperature, equilibrium) ----- ○ — ○ — ○
- BTBS17CC c) Basic properties/behaviors of light (reflection, refraction, color, shadows, simple ray diagrams) ----- ○ — ○ — ○
- BTBS17CD d) Basic properties/behaviors of sound (vibrations that produce sound, transmission through media, loudness, pitch) ----- ○ — ○ — ○
- BTBS17CE e) Electric circuits (e.g., electrical conductors/insulators and the flow of electricity in series/parallel circuits) ----- ○ — ○ — ○
- BTBS17CF f) Properties and uses of permanent magnets and electromagnets ----- ○ — ○ — ○
- BTBS17CG g) Motion and forces (e.g., basic description of motion, common mechanical forces, properties of forces, effects of forces, simple machines, buoyancy, effects of density and pressure) ----- ○ — ○ — ○

D. Earth Science

- BTBS17DA a) Earth's structure and physical features (e.g., Earth's crust, mantle, and core; composition and relative distribution of water; composition of Earth's atmosphere) ----- ○ — ○ — ○
- BTBS17DB b) Earth's processes, cycles, and history (e.g., rock cycle, major geological events, formation of fossils and fossil fuels, water cycle, weather versus climate) ----- ○ — ○ — ○
- BTBS17DC c) Earth's resources, their use, and conservation (e.g., renewable/nonrenewable resources, human use of land and water resources) ----- ○ — ○ — ○
- BTBS17DD d) Earth in the Solar System and the universe (phenomena on Earth: seasons, eclipses, tides, phases of moon; members of the Solar System; physical features of Earth) ----- ○ — ○ — ○

Science Homework for the <TIMSS Class/Class with the TIMSS students>

18

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

BTBS18A

Check **one** circle only.

- I do not assign science homework --- ☐ 
(Go to #19)
- Less than once a week --- ☐
- 1 or 2 times a week --- ☐
- 3 or 4 times a week --- ☐
- Every day --- ☐

B. When you assign science 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.)

BTBS18B

Check **one** circle only.

- 15 minutes or less --- ☐
- 16–30 minutes --- ☐
- 31–60 minutes --- ☐
- 61–90 minutes --- ☐
- More than 90 minutes --- ☐

C. How often do you do the following with the science homework assignments for this class?

Check **one** circle for each line.

Always or almost always
Sometimes
Never or almost never

- BTBS18CA a) Correct assignments and give feedback to students --- ☐ ☐ ☐
- BTBS18CB b) Have students correct their own homework --- ☐ ☐ ☐
- BTBS18CC c) Discuss the homework in class --- ☐ ☐ ☐
- BTBS18CD d) Monitor whether or not the homework was completed --- ☐ ☐ ☐
- BTBS18CE e) Use the homework to contribute towards students' grades or marks --- ☐ ☐ ☐

Science Assessment of the <TIMSS Class/Class with the TIMSS students>

19

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

Check **one** circle for each line.

A Lot
Some
None

- BTBS19A a) Observing students as they work --- ☐ ☐ ☐
- BTBS19B b) Asking students to answer questions during class --- ☐ ☐ ☐
- BTBS19C c) Short, regular written assessments --- ☐ ☐ ☐
- BTBS19D d) Longer tests (e.g., unit tests or exams) --- ☐ ☐ ☐
- BTBS19E e) Long-term projects --- ☐ ☐ ☐

20

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

BTBS20

Check **one** circle only.

- More than once a month --- ☐
- Once a month --- ☐
- Twice a year --- ☐
- Once a year --- ☐
- Never --- ☐

Professional Development to Teach Science

21

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

Check **one** circle for each line.

Yes No

- | | | | |
|----------|--|-------------------|----------|
| BTBS21AA | a) Science content | -----○-----○----- | BTBS21BA |
| BTBS21AB | b) Science pedagogy/ instruction | -----○-----○----- | BTBS21BB |
| BTBS21AC | c) Science curriculum | -----○-----○----- | BTBS21BC |
| BTBS21AD | d) Integrating technology into science instruction | -----○-----○----- | BTBS21BD |
| BTBS21AE | e) Improving students' critical thinking or inquiry skills | -----○-----○----- | BTBS21BE |
| BTBS21AF | f) Science assessment | -----○-----○----- | BTBS21BF |
| BTBS21AG | g) Addressing individual students' needs | -----○-----○----- | BTBS21BG |

22

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 science?

BTBS22

Check **one** circle only.

- None --- ○
- Less than 6 hours --- ○
- 6–15 hours --- ○
- 16–35 hours --- ○
- More than 35 hours --- ○

Thank You

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



BOSTON
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<Grade 8>



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International Association
for the Evaluation of
Educational Achievement



SECTION 2.6: **SCHOOL QUESTIONNAIRE** **GRADE 8**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



IEA

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

Exhibit 2.6: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-01	BCBG01	What is the total enrollment of students in your school as of <first day of month TIMSS testing begins, 2019>?	BCBG01	
ScQ-02	BCBG02	What is the total enrollment of <eighth grade> students in your school as of <first day of month TIMSS testing begins, 2019>?	BCBG02	
ScQ-03a	BCBG03A	Approximately what percentage of students in your school have the following backgrounds? Come from economically disadvantaged homes	BCBG03A	
ScQ-03b	BCBG03B	Approximately what percentage of students in your school have the following backgrounds? Come from economically affluent homes	BCBG03B	
ScQ-04	BCBG04	Approximately what percentage of students in your school have <language of test> as their native language?	BCBG04	
ScQ-05A	BCBG05A	How many people live in the city, town, or area where your school is located?	BCBG05A	
ScQ-05B	BCBG05B	Which best describes the immediate area in which your school is located?	BCBG05B	
ScQ-06A	BCBG06A	For the <eighth grade> students in your school: How many days per year is your school open for instruction?	BCBG07A	
ScQ-06B	BCBG06B	For the <eighth grade> students in your school: What is the total instructional time, excluding breaks, in a typical day? (minutes)	BCBG07B	
ScQ-06C	BCBG06C	For the <eighth grade> students in your school: In one calendar week, how many days is the school open for instruction?	BCBG07C	
ScQ-07	BCBG07	How many computers (including tablets) does your school have for use by <eighth grade> students?	BCBG10	
ScQ-08A	BCBG08A	Does your school have a science laboratory that can be used by <eighth grade> students?	BCBG11A	
ScQ-08B	BCBG08B	Do teachers usually have assistance available when students are conducting science experiments?	BCBG11B	
ScQ-09	BCBG09	Does your school use an online learning management system to support learning (e.g., teacher-student communication, management of grades, student access to course materials)?		
ScQ-10A	BCBG10A	Does your school have a school library?	BCBG12	
ScQ-10B	BCBG10B	Approximately how many books (print) with different titles does your school library have (exclude magazines and periodicals)?	BCBG12AA	Modified wording and response options in 2019
ScQ-11	BCBG11	Does your school have classroom libraries?		
ScQ-12	BCBG12	Does your school provide students access to digital learning resources (e.g., books, videos)?		
ScQ-13Aa	BCBG13AA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Instructional materials	BCBG13AA	
ScQ-13Ab	BCBG13AB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Supplies	BCBG13AB	
ScQ-13Ac	BCBG13AC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: School buildings and grounds	BCBG13AC	
ScQ-13Ad	BCBG13AD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Heating/cooling and lighting systems	BCBG13AD	

Exhibit 2.6: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-13Ae	BCBG13AE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Instructional space	BCBG13AE	
ScQ-13Af	BCBG13AF	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Technologically competent staff	BCBG13AF	
ScQ-13Ag	BCBG13AG	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Audio-visual resources for delivery of instruction	BCBG13AG	
ScQ-13Ah	BCBG13AH	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Computer technology for teaching and learning	BCBG13AH	
ScQ-13Ai	BCBG13AI	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? General School Resources: Resources for students with disabilities	BCBG13AI	
ScQ-13Ba	BCBG13BA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Teachers with a specialization in mathematics	BCBG13BA	
ScQ-13Bb	BCBG13BB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Computer software/applications for mathematics instruction	BCBG13BB	
ScQ-13Bc	BCBG13BC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Library resources relevant to mathematics instruction	BCBG13BC	
ScQ-13Bd	BCBG13BD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Calculators for mathematics instruction	BCBG13BD	
ScQ-13Be	BCBG13BE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Mathematics Instruction: Concrete objects or materials to help students understand quantities or procedures	BCBG13BE	
ScQ-13Ca	BCBG13CA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Teachers with a specialization in science	BCBG13CA	
ScQ-13Cb	BCBG13CB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Computer software/applications for science instruction	BCBG13CB	
ScQ-13Cc	BCBG13CC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Library resources relevant to science instruction	BCBG13CC	
ScQ-13Cd	BCBG13CD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Calculators for science instruction	BCBG13CD	
ScQ-13Ce	BCBG13CE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following? Resources for Science Instruction: Science equipment and materials for experiments	BCBG13CE	
ScQ-14a	BCBG14A	How would you characterize each of the following within your school? Teachers' understanding of the school's curricular goals	BCBG14A	

Exhibit 2.6: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-14b	BCBG14B	How would you characterize each of the following within your school? Teachers' degree of success in implementing the school's curriculum	BCBG14B	
ScQ-14c	BCBG14C	How would you characterize each of the following within your school? Teachers' expectations for student achievement	BCBG14C	
ScQ-14d	BCBG14D	How would you characterize each of the following within your school? Teachers' ability to inspire students	BCBG14E	
ScQ-14e	BCBG14E	How would you characterize each of the following within your school? Parental involvement in school activities	BCBG14F	
ScQ-14f	BCBG14F	How would you characterize each of the following within your school? Parental commitment to ensure that students are ready to learn	BCBG14G	
ScQ-14g	BCBG14G	How would you characterize each of the following within your school? Parental expectations for student achievement	BCBG14H	
ScQ-14h	BCBG14H	How would you characterize each of the following within your school? Parental support for student achievement	BCBG14I	
ScQ-14i	BCBG14I	How would you characterize each of the following within your school? Students' desire to do well in school	BCBG14K	
ScQ-14j	BCBG14J	How would you characterize each of the following within your school? Students' ability to reach school's academic goals	BCBG14L	
ScQ-14k	BCBG14K	How would you characterize each of the following within your school? Students' respect for classmates who excel academically	BCBG14M	Modified wording in 2019
ScQ-15a	BCBG15A	How much do you agree with these statements about mathematics and science education within your school? The school provides students with information about career options in mathematics and science		
ScQ-15b	BCBG15B	How much do you agree with these statements about mathematics and science education within your school? The school has initiatives to promote student interest in mathematics and science (e.g., student clubs, competitions)		
ScQ-15c	BCBG15C	How much do you agree with these statements about mathematics and science education within your school? The school promotes professional development for teachers of mathematics and science		
ScQ-15d	BCBG15D	How much do you agree with these statements about mathematics and science education within your school? The school provides extra lessons to help students excel in mathematics and science		
ScQ-15e	BCBG15E	How much do you agree with these statements about mathematics and science education within your school? The school provides special activities in mathematics and science for interested students		
ScQ-15f	BCBG15F	How much do you agree with these statements about mathematics and science education within your school? The school has a specific goal to improve mathematics and science education		
ScQ-15g	BCBG15G	How much do you agree with these statements about mathematics and science education within your school? The school encourages students to continue studying mathematics and science in the future		
ScQ-15h	BCBG15H	How much do you agree with these statements about mathematics and science education within your school? Mathematics and science teachers in this school spend extra time working with students interested in mathematics and science		
ScQ-16a	BCBG16A	To what degree is each of the following a problem among <eighth grade> students in your school? Arriving late at school	BCBG15A	

Exhibit 2.6: International Context Variables for the TIMSS 2019 School Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description	TIMSS 2015 Variable Name	Notes
ScQ-16b	BCBG16B	To what degree is each of the following a problem among <eighth grade> students in your school? Absenteeism	BCBG15B	
ScQ-16c	BCBG16C	To what degree is each of the following a problem among <eighth grade> students in your school? Classroom disturbance	BCBG15C	
ScQ-16d	BCBG16D	To what degree is each of the following a problem among <eighth grade> students in your school? Cheating	BCBG15D	
ScQ-16e	BCBG16E	To what degree is each of the following a problem among <eighth grade> students in your school? Profanity	BCBG15E	
ScQ-16f	BCBG16F	To what degree is each of the following a problem among <eighth grade> students in your school? Vandalism	BCBG15F	
ScQ-16g	BCBG16G	To what degree is each of the following a problem among <eighth grade> students in your school? Theft	BCBG15G	
ScQ-16h	BCBG16H	To what degree is each of the following a problem among <eighth grade> students in your school? Intimidation or verbal abuse among students	BCBG15H	
ScQ-16i	BCBG16I	To what degree is each of the following a problem among <eighth grade> students in your school? Physical injury to other students	BCBG15I	
ScQ-16j	BCBG16J	To what degree is each of the following a problem among <eighth grade> students in your school? Intimidation or verbal abuse of teachers or staff	BCBG15J	
ScQ-16k	BCBG16K	To what degree is each of the following a problem among <eighth grade> students in your school? Physical injury to teachers or staff	BCBG15K	
ScQ-17a	BCBG17A	To what degree is each of the following a problem among teachers in your school? Arriving late or leaving early	BCBG18A	
ScQ-17b	BCBG17B	To what degree is each of the following a problem among teachers in your school? Absenteeism	BCBG18B	
ScQ-18	BCBG18	By the end of this school year, how many years will you have been a principal altogether?	BCBG19	
ScQ-19	BCBG19	By the end of this school year, how many years will you have been a principal at this school?	BCBG20	
ScQ-20	BCBG20	What is the highest level of formal education you have completed?	BCBG21	
ScQ-21a	BCBG21A	Do you hold the following qualifications or credentials in educational leadership? <Certificate or license>		
ScQ-21b	BCBG21B	Do you hold the following qualifications or credentials in educational leadership? <Master's or equivalent level—ISCED Level 7>	BCBG22A	Modified wording in 2019
ScQ-21c	BCBG21C	Do you hold the following qualifications or credentials in educational leadership? <Doctor or equivalent level—ISCED Level 8>	BCBG22B	Modified wording in 2019



Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

School Questionnaire

<Grade 8>

<TIMSS National Research Center Name>

<Address>

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

School Questionnaire

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 school principals and department heads who are asked to supply information about their schools. Since your school has been selected as part of a nationwide sample, your responses are very important in helping to describe secondary education in <country>.

It is important that you answer each question carefully so that the information provided reflects the situation in your school as accurately as possible. Some of the questions will require that you look up school records, so you may wish to arrange for the assistance of another staff member to help provide this information.

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 study.

It is estimated that you will need approximately 30 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 2019

School Enrollment and Characteristics

BCBG01

1

What is the total enrollment of students in your school as of <first day of month TIMSS testing begins, 2019>?

_____ students
Write in the number.

BCBG02

2

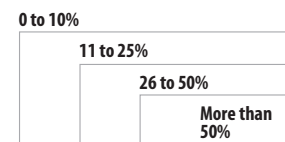
What is the total enrollment of <eighth grade> students in your school as of <first day of month TIMSS testing begins, 2019>?

_____ students
Write in the number.

3

Approximately what percentage of students in your school have the following backgrounds?

Check **one** circle for each line.



BCBG03A

a) Come from economically disadvantaged homes -----

☐ ☐ ☐ ☐

BCBG03B

b) Come from economically affluent homes -----

☐ ☐ ☐ ☐

BCBG04

4

Approximately what percentage of students in your school have <language of test> as their native language?

Check **one** circle only.

- More than 90% --- ☐
- 76 to 90% --- ☐
- 51 to 75% --- ☐
- 26 to 50% --- ☐
- 25% or less --- ☐

5

A. How many people live in the city, town, or area where your school is located?

BCBG05A

Check **one** circle only.

- More than 500,000 people --- ☐
- 100,001 to 500,000 people --- ☐
- 50,001 to 100,000 people --- ☐
- 30,001 to 50,000 people --- ☐
- 15,001 to 30,000 people --- ☐
- 3,001 to 15,000 people --- ☐
- 3,000 people or fewer --- ☐

B. Which best describes the immediate area in which your school is located?

BCBG05B

Check **one** circle only.

- Urban—Densely populated --- ☐
- Suburban—On fringe or outskirts of urban area --- ☐
- Medium size city or large town --- ☐
- Small town or village --- ☐
- Remote rural --- ☐

Instructional Time

6

For the <eighth grade> students in your school:

BCBG06A A. How many days per year is your school open for instruction?

_____ days
Write in the number.

BCBG06B B. What is the total instructional time, excluding breaks, in a typical day?

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

BCBG06C C. In one calendar week, how many days is the school open for instruction?

Check **one** circle only.

- 6 days --- ☐
- 5 1/2 days --- ☐
- 5 days --- ☐
- 4 1/2 days --- ☐
- 4 days --- ☐
- Other --- ☐

Resources and Technology

BCBG07

7

How many computers (including tablets) does your school have for use by <eighth grade> students?

_____ computers
Write in the number.

BCBG08A

8

A. Does your school have a science laboratory that can be used by <eighth grade> students?

Check **one** circle only.

Yes --- ☐

No --- ☐

BCBG08B

B. Do teachers usually have assistance available when students are conducting science experiments?

Check **one** circle only.

Yes --- ☐

No --- ☐

BCBG09

9

Does your school use an online learning management system to support learning (e.g., teacher-student communication, management of grades, student access to course materials)?

Check **one** circle only.

Yes --- ☐

No --- ☐

10

A. Does your school have a school library?

BCBG10A

Check **one** circle only.

Yes --- ☐

No --- ☐

(If No, go to #11)

If Yes,

B. Approximately how many books (print) with different titles does your school library have (exclude magazines and periodicals)?

BCBG10B

Check **one** circle only.

2,000 books or fewer --- ☐

More than 2,000 books --- ☐

11

Does your school have classroom libraries?

BCBG11

Check **one** circle only.

Yes --- ☐

No --- ☐

12

Does your school provide students access to digital learning resources (e.g., books, videos)?

BCBG12

Check **one** circle only.

Yes --- ☐

No --- ☐

13

How much is your school's capacity to provide instruction affected by a shortage or inadequacy of the following?

Check **one** circle for each line.

Not at all
A little
Some
A lot

A. General School Resources

- BCBG13AA a) Instructional materials (e.g., textbooks) ----- ○ — ○ — ○ — ○
- BCBG13AB b) Supplies (e.g., papers, pencils, materials) ----- ○ — ○ — ○ — ○
- BCBG13AC c) School buildings and grounds ----- ○ — ○ — ○ — ○
- BCBG13AD d) Heating/cooling and lighting systems ----- ○ — ○ — ○ — ○
- BCBG13AE e) Instructional space (e.g., classrooms) ----- ○ — ○ — ○ — ○
- BCBG13AF f) Technologically competent staff ----- ○ — ○ — ○ — ○
- BCBG13AG g) Audio-visual resources for delivery of instruction (e.g., interactive white boards, digital projectors) ----- ○ — ○ — ○ — ○
- BCBG13AH h) Computer technology for teaching and learning (e.g., computers or tablets for student use) ----- ○ — ○ — ○ — ○
- BCBG13AI i) Resources for students with disabilities ----- ○ — ○ — ○ — ○

Check **one** circle for each line.

Not at all
A little
Some
A lot

B. Resources for Mathematics Instruction

- BCBG13BA a) Teachers with a specialization in mathematics ----- ○ — ○ — ○ — ○
- BCBG13BB b) Computer software/applications for mathematics instruction ----- ○ — ○ — ○ — ○
- BCBG13BC c) Library resources relevant to mathematics instruction ----- ○ — ○ — ○ — ○
- BCBG13BD d) Calculators for mathematics instruction ----- ○ — ○ — ○ — ○
- BCBG13BE e) Concrete objects or materials to help students understand quantities or procedures ----- ○ — ○ — ○ — ○

C. Resources for Science Instruction

- BCBG13CA a) Teachers with a specialization in science ----- ○ — ○ — ○ — ○
- BCBG13CB b) Computer software/applications for science instruction ----- ○ — ○ — ○ — ○
- BCBG13CC c) Library resources relevant to science instruction ----- ○ — ○ — ○ — ○
- BCBG13CD d) Calculators for science instruction ----- ○ — ○ — ○ — ○
- BCBG13CE e) Science equipment and materials for experiments ----- ○ — ○ — ○ — ○

School Emphasis on Academic Success

14

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

Check **one** circle for each line.

Very high
High
Medium
Low
Very low

- BCBG14A a) Teachers' understanding of the school's curricular goals --- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14B b) Teachers' degree of success in implementing the school's curriculum ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14C c) Teachers' expectations for student achievement ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14D d) Teachers' ability to inspire students ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14E e) Parental involvement in school activities ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14F f) Parental commitment to ensure that students are ready to learn ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14G g) Parental expectations for student achievement ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14H h) Parental support for student achievement ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14I i) Students' desire to do well in school ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14J j) Students' ability to reach school's academic goals ----- ○ --- ○ --- ○ --- ○ --- ○
- BCBG14K k) Students' respect for classmates who excel academically ----- ○ --- ○ --- ○ --- ○ --- ○

15

How much do you agree with these statements about mathematics and science education within your school?

Check **one** circle for each line.

Agree a lot
Agree a little
Disagree a little
Disagree a lot

- BCBG15A a) The school provides students with information about career options in mathematics and science ----- ○ --- ○ --- ○ --- ○
- BCBG15B b) The school has initiatives to promote student interest in mathematics and science (e.g., student clubs, competitions) ----- ○ --- ○ --- ○ --- ○
- BCBG15C c) The school promotes professional development for teachers of mathematics and science ----- ○ --- ○ --- ○ --- ○
- BCBG15D d) The school provides extra lessons to help students excel in mathematics and science --- ○ --- ○ --- ○ --- ○
- BCBG15E e) The school provides special activities in mathematics and science for interested students ----- ○ --- ○ --- ○ --- ○
- BCBG15F f) The school has a specific goal to improve mathematics and science education ----- ○ --- ○ --- ○ --- ○
- BCBG15G g) The school encourages students to continue studying mathematics and science in the future ----- ○ --- ○ --- ○ --- ○
- BCBG15H h) Mathematics and science teachers in this school spend extra time working with students interested in mathematics and science ----- ○ --- ○ --- ○ --- ○

School Discipline and Safety

16

To what degree is each of the following a problem among <eighth grade> students in your school?

Check **one** circle for each line.

Not a problem
Minor problem
Moderate problem
Serious problem

- BCBG16A a) Arriving late at school -----○-----○-----○-----○
- BCBG16B b) Absenteeism (i.e., unjustified absences) -----○-----○-----○-----○
- BCBG16C c) Classroom disturbance -----○-----○-----○-----○
- BCBG16D d) Cheating -----○-----○-----○-----○
- BCBG16E e) Profanity -----○-----○-----○-----○
- BCBG16F f) Vandalism -----○-----○-----○-----○
- BCBG16G g) Theft -----○-----○-----○-----○
- BCBG16H h) Intimidation or verbal abuse among students (including texting, emailing, etc.) -----○-----○-----○-----○
- BCBG16I i) Physical injury to other students -----○-----○-----○-----○
- BCBG16J j) Intimidation or verbal abuse of teachers or staff (including texting, emailing, etc.) -----○-----○-----○-----○
- BCBG16K k) Physical injury to teachers or staff -----○-----○-----○-----○

17

To what degree is each of the following a problem among teachers in your school?

Check **one** circle for each line.

Not a problem
Minor problem
Moderate problem
Serious problem

- BCBG17A a) Arriving late or leaving early -----○-----○-----○-----○
- BCBG17B b) Absenteeism -----○-----○-----○-----○

Principal Experience and Education

18

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

BCBG18

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

19

By the end of this school year, how many years will you have been a principal at this school?

BCBG19

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

20

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

BCBG20

Check **one** circle only.

- Did not complete <Bachelor's or equivalent level—ISCED Level 6> ---○
- <Bachelor's or equivalent level—ISCED Level 6> ---○
- <Master's or equivalent level—ISCED Level 7> ---○
- <Doctor or equivalent level—ISCED Level 8> ---○

21

Do you hold the following qualifications or credentials in educational leadership?

Check **one** circle for each line.

Yes
No

- BCBG21A a) <Certificate or license> -----○-----○
- BCBG21B b) <Master's or equivalent level—ISCED Level 7> -----○-----○
- BCBG21C c) <Doctor or equivalent level—ISCED Level 8> -----○-----○

Thank You

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



BOSTON
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<Grade 8>



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International Association
for the Evaluation of
Educational Achievement



SECTION 2.7: **CURRICULUM QUESTIONNAIRE** **GRADE 8**

TIMSS 2019 USER GUIDE FOR THE
INTERNATIONAL DATABASE



IEA

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

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQG-01	GEN01	What is your country's name for the grade(s) tested in TIMSS 2019, in English (e.g., grade 4, grade 8)?
CQG-02A	GEN02A	In your country, what is the stated official policy or regulation on students' age of entry to primary school (ISCED Level 1)?
CQG-02B	GEN02B	If the official policy [on age of entry] allows some parental discretion or choice, please describe the usual practice.
CQG-03A	GEN03A	Has the stated official policy [on age of entry] changed in the last 10 years?
CQG-03B	GEN03B	If Yes...How did the policy change, and what is the status of implementation?
CQG-04	GEN04	What are the ages (or grades) of compulsory education in your country?
CQG-05	GEN05	Beginning with ISCED Level 1, what grades of schooling are provided to students through ISCED Level 3 (upper secondary)?
CQG-06	GEN06	Does your country have a policy on the promotion and retention of students across grades 1–8?
CQG-06T	GEN06T	Does your country have a policy on the promotion and retention of students across grades 1–8? Please describe:
CQG-07	GEN07	Does your country have a nationally mandated number of school days per year?
CQG-07T	GEN07T	Does your country have a nationally mandated number of school days per year? Please describe:
CQG-08A	GEN08A	State the official language(s) and describe the major language subgroups.
CQG-08B	GEN08B	Describe the languages of instruction for mathematics and science in the fourth and eighth grades. For example, is the instruction in these grades for these subjects presented to the students in their native language or in a second language?
CQG-09Aa	GEN09AA	Does your country provide universal ECED or PPE coverage? ECED programs for children under age 3
CQG-09Ab	GEN09AB	Does your country provide universal ECED or PPE coverage? PPE programs for children age 3 or older
CQG-09B	GEN09B	How many years can children attend [ECED or PPE] programs altogether?
CQG-09BT	GEN09BT	How many years can children attend [ECED or PPE] programs altogether? Comments:
CQG-09Ca	GEN09CA	Does your country provide targeted ECED or PPE coverage? ECED programs for children under age 3
CQG-09Cb	GEN09CB	Does your country provide targeted ECED or PPE coverage? PPE programs for children age 3 or older
CQG-09CT	GEN09CT	Does your country provide targeted ECED or PPE coverage? Please describe:
CQG-10Aa	GEN10AA	Does your country have national curriculum guidance documents for ECED or PPE programs? ECED programs for children under age 3
CQG-10Ab	GEN10AB	Does your country have national curriculum guidance documents for ECED or PPE programs? PPE programs for children age 3 or older
CQG-10BaA	GEN10BAA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Socio-emotional development
CQG-10BaB	GEN10BAB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Socio-emotional development
CQG-10BbA	GEN10BBA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Physical development and health education
CQG-10BbB	GEN10BBB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Physical development and health education
CQG-10BcA	GEN10BCA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Oral language development and communication skills
CQG-10BcB	GEN10BCB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Oral language development and communication skills
CQG-10BdA	GEN10BDA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Reading and literacy skills
CQG-10BdB	GEN10BDB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Reading and literacy skills
CQG-10BeA	GEN10BEA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Mathematics and numeracy skills

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQG-10BeB	GEN10BEB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Mathematics and numeracy skills
CQG-10BfA	GEN10BFA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Science including understanding the natural world (e.g., weather)
CQG-10BfB	GEN10BFB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Science including understanding the natural world (e.g., weather)
CQG-10BgA	GEN10BGA	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED programs: Other
CQG-10BgB	GEN10BGB	If Yes...Do the curriculum guidance documents cover any of the following topic areas? PPE programs: Other
CQG-10BgT	GEN10BGT	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED and PPE programs: Other, please specify below
CQG-10BT	GEN10BT	If Yes...Do the curriculum guidance documents cover any of the following topic areas? ECED and PPE programs: Comments:
CQG-11A	GEN11A	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations that have consequences for individual students, such as entry to a higher school system, entry to a university, and/or exiting or graduating from secondary school?
CQG-11B	GEN11B	If Yes...Please describe the grades at which the exams are given, the subjects that are assessed, and the purpose of each exam.
CQG-12A	GEN12A	What is the main preparation route(s) for teachers of students in the fourth grade?
CQG-12Ba	GEN12BA	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Supervised practicum during the teacher education program.
CQG-12BaT	GEN12BAT	If Yes...How long is this period?
CQG-12Bb	GEN12BB	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Passing a qualifying examination (e.g., licensing, certification).
CQG-12Bc	GEN12BC	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Completion of a probationary teaching period.
CQG-12BcT	GEN12BCT	If Yes...How long is this period?
CQG-12Bd	GEN12BD	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Completion of a mentoring or induction program.
CQG-12Be	GEN12BE	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Other
CQG-12BeT	GEN12BET	According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade? Other, please specify below
CQG-12C	GEN12C	Are there additional requirements for teachers of mathematics and science in the fourth grade?
CQG-12D	GEN12D	If Yes...What are they?
CQG-12E	GEN12E	In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the fourth grade?
CQG-12F	GEN12F	If Yes...How did the policy change, and what is the status of implementation?
CQG-13A	GEN13A	Is the main preparation route(s) for teachers of students in the eighth grade different from the main preparation route(s) at the fourth grade?
CQG-13B	GEN13B	If Yes...If the main preparation route(s) for teachers of students in the eighth grade is different, what is their main preparation route?
CQG-13Ca	GEN13CA	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Supervised practicum during the teacher education program.
CQG-13CaT	GEN13CAT	If Yes...How long is this period?
CQG-13Cb	GEN13CB	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Passing a qualifying examination (e.g., licensing, certification).

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQG-13c	GEN13CC	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Completion of a probationary teaching period.
CQG-13CcT	GEN13CCT	If Yes...How long is this period?
CQG-13Cd	GEN13CD	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Completion of a mentoring or induction program
CQG-13Ce	GEN13CE	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Other
CQG-13CeT	GEN13CET	If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade? Other, please specify below:
CQG-13D	GEN13D	If there are additional requirements for teachers of mathematics and science in the eighth grade that are different than in the fourth grade, what are they?
CQG-13E	GEN13E	In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the eighth grade?
CQG-13F	GEN13F	If Yes...How did the policy change, and what is the status of implementation?
CQG-14A	GEN14A	What is the main preparation route(s) for principals of schools with fourth grade students?
CQG-14Ba	GEN14BA	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Teaching experience
CQG-14Bb	GEN14BB	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Completion of a specialized school leadership training program
CQG-14Bc	GEN14BC	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Other
CQG-14BcT	GEN14BCT	According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students? Other, please specify below
CQG-14C	GEN14C	In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with fourth grade students?
CQG-14D	GEN14D	If Yes...How did the policy change, and what is the status of implementation?
CQG-15A	GEN15A	Is the main preparation route(s) for principals of schools with eighth grade students different from the main preparation route(s) for principals of schools with fourth grade students?
CQG-15B	GEN15B	If the main preparation route(s) for principals of schools with eighth grade students is different, what is their main preparation route?
CQG-15Ca	GEN15CA	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Teaching experience
CQG-15Cc	GEN15CB	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Completion of a specialized school leadership training program
CQG-15Cc	GEN15CC	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Other
CQG-15CcT	GEN15CCT	According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students? Other, please specify below:
CQG-15D	GEN15D	In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with eighth grade students?
CQG-15E	GEN15E	If Yes...How did the policy change, and what is the status of implementation?
CQM8-01	MA801	Does your country have a national curriculum that covers mathematics instruction at the eighth grade of formal schooling?
CQM8-01TA	MA801TA	If Yes...Comments:
CQM8-01TB	MA801TB	If No...What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers mathematics instruction at the eighth grade of formal schooling?
CQM8-02A	MA802A	In what year was the 2018/2019 mathematics curriculum introduced?

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQM8-02AT	MA802AT	In what year was the 2018/2019 mathematics curriculum introduced? Comments (e.g., status of implementation):
CQM8-02B	MA802B	Is the mathematics curriculum currently being revised?
CQM8-02BTA	MA802BTA	If Yes...Please explain:
CQM8-02BTB	MA802BTB	If No...Comments:
CQM8-03	MA803	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the eighth grade of formal schooling?
CQM8-03TA	MA803TA	If Yes...Please specify the percentage:
CQM8-03TB	MA803TB	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the eighth grade of formal schooling? Comments:
CQM8-04a	MA804A	How is the mathematics curriculum implementation evaluated? Visits by inspectors
CQM8-04b	MA804B	How is the mathematics curriculum implementation evaluated? Research programs
CQM8-04c	MA804C	How is the mathematics curriculum implementation evaluated? School self-evaluation
CQM8-04d	MA804D	How is the mathematics curriculum implementation evaluated? National or regional examinations
CQM8-04e	MA804E	How is the mathematics curriculum implementation evaluated? Other
CQM8-04eT	MA804ET	How is the mathematics curriculum implementation evaluated? Other, please specify below:
CQM8-04T	MA804T	How is the mathematics curriculum implementation evaluated? Comments:
CQM8-05A	MA805A	Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 8 mathematics instruction?
CQM8-05AT	MA805AT	If Yes...What are the statements/policies?
CQM8-05B	MA805B	Does the national curriculum contain statements/policies about student use of digital devices (e.g., computers, tablets, calculators) in grade 8 mathematics tests or examinations?
CQM8-05BTA	MA805BTA	If Yes...What are the statements/policies?
CQM8-05BTB	MA805BTB	Does the national curriculum contain statements/policies about student use of digital devices (e.g., computers, tablets, calculators) in grade 8 mathematics tests or examinations? Comments:
CQM8-06	MA806	At what grade(s) are students first taught by mathematics subject specialists rather than general classroom teachers?
CQM8-07Aa	MA807AA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Number: Computing with negative numbers
CQM8-07AaP to CQM8-07Aa12	MA807AAP to MA807AA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Computing with negative numbers
CQM8-07Ab	MA807AB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Number: Concepts of fractions and decimals
CQM8-07AbP to CQM8-07Ab12	MA807ABP to MA807AB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Concepts of fractions and decimals
CQM8-07Ac	MA807AC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Number: Solving problems involving proportions and percents
CQM8-07AcP to CQM8-07Ac12	MA807ACP to MA807AC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number: Solving problems involving proportions and percents

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQM8-07AT	MA807AT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Number topics: Comments:
CQM8-07Ba	MA807BA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Algebra: Simplifying and evaluating algebraic expressions
CQM8-07BaP to CQM8-07Ba12	MA807BAP to MA807BA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra: Simplifying and evaluating algebraic expressions
CQM8-07Bb	MA807BB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Algebra: Simple linear equations
CQM8-07BbP to CQM8-07Bb12	MA807BBP to MA807BB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra: Simple linear equations
CQM8-07Bc	MA807BC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Algebra: Simple linear inequalities
CQM8-07BcP to CQM8-07Bc12	MA807BCP to MA807BC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra: Simple linear inequalities
CQM8-07Bd	MA807BD	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Algebra: Simultaneous (two variables) equations
CQM8-07BdP to CQM8-07Bd12	MA807BDP to MA807BD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra: Simultaneous (two variables) equations
CQM8-07Be	MA807BE	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Algebra: Representation of linear and quadratic functions in tables, graphs, words, or equations
CQM8-07BeP to CQM8-07Be12	MA807BEP to MA807BE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra: Representation of linear and quadratic functions in tables, graphs, words, or equations
CQM8-07Bf	MA807BF	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Algebra: Properties of functions (slopes, intercepts, etc.)
CQM8-07BfP to CQM8-07Bf12	MA807BFP to MA807BF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra: Properties of functions (slopes, intercepts, etc.)
CQM8-07Bg	MA807BG	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Algebra: Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns)
CQM8-07BgP to CQM8-07Bg12	MA807BGP to MA807BG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra: Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns)
CQM8-07BT	MA807BT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Algebra topics: Comments:

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQM8-07Ca	MA807CA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Geometry: Geometric properties of angles, pairs of lines, and geometric shapes (triangles, quadrilaterals, and other common polygons)
CQM8-07CaP to CQM8-07Ca12	MA807CAP to MA807CA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Geometry: Geometric properties of angles, pairs of lines, and geometric shapes (triangles, quadrilaterals, and other common polygons)
CQM8-07Cb	MA807CB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Geometry: Solving problems involving perimeters, circumferences, and areas
CQM8-07CbP to CQM8-07Cb12	MA807CBP to MA807CB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Geometry: Solving problems involving perimeters, circumferences, and areas
CQM8-07Cc	MA807CC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Geometry: Solving problems involving the Pythagorean Theorem
CQM8-07CcP to CQM8-07Cc12	MA807CCP to MA807CC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Geometry: Solving problems involving the Pythagorean Theorem
CQM8-07Cd	MA807CD	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Geometry: Translation, reflection, and rotation
CQM8-07CdP to CQM8-07Cd12	MA807CDP to MA807CD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Geometry: Translation, reflection, and rotation
CQM8-07Ce	MA807CE	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Geometry: Congruent figures and similar triangles
CQM8-07CeP to CQM8-07Ce12	MA807CEP to MA807CE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Geometry: Congruent figures and similar triangles
CQM8-07Cf	MA807CF	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Geometry: Solving problems with three-dimensional shapes
CQM8-07CfP to CQM8-07Cf12	MA807CFP to MA807CF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Solving problems with three-dimensional shapes
CQM8-07CT	MA807CT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Geometry topics: Comments:
CQM8-07Da	MA807DA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Data and Probability: Reading and interpreting data from one or more sources to solve problems (interpolating, extrapolating, drawing conclusions)
CQM8-07DaP to CQM8-07Da12	MA807DAP to MA807DA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data and Probability: Reading and interpreting data from one or more sources to solve problems (interpolating, extrapolating, drawing conclusions)

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQM8-07Db	MA807DB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Data and Probability: Identifying appropriate procedures for collecting data
CQM8-07DbP to CQM8-07Db12	MA807DBP to MA807DB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data and Probability: Identifying appropriate procedures for collecting data
CQM8-07Dc	MA807DC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Data and Probability: Organizing and representing data to help answer questions
CQM8-07DcP to CQM8-07Dc12	MA807DCP to MA807DC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data and Probability: Organizing and representing data to help answer questions
CQM8-07Dd	MA807DD	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Data and Probability: Calculating and interpreting statistics summarizing data distributions
CQM8-07DdP to CQM8-07Dd12	MA807DDP to MA807DD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data and Probability: Calculating and interpreting statistics summarizing data distributions
CQM8-07De	MA807DE	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Data and Probability: Theoretical and empirical probability of simple events
CQM8-07DeP to CQM8-07De12	MA807DEP to MA807DE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data and Probability: Theoretical and empirical probability of simple events
CQM8-07Df	MA807DF	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Data and Probability: Theoretical and empirical probability of compound events
CQM8-07DfP to CQM8-07Df12	MA807DFP to MA807DF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data and Probability: Theoretical and empirical probability of compound events
CQM8-07DT	MA807DT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Data and Probability topics: Comments:
CQS8-01	SC801	Does your country have a national curriculum that covers science instruction at the eighth grade of formal schooling?
CQS8-01TA	SC801TA	If Yes...Comments:
CQS8-01TB	SC801TB	If No...What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers science instruction at the eighth grade of formal schooling?
CQS8-02A	SC802A	In what year was the 2018/2019 science curriculum introduced?
CQS8-02AT	SC802AT	In what year was the 2018/2019 science curriculum introduced? Comments (e.g., status of implementation):
CQS8-02B	SC802B	Is the science curriculum currently being revised?
CQS8-02BTA	SC802BTA	If Yes...Please explain:
CQS8-02BTB	SC802BTB	If No...Comments:
CQS8-03	SC803	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the eighth grade of formal schooling?
CQS8-03TA	SC803TA	If Yes...Please specify the percentage

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS8-03TB	SC803TB	Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the eighth grade of formal schooling? Comments:
CQS8-04a	SC804A	How is the science curriculum implementation evaluated? Visits by inspectors
CQS8-04b	SC804B	How is the science curriculum implementation evaluated? Research programs
CQS8-04c	SC804C	How is the science curriculum implementation evaluated? School self-evaluation
CQS8-04d	SC804D	How is the science curriculum implementation evaluated? National or regional examinations
CQS8-04e	SC804E	How is the science curriculum implementation evaluated? Other
CQS8-04eT	SC804ET	How is the science curriculum implementation evaluated? Other, please specify below:
CQS8-04T	SC804T	How is the science curriculum implementation evaluated? Comments:
CQS8-05A	SC805A	Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 8 science instruction?
CQS8-05AT	SC805AT	If Yes...What are the statements/policies?
CQS8-06	SA806	At what grade(s) are students first taught by science subject specialists rather than general classroom teachers?
CQS8-07Aa	SC807AA	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Biology: Differences among major taxonomic groups of organisms (plants, animals, fungi, mammals, birds, reptiles, fish, amphibians, insects)
CQS8-07AaP to CQS8-07Aa12	SC807AAP to SC807AA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology: Differences among major taxonomic groups of organisms (plants, animals, fungi, mammals, birds, reptiles, fish, amphibians, insects)
CQS8-07Ab	SC807AB	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Biology: Major organs and organ systems in humans and other organisms (structure/function, life processes)
CQS8-07AbP to CQS8-07Ab12	SC807ABP to SC807AB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology: Major organs and organ systems in humans and other organisms (structure/function, life processes)
CQS8-07Ac	SC807AC	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Biology: Cells, their structure and functions, including respiration and photosynthesis as cellular processes
CQS8-07AcP to CQS8-07Ac12	SC807ACP to SC807AC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology: Cells, their structure and functions, including respiration and photosynthesis as cellular processes
CQS8-07Ad	SC807AD	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Biology: Life cycles, sexual reproduction, and heredity (inherited versus acquired/learned characteristics)
CQS8-07AdP to CQS8-07Ad12	SC807ADP to SC807AD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology: Life cycles, sexual reproduction, and heredity (inherited versus acquired/learned characteristics)
CQS8-07Ae	SC807AE	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Biology: Role of variation and adaptation in survival/extinction of species (including fossil evidence)
CQS8-07AeP to CQS8-07Ae12	SC807AEP to SC807AE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology: Role of variation and adaptation in survival/extinction of species (including fossil evidence)

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS8-07Af	SC807AF	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Biology: Interdependence of populations of organisms in an ecosystem (e.g., carbon and water cycles, energy flow, food webs, competition, predation, human impacts on ecosystems)
CQS8-07AfP to CQS8-07Af12	SC807AFP to SC807AF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology: Interdependence of populations of organisms in an ecosystem (e.g., carbon and water cycles, energy flow, food webs, competition, predation, human impacts on ecosystems)
CQS8-07Ag	SC807AG	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Biology: Human health (e.g., causes, transmission, and prevention of common infectious diseases, immunity) and the importance of diet, exercise, and other lifestyle choices in maintaining health
CQS8-07AgP to CQS8-07Ag12	SC807AGP to SC807AG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology: Human health (e.g., causes, transmission, and prevention of common infectious diseases, immunity) and the importance of diet, exercise, and other lifestyle choices in maintaining health
CQS8-07AT	SC807AT	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Biology topics: Comments:
CQS8-07Ba	SC807BA	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: Particulate structure, classification, and composition of matter (protons, neutrons, electrons, atoms, molecules, elements, compounds, mixtures)
CQS8-07BaP to CQS8-07Ba12	SC807BAP to SC807BA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: Particulate structure, classification, and composition of matter (protons, neutrons, electrons, atoms, molecules, elements, compounds, mixtures)
CQS8-07Bb	SC807BB	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: The periodic table as an organizing principle for the known elements
CQS8-07BbP to CQS8-07Bb12	SC807BBP to SC807BB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: The periodic table as an organizing principle for the known elements
CQS8-07Bc	SC807BC	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: Physical and chemical properties of matter
CQS8-07BcP to CQS8-07Bc12	SC807BCP to SC807BC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: Physical and chemical properties of matter
CQS8-07Bd	SC807BD	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: Mixtures and solutions (e.g., solvent, solute, concentration/dilution)
CQS8-07BdP to CQS8-07Bd12	SC807BDP to SC807BD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: Mixtures and solutions (e.g., solvent, solute, concentration/dilution)

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS8-07Be	SC807BE	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: Properties of common acids and bases (e.g., acids have pH less than 7, reactions with indicators produce color changes, acids and bases neutralize each other)
CQS8-07BeP to CQS8-07Be12	SC807BEP to SC807BE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: Properties of common acids and bases (e.g., acids have pH less than 7, reactions with indicators produce color changes, acids and bases neutralize each other)
CQS8-07Bf	SC807BF	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: Characteristics of chemical reactions (e.g., transformation of reactants, evidence of chemical change)
CQS8-07BfP to CQS8-07Bf12	SC807BFP to SC807BF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: Characteristics of chemical reactions (e.g., transformation of reactants, evidence of chemical change)
CQS8-07Bg	SC807BG	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: Matter and energy in chemical reactions (conservation of matter, familiar exothermic and endothermic reactions, factors affecting reaction rates)
CQS8-07BgP to CQS8-07Bg12	SC807BGP to SC807BG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: Matter and energy in chemical reactions (conservation of matter, familiar exothermic and endothermic reactions, factors affecting reaction rates)
CQS8-07Bh	SC807BH	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Chemistry: The role of electrons in chemical bonds
CQS8-07BhP to CQS8-07Bh12	SC807BHP to SC807BH12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry: The role of electrons in chemical bonds
CQS8-07BT	SC807BT	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Chemistry topics: Comments:
CQS8-07Ca	SC807CA	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Physics: Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, changes in volume and/or pressure, physical changes)
CQS8-07CaP to CQS8-07Ca12	SC807CAP to SC807CA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics: Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, changes in volume and/or pressure, physical changes)
CQS8-07Cb	SC807CB	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Physics: Energy transformation and transfer (e.g., forms of energy, energy conservation, heat temperature, equilibrium)
CQS8-07CbP to CQS8-07Cb12	SC807CBP to SC807CB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics: Energy transformation and transfer (e.g., forms of energy, energy conservation, heat temperature, equilibrium)
CQS8-07Cc	SC807CC	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Physics: Basic properties/behaviors of light (reflection, refraction, color, shadows, simple ray diagrams)

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS8-07CcP to CQS8-07Cc12	SC807CCP to SC807CC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics: Basic properties/behaviors of light (reflection, refraction, color, shadows, simple ray diagrams)
CQS8-07Cd	SC807CD	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Physics: Basic properties/behaviors of sound (vibrations that produce sound, transmission through media, loudness, pitch)
CQS8-07CdP to CQS8-07Cd12	SC807CDP to SC807CD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics: Basic properties/behaviors of sound (vibrations that produce sound, transmission through media, loudness, pitch)
CQS8-07Ce	SC807CE	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Physics: Electric circuits (e.g., electrical conductors/insulators and the flow of electricity in series/parallel circuits)
CQS8-07CeP to CQS8-07Ce12	SC807CEP to SC807CE12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics: Electric circuits (e.g., electrical conductors/insulators and the flow of electricity in series/parallel circuits)
CQS8-07Cf	SC807CF	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Physics: Properties and uses of permanent magnets and electromagnets
CQS8-07CfP to CQS8-07Cf12	SC807CFP to SC807CF12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics: Properties and uses of permanent magnets and electromagnets
CQS8-07Cg	SC807CG	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Physics: Motion and forces (e.g., basic description of motion, common mechanical forces, properties of forces, effects of forces, simple machines, buoyancy, effects of density and pressure)
CQS8-07CgP to CQS8-07Cg12	SC807CGP to SC807CG12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics: Motion and forces (e.g., basic description of motion, common mechanical forces, properties of forces, effects of forces, simple machines, buoyancy, effects of density and pressure)
CQS8-07CT	SC807CT	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Physics topics: Comments:
CQS8-07Da	SC807DA	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Earth Science: Earth's structure and physical features (e.g., Earth's crust, mantle, and core; composition and relative distribution of water; composition of Earth's atmosphere)
CQS8-07DaP to CQS8-07Da12	SC807DAP to SC807DA12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Earth's structure and physical features (e.g., Earth's crust, mantle, and core; composition and relative distribution of water; composition of Earth's atmosphere)
CQS8-07Db	SC807DB	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Earth Science: Earth's processes, cycles, and history (e.g., rock cycle, major geological events, formation of fossils and fossil fuels, water cycle, weather versus climate)
CQS8-07DbP to CQS8-07Db12	SC807DBP to SC807DB12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Earth's processes, cycles, and history (e.g., rock cycle, major geological events, formation of fossils and fossil fuels, water cycle, weather versus climate)

Exhibit 2.7: International Context Variables for the TIMSS 2019 Curriculum Questionnaire (Grade 8)

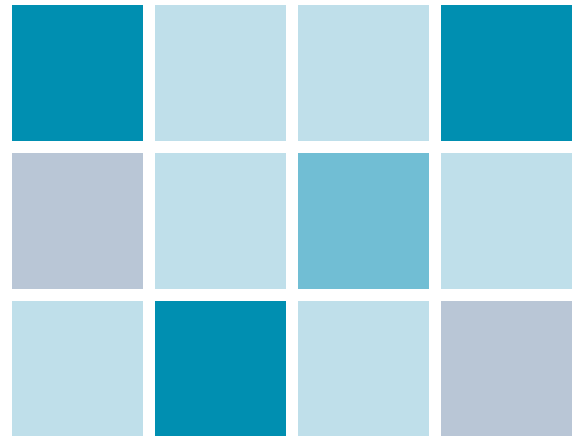
TIMSS 2019 Question Number	TIMSS 2019 Variable Name	TIMSS 2019 Variable Description
CQS8-07Dc	SC807DC	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Earth Science: Earth's resources, their use, and conservation (e.g., renewable/nonrenewable resources, human use of land and water resources)
CQS8-07DcP to CQS8-07Dc12	SC807DCP to SC807DC12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Earth's resources, their use, and conservation (e.g., renewable/nonrenewable resources, human use of land and water resources)
CQS8-07Dd	SC807DD	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Earth Science: Earth in the Solar System and the universe (phenomena on Earth: seasons, eclipses, tides, phases of moon; members of the Solar System; physical features of Earth)
CQS8-07DdP to CQS8-07Dd12	SC807DDP to SC807DD12	Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science: Earth in the Solar System and the universe (phenomena on Earth: seasons, eclipses, tides, phases of moon; members of the Solar System; physical features of Earth)
CQS8-07DT	SC807DT	According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8? Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught? Earth Science topics: Comments:



TIMSS 2019

Curriculum Questionnaire

Eighth Grade



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TIMSS 2019 Curriculum Questionnaire

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade

TIMSS 2019 Curriculum Questionnaire – Eighth Grade

The TIMSS 2019 Curriculum Questionnaire is designed to collect basic information about the structure of the education system as well as the organization, content, and implementation of the mathematics and/or science curricula in each country.

The questionnaire should be completed by the National Research Coordinators, drawing on the expertise of curriculum specialists and educators. Please submit this questionnaire no later than **October 30, 2019**.

To begin the questionnaire, please click on the "Next" button. When navigating through the questionnaire, make sure to confirm your responses by clicking on the "Next" or "Previous" button. To go to a particular section or item, please click on the corresponding link in the "Table of Contents." When you have completed the questionnaire, please make sure to click the "Submit" button to submit your answers.

Please note that the General Module is the same across the fourth and eighth grades, and therefore National Research Coordinators of countries participating in TIMSS 2019 at both the fourth and eighth grade are advised to complete the General Module at only one of the grade levels. The Mathematics and Science Modules should be completed at both grade levels.

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

If you have any technical questions on how to complete this questionnaire, please contact the IEA Hamburg (TIMSS email account): timss@iea-hamburg.de

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - GENERAL MODULE

GENERAL MODULE

To be completed by all countries participating in TIMSS

Please note: if you already have completed the General Module of the Grade 4 Curriculum Questionnaire, please skip the General Module using the [Table of Contents](#).

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Grade Structure and Student Flow

GEN01

Grade Structure and Student Flow

G1. What is your country's name for the grade(s) tested in TIMSS 2019, in English (e.g., grade 4, grade 8)?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Grade Structure and Student Flow

GEN02A
GEN02B

G2. A. In your country, what is the stated official policy or regulation on students' age of entry to primary school (ISCED Level 1)?

Examples: "Children begin school during the calendar year of their 6th birthday"; "Children must be 6 years old by the end of June to begin school the following September."

B. If the official policy allows some parental discretion or choice, please describe the usual practice.

Example: "Even though the official policy is that students can begin school in the year when they turn 6 years old, children typically begin primary school at age 7 because their parents feel they will benefit from being more mature."

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GEN03A
GEN03B

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Grade Structure and Student Flow

G3. A. Has the stated official policy changed in the last 10 years?

Check *one* circle only.

☐ Yes

☐ No

If Yes....

B. How did the policy change, and what is the status of implementation?

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Grade 8

CURRICULUM QUESTIONNAIRE

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BOSTON COLLEGE

SECTION 2.7: CURRICULUM QUESTIONNAIRE – GRADE 8

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Grade Structure and Student Flow

GEN04

G4. What are the ages (or grades) of compulsory education in your country?
Example: "Ages 6-16 (or Grades 1-9)."

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GEN05

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Grade Structure and Student Flow

G5. Beginning with ISCED Level 1, what grades of schooling are provided to students through ISCED Level 3 (upper secondary)?

Example: "Grades 1-12."

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GEN06

GEN06T

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Grade Structure and Student Flow

G6. Does your country have a policy on the promotion and retention of students across grades 1-8?

Example: "Automatic promotion for grades 1-5, dependent on academic progress for grades 6-8."

Check **one** circle only.

☐ Yes

☐ No

Please describe:

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GEN07

GEN07T

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Grade Structure and Student Flow

G7. Does your country have a nationally mandated number of school days per year?

Check *one* circle only.

☐ Yes
 ☐ No

Please describe:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Languages of Instruction

GEN08A

Languages of Instruction

G8. A. State the official language(s) and describe the major language subgroups.

GEN08B

B. Describe the languages of instruction for mathematics and science in the fourth and eighth grades. For example, is the instruction in these grades for these subjects presented to the students in their native language or in a second language?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Early Childhood Education

Early Childhood Education

Early childhood education (ISCED Level 0) is subdivided into:

- Early childhood educational development (ECED) programs for children under age 3; and
- Pre-primary education (PPE) programs including Kindergarten for children age 3 or older.

G9. A. Does your country provide universal ECED or PPE coverage?

Programs with **universal** coverage are accessible and available to all children, although in some cases parents may choose not to enroll their children.

Check **one** circle for each line.

GEN09AA

GEN09AB

- | | Yes | No |
|---|-----------------------|-----------------------|
| a) ECED programs for children under age 3 | ☐ | ☐ |
| b) PPE programs for children age 3 or older | ☐ | ☐ |

GEN09B

B. How many years can children attend these programs altogether?

Check **one** circle only.

- ☐ 1 year
☐ 2 years
☐ 3 years
☐ 4 or more years

GEN09BT

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GEN09CA

GEN09CB

GEN09CT

C. Does your country provide targeted ECED or PPE coverage?

Programs with **targeted** coverage are only available for certain subgroups (e.g., for children from low-income families, for children where the language spoken at home is different from the national language).

Check **one** circle for each line.

Yes

No

a) ECED programs for children under age 3

☐

☐

b) PPE programs for children age 3 or older

☐

☐

Please describe:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Early Childhood Education

Early childhood education (ISCED Level 0) is subdivided into:

- Early childhood educational development (ECED) programs for children under age 3; and
- Pre-primary education (PPE) programs including Kindergarten for children age 3 or older.

G10. A. Does your country have national curriculum guidance documents for ECED or PPE programs?

Check **one** circle for each line.

GEN10AA

GEN10AB

- | | Yes | No |
|---|-----------------------|-----------------------|
| a) ECED programs for children under age 3 | ☐ | ☐ |
| b) PPE programs for children age 3 or older | ☐ | ☐ |

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Early Childhood Education

If Yes....

B. Do the curriculum guidance documents cover any of the following topic areas?

Check **one** circle for ECED programs, AND **one** circle for PPE programs.

	ECED programs		PPE programs	
	Yes	No	Yes	No
a) Socio-emotional development	☐	☐	☐	☐
b) Physical development and health education	☐	☐	☐	☐
c) Oral language development and communication skills	☐	☐	☐	☐
d) Reading and literacy skills	☐	☐	☐	☐
e) Mathematics and numeracy skills	☐	☐	☐	☐
f) Science including understanding the natural world (e.g., weather)	☐	☐	☐	☐
g) Other	☐	☐	☐	☐
Please specify below:				

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GEN11A

GEN11B

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Examinations

Examinations

G11. A. Does an educational authority in your country (e.g., National Ministry of Education) administer examinations that have consequences for individual students, such as entry to a higher school system, entry to a university, and/or exiting or graduating from secondary school?

*Check **one** circle only.*

☐ Yes
 ☐ No

If Yes....

B. Please describe the grades at which the exams are given, the subjects that are assessed, and the purpose of each exam.

Example: "There is an exam including language and mathematics given at the end of grade 8 to determine placement for entry to secondary school."

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

GEN12A

Teacher Preparation

G12. A. What is the main preparation route(s) for teachers of students in the fourth grade?

Example: "Most teachers receive their education through a university degree program. Some have attended a teacher college program, but that is becoming less common."

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

B. According to the main teacher preparation route, what are the current requirements for being a teacher of students in the fourth grade?

Check **one** circle for each line.

	Yes	No
a) Supervised practicum during the teacher education program.	☐	☐
If Yes... How long is this period?		
b) Passing a qualifying examination (e.g., licensing, certification).	☐	☐
c) Completion of a probationary teaching period.	☐	☐
If Yes... How long is this period?		
d) Completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance).	☐	☐
e) Other	☐	☐
Please specify below:		

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

GEN12C

C. Are there additional requirements for teachers of mathematics and science in the fourth grade?

Check *one* circle only.

- ☐ Yes
☐ No

If Yes...

GEN12D

D. What are they?

GEN12E

E. In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the fourth grade?

Check *one* circle only.

- ☐ Yes
☐ No

If Yes....

F. How did the policy change, and what is the status of implementation?

GEN12F

Example: "A master's degree will be required in 2020; an oral examination has been required since 2018."

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

GEN13A

G13. A. Is the main preparation route(s) for teachers of students in the eighth grade different from the main preparation route(s) at the fourth grade?

Check **one** circle only.

- ☐ Yes
☐ No

If Yes....

GEN13B

B. If the main preparation route(s) for teachers of students in the eighth grade is different, what is their main preparation route?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

C. If the requirements are different than the fourth grade, what are the current requirements for being a teacher of students in the eighth grade?

Check **one** circle for each line.

GEN13CA
GEN13CAT
GEN13CB
GEN13CC
GEN13CCT
GEN13CD
GEN13CE
GEN13CET

	Yes	No
a) Supervised practicum during the teacher education program.	☐	☐
If Yes... How long is this period?		
b) Passing a qualifying examination (e.g., licensing, certification).	☐	☐
c) Completion of a probationary teaching period.	☐	☐
If Yes... How long is this period?		
d) Completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance).	☐	☐
e) Other Please specify below:	☐	☐

GEN13D

D. If there are additional requirements for teachers of mathematics and science in the eighth grade that are different than in the fourth grade, what are they?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

GEN13E

E. In the last 10 years, has there been a change in the stated official policy about the requirements for being a teacher of students in the eighth grade?

Check **one** circle only.

☐ Yes

☐ No

GEN13F

If Yes....
F. How did the policy change, and what is the status of implementation?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

GEN14A

Principal Preparation

G14. A. What is the main preparation route(s) for principals of schools with fourth grade students?

Example: "In addition to receiving their teaching qualifications, most principals have a degree in educational leadership."

B. According to the main principal preparation route, what are the current requirements for being a principal of a school with fourth grade students?

Check *one* circle for each line.

GEN14BA

	Yes	No
a) Teaching experience	☐	☐

GEN14BB

b) Completion of a specialized school leadership training program (including a school leadership degree program)	☐	☐
---	-----------------------	-----------------------

GEN14BC

c) Other Please specify below:	☐	☐
-----------------------------------	-----------------------	-----------------------

GEN14BCT

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GEN14C

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

C. In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with fourth grade students?

Check **one** circle only.

☐ Yes

☐ No

GEN14D

If Yes....

D. How did the policy change, and what is the status of implementation?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

GEN15A

G15. A. Is the main preparation route(s) for principals of schools with eighth grade students different from the main preparation route(s) for principals of schools with fourth grade students?

Check **one** circle only.

- ☐ Yes
☐ No

GEN15B

If Yes....

B. If the main preparation route(s) for principals of schools with eighth grade students is different, what is their main preparation route?

Example: "In addition to receiving their teaching qualifications, most principals have a degree in educational leadership."

C. According to the main principal preparation route, what are the current requirements for being a principal of a school with eighth grade students?

Check **one** circle for **each** line.

GEN15CA

a) Teaching experience

Yes
☐

No
☐

GEN15CB

b) Completion of a specialized school leadership training program (including a school leadership degree program)

☐

☐

GEN15CC

c) Other

☐

☐

Please specify below:

GEN15CCT

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

GEN15D

D. In the last 10 years, has there been a change in the stated official policy about the requirements for being a principal of a school with eighth grade students?

Check **one** circle only.

☐ Yes

☐ No

GEN15E

If Yes....

E. How did the policy change, and what is the status of implementation?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - MATHEMATICS MODULE - GRADE 8

MATHEMATICS MODULE - GRADE 8

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

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling 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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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - About the Eighth Grade Mathematics Curriculum

About the Eighth Grade Mathematics Curriculum

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

MA801

M1. Does your country have a national curriculum that covers mathematics instruction at the eighth grade of formal schooling?

Check **one** circle only.

☐ Yes

☐ No

MA801TA

If Yes...

Comments:

MA801TB

If No...

What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers mathematics instruction at the eighth grade of formal schooling?

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MA802A

MA802AT

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - About the Eighth Grade Mathematics Curriculum

M2. A. In what year was the 2018/2019 mathematics curriculum introduced?

Comments (e.g., status of implementation):

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - About the Eighth Grade Mathematics Curriculum

MA802B

B. Is the mathematics curriculum currently being revised?

Check one circle only.

☐ Yes

☐ No

MA802BTA

If Yes...
Please explain:

MA802BTB

If No...
Comments:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Curriculum Specifications

MA803

MA803TA

MA803TB

Curriculum Specifications

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

M3. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the eighth grade of formal schooling?

*Check **one** circle only.*

☐ Yes
 ☐ No

If Yes...
Please specify the percentage:

Comments:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Curriculum Specifications

MA804A

a) Visits by inspectors

MA804B

b) Research programs

MA804C

c) School self-evaluation

MA804D

d) National or regional examinations

MA804E

e) Other

MA804ET

Please specify below:

Yes

No

☐

☐

☐

☐

☐

☐

☐

☐

☐

☐

Comments:

MA804T

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Use of Digital Devices

Use of Digital Devices

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

MA805A

M5. A. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 8 mathematics instruction?

Check **one** circle only.

☐ Yes

☐ No

MA805AT

If Yes...

What are the statements/policies?

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MA805B

MA805BTA

MA805BTB

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Use of Digital Devices

B. Does the national curriculum contain statements/policies about student use of digital devices (e.g., computers, tablets, calculators) in grade 8 mathematics tests or examinations?

Check **one** circle only.

☐ Yes

☐ No

If Yes...

What are the statements/policies?

Comments:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Specialist Mathematics Teachers

MA806

Specialist Mathematics Teachers

M6. At what grade(s) are students first taught by mathematics subject specialists rather than general classroom teachers?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Mathematics Topics Covered

Eighth Grade Mathematics Topics Covered

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

M7. (i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if “Year 9” in your country corresponds to the eighth year of formal schooling, please choose grade 8.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., fractions in part A topic (b)], please explain in the comment field.

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
A. Number																
a) Computing with negative numbers	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
b) Concepts of fractions and decimals	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
c) Solving problems involving proportions and percents	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Comments:

MA807AA

MA807AB

MA807AC

MA807AT

MA807AAP-12

MA807ABP-12

MA807ACP-12

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Mathematics Topics Covered

M7. (continued)

(i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., fractions in part A topic (b)], please explain in the comment field.

		(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
		Check one circle for each line.			Check the corresponding grade(s) for each topic.												
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
B. Algebra																	
MA807BA	a) Simplifying and evaluating algebraic expressions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807BB	b) Simple linear equations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807BC	c) Simple linear inequalities	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807BD	d) Simultaneous (two variables) equations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807BE	e) Representation of linear and quadratic functions in tables, graphs, words, or equations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807BF	f) Properties of functions (slopes, intercepts, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807BG	g) Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807BT	Comments:																

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Mathematics Topics Covered

M7. (continued)**(i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?***Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.***(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?***If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., fractions in part A topic (b)], please explain in the comment field.*

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
C. Geometry																
MA807CA a) Geometric properties of angles, pairs of lines, and geometric shapes (triangles, quadrilaterals, and other common polygons)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807CB b) Solving problems involving perimeters, circumferences, and areas	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807CC c) Solving problems involving the Pythagorean Theorem	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807CD d) Translation, reflection, and rotation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807CE e) Congruent figures and similar triangles	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807CF f) Solving problems with three-dimensional shapes	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
MA807CT	Comments:															

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Mathematics Topics Covered

M7. (continued)

(i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., fractions in part A topic (b)], please explain in the comment field.

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
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	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
e) Calculating and interpreting statistics summarizing data distributions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
e) Theoretical and empirical probability of simple events	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
f) Theoretical and empirical probability of compound events	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - SCIENCE MODULE - GRADE 8

SCIENCE MODULE - GRADE 8

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

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling 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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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - About the Eighth Grade Science Curriculum

About the Eighth Grade Science Curriculum

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

SC801

S1. Does your country have a national curriculum that covers science instruction at the eighth grade of formal schooling?

Check one circle only.

☐ Yes☐ No

SC801TA

If Yes...
Comments:

If No...

What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers science instruction at the eighth grade of formal schooling?

SC801TB

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SC802A

SC802AT

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - About the Eighth Grade Science Curriculum

S2. A. In what year was the 2018/2019 science curriculum introduced?

Comments (e.g., status of implementation):

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SC802B

SC802BTA

SC802BTB

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - About the Eighth Grade Science Curriculum

(Continued)

B. Is the science curriculum currently being revised?

Check **one** circle only.

- ☐ Yes
- ☐ No

If Yes...
Please explain:

If No...
Comments:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Curriculum Specifications

Curriculum Specifications

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S3. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the eighth grade of formal schooling?

Check *one* circle only.

☐ Yes
 ☐ No

If Yes...
Please specify the percentage:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Curriculum Specifications

S4. How is the science curriculum implementation evaluated?

Check **one** circle for each line.

	Yes	No
SC804A a) Visits by inspectors	☐	☐
SC804B b) Research programs	☐	☐
SC804C c) School self-evaluation	☐	☐
SC804D d) National or regional examinations	☐	☐
SC804E e) Other	☐	☐
Please specify below:		

SC804ET

SC804T

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SC805

SC805T

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Use of Digital Devices

Use of Digital Devices

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S5. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 8 science instruction?

Check *one* circle only.

☐ Yes
 ☐ No

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

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Specialist Science Teachers

SC806

Specialist Science Teachers

S6. At what grade(s) are students first taught by science subject specialists rather than general classroom teachers?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Science Topics Covered

Eighth Grade Science Topics Covered

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S7. (i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., energy flow in part A topic (f)], please explain in the comment field.

		(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)													
		Check one circle for each line.			Check the corresponding grade(s) for each topic.													
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	
A. Biology																		
SC807AA	a) Differences among major taxonomic groups of organisms (plants, animals, fungi, mammals, birds, reptiles, fish, amphibians, insects)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC807AAP-12
SC807AB	b) Major organs and organ systems in humans and other organisms (structure/function, life processes)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC807ABP-12
SC807AC	c) Cells, their structure and functions, including respiration and photosynthesis as cellular processes	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC807ACP-12
SC807AD	d) Life cycles, sexual reproduction, and heredity (inherited versus acquired/learned characteristics)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC807ADP-12
SC807AE	e) Role of variation and adaptation in survival/extinction of species (including fossil evidence)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SC807AEP-12

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Science Topics Covered

SC807AF

f) Interdependence of populations of organisms in an ecosystem (e.g., carbon and water cycles, energy flow, food webs, competition, predation, human impacts on ecosystems)

SC807AFP-12

SC807AG

g) Human health (e.g., causes, transmission, and prevention of common infectious diseases, immunity) and the importance of diet, exercise, and other lifestyle choices in maintaining health

SC807AGP-12

SC807AT

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CURRICULUM QUESTIONNAIRE

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SECTION 2.7: CURRICULUM QUESTIONNAIRE – GRADE 8

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Science Topics Covered

S7. (continued)

(i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., energy flow in part A topic (f)], please explain in the comment field.

		(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
		Check one circle for each line.			Check the corresponding grade(s) for each topic.												
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
B. Chemistry																	
SC807BA	a) Particulate structure, classification, and composition of matter (protons, neutrons, electrons, atoms, molecules, elements, compounds, mixtures)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807BB	b) The periodic table as an organizing principle for the known elements	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807BC	c) Physical and chemical properties of matter	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807BD	d) Mixtures and solutions (e.g., solvent, solute, concentration/dilution)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807BE	e) Properties of common acids and bases (e.g., acids have pH less than 7, reactions with indicators produce color changes, acids and bases neutralize each other)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807BF	f) Characteristics of chemical reactions (e.g., transformation of reactants, evidence of chemical change)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807BG	g) Matter and energy in chemical reactions (conservation of matter, familiar exothermic and endothermic reactions, factors affecting reaction rates)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807BH	h) The role of electrons in chemical bonds	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Science Topics Covered

S7. (continued)

(i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., energy flow in part A topic (f)], please explain in the comment field.

		(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
		Check one circle for each line.			Check the corresponding grade(s) for each topic.												
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
SC807CA	a) Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, changes in volume and/or pressure, physical changes)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807CB	b) Energy transformation and transfer (e.g., forms of energy, energy conservation, heat, temperature, equilibrium)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807CC	c) Basic properties/behaviors of light (reflection, refraction, color, shadows, simple ray diagrams)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807CD	d) Basic properties/behaviors of sound (vibrations that produce sound, transmission through media, loudness, pitch)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807CE	e) Electric circuits (e.g., electrical conductors/insulators and the flow of electricity in series/parallel circuits)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807CF	f) Properties and uses of permanent magnets and electromagnets	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807CG	g) Motion and forces (e.g., basic description of motion, common mechanical forces, properties of forces, effects of forces, simple machines, buoyancy, effects of density and pressure)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Eighth Grade Science Topics Covered

S7. (continued)

(i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

(ii) Across grades from preprimary through upper secondary education, at what grade(s) are the topics primarily intended to be taught?

If there are not any specifications to this detail, please indicate national expectations to the best of your ability. If part of a topic does not apply [e.g., energy flow in part A topic (f)], please explain in the comment field.

		(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
		Check one circle for each line.			Check the corresponding grade(s) for each topic.												
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
SC807DA	a) Earth's structure and physical features (e.g., Earth's crust, mantle, and core; composition and relative distribution of water; composition of Earth's atmosphere)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807DB	b) Earth's processes, cycles, and history (e.g., rock cycle, major geological events, formation of fossils and fossil fuels, water cycle, weather versus climate)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807DC	c) Earth's resources, their use, and conservation (e.g., renewable/nonrenewable resources, human use of land and water resources)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
SC807DD	d) Earth in the Solar System and the universe (phenomena on Earth: seasons, eclipses, tides, phases of moon; members of the Solar System; physical features of Earth)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

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