

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

# TIMSS



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College



TIMSS 2011 User Guide  
for the International Database

# Supplement 1

International Version of the TIMSS 2011  
Background and Curriculum Questionnaires

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TIMSS 2011 User Guide for the International Database

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# Supplement 1

## *International Version of the TIMSS 2011 Background and Curriculum Questionnaires*

### **Overview**

The TIMSS 2011 International Database includes data for all questionnaires administered as part of the TIMSS 2011 assessment. This supplement contains the international version of the TIMSS 2011 background questionnaires and curriculum questionnaires in the following 10 sections:

Section 1:	Fourth Grade Student Questionnaire
Section 2:	Fourth Grade Home Questionnaire
Section 3:	Fourth Grade Teacher Questionnaire
Section 4:	Fourth Grade School Questionnaire
Section 5:	Fourth Grade Curriculum Questionnaire
Section 6:	Eighth Grade Student Questionnaire – General/Integrated Science Version & Eighth Grade Student Questionnaire – Separate Science Subjects Version
Section 7:	Eighth Grade Mathematics Teacher Questionnaire
Section 8:	Eighth Grade Science Teacher Questionnaire
Section 9:	Eighth Grade School Questionnaire
Section 10:	Eighth Grade Curriculum Questionnaire

Each section contains a table that lists detailed information for each question, followed by the international version of the questionnaire with variable names labeled in the margin. For the eighth grade student questionnaires, although there are two versions of the questionnaire, only one table is presented where it is indicated whether the variables were included in the general/integrated science, the separate science subjects, or both questionnaires.

Exhibits S1.1 through S1.10 list the questions for each of the TIMSS 2011 questionnaires by their location and variable name, and indicate whether a variable was available in 2007 (with the exception of the Home Questionnaire and the Curriculum Questionnaires).

The TIMSS 2011 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 (<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 background questionnaires are documented in Supplement 2.

# Section 1

## Fourth Grade – Student Questionnaire



**Exhibit S1.1: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Fourth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQG-01	ASBG01	Are you a girl or boy?	AS4GSEX	
SQG-02A	ASBG02A	What month were you born?	AS4GBRTM	
SQG-02B	ASBG02B	What year were you born?	AS4GBRTY	
SQG-03	ASBG03	How often do you speak <language of test> at home?	AS4GOLAN	Modified response options in 2011
SQG-04	ASBG04	About how many books are there in your home?	AS4GBOOK	
SQG-05A	ASBG05A	Do you have a computer at your home?	AS4GTH02	
SQG-05B	ASBG05B	Do you have a study desk/table for your use at your home?	AS4GTH03	
SQG-05C	ASBG05C	Do you have books of your very own at your home?		
SQG-05D	ASBG05D	Do you have your own room at your home?		
SQG-05E	ASBG05E	Do you have internet connection at your home?	AS4GTH05	
SQG-05F	ASBG05F	Do you have <country-specific indicator of wealth> at your home?	AS4GTH06	
SQG-05G	ASBG05G	Do you have <country-specific indicator of wealth> at your home?	AS4GTH07	
SQG-05H	ASBG05H	Do you have <country-specific indicator of wealth> at your home?	AS4GTH08	
SQG-05I	ASBG05I	Do you have <country-specific indicator of wealth> at your home?	AS4GTH09	
SQG-05J	ASBG05J	Do you have <country-specific indicator of wealth> at your home?		
SQG-05K	ASBG05K	Do you have <country-specific indicator of wealth> at your home?		
SQG-06A	ASBG06A	How often do you use a computer at home?	AS4GCHOM	Modified response options in 2011
SQG-06B	ASBG06B	How often do you use a computer at school?	AS4GCSCH	Modified response options in 2011
SQG-06C	ASBG06C	How often do you use a computer at some other place?	AS4GCELS	Modified response options in 2011
SQG-07A	ASBG07A	How often do your parents ask you what you learned in school?		
SQG-07B	ASBG07B	How often do you talk about your schoolwork with your parents?		
SQG-07C	ASBG07C	How often do your parents make sure that you set aside time for your homework?		

**Exhibit S1.1: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQG-07D	ASBG07D	How often do your parents check if you do your homework?		
SQG-08A	ASBG08A	How much do you agree that you like being in school?	AS4GALBS	
SQG-08B	ASBG08B	How much do you agree that you feel safe when you are at school?		
SQG-08C	ASBG08C	How much do you agree that you belong at school?		
SQG-09A	ASBG09A	During this year, how often were you made fun of or called names at school?		
SQG-09B	ASBG09B	During this year, how often were you left out of games or activities by other students at school?		
SQG-09C	ASBG09C	During this year, how often did someone spread lies about you at school?		
SQG-09D	ASBG09D	During this year, how often was something stolen from you at school?		
SQG-09E	ASBG09E	During this year, how often were you hit or hurt by other student(s) at school?		
SQG-09F	ASBG09F	During this year, how often were you made to do things you didn't want to do by other students at school?		
SQMS-01A	ASBM01A	How much do you agree that you enjoy learning mathematics?	AS4MAENJ	
SQMS-01B	ASBM01B	How much do you agree that you wish you did not have to study mathematics?		
SQMS-01C	ASBM01C	How much do you agree that mathematics is boring?	AS4MABOR	
SQMS-01D	ASBM01D	How much do you agree that you learn many interesting things in mathematics?		
SQMS-01E	ASBM01E	How much do you agree that you like mathematics?	AS4MALIK	
SQMS-01F	ASBM01F	How much do you agree that it is important to do well in mathematics?		
SQMS-02A	ASBM02A	How much do you agree that you know what your teacher expects you to do in your mathematics lessons?		
SQMS-02B	ASBM02B	How much do you agree that you think of things not related to the lesson in your mathematics lessons?		
SQMS-02C	ASBM02C	How much do you agree that your teacher is easy to understand in your mathematics lessons?		
SQMS-02D	ASBM02D	How much do you agree that you are interested in what your teacher is saying in your mathematics lessons?		
SQMS-02E	ASBM02E	How much do you agree that your teacher gives you interesting things to do in your mathematics lessons?		
SQMS-03A	ASBM03A	How much do you agree that you usually do well in mathematics?	AS4MAWEL	

**Exhibit S1.1: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQMS-03B	ASBM03B	How much do you agree that mathematics is harder for you than for many of your classmates?	AS4MACLM	
SQMS-03C	ASBM03C	How much do you agree that you are just not good at mathematics?	AS4MANOT	
SQMS-03D	ASBM03D	How much do you agree that you learn things quickly in mathematics?	AS4MAQKY	
SQMS-03E	ASBM03E	How much do you agree that you are good at working out difficult mathematics problems?		
SQMS-03F	ASBM03F	How much do you agree that your teacher tells you that you are good at mathematics?		
SQMS-03G	ASBM03G	How much do you agree that mathematics is harder for you than any other subject?		
SQMS-04A	ASBS04A	How much do you agree that you enjoy learning science?	AS4SAENJ	
SQMS-04B	ASBS04B	How much do you agree that you wish you did not have to study science?		
SQMS-04C	ASBS04C	How much do you agree that you read about science in your spare time?		
SQMS-04D	ASBS04D	How much do you agree that science is boring?	AS4SABOR	
SQMS-04E	ASBS04E	How much do you agree that you learn many interesting things in science?		
SQMS-04F	ASBS04F	How much do you agree that you like science?	AS4SALIK	
SQMS-04G	ASBS04G	How much do you agree that it is important to do well in science?		
SQMS-05A	ASBS05A	How much do you agree that you know what your teacher expects you to do in your science lessons?		
SQMS-05B	ASBS05B	How much do you agree that you think of things not related to the lesson in your science lessons?		
SQMS-05C	ASBS05C	How much do you agree that your teacher is easy to understand in your science lessons?		
SQMS-05D	ASBS05D	How much do you agree that you are interested in what your teacher is saying in your science lessons?		
SQMS-05E	ASBS05E	How much do you agree that your teacher gives you interesting things to do in your science lessons?		
SQMS-06A	ASBS06A	How much do you agree that you usually do well in science?	AS4SAWEL	
SQMS-06B	ASBS06B	How much do you agree that science is harder for you than for many of your classmates?	AS4SACLM	
SQMS-06C	ASBS06C	How much do you agree that you are just not good at science?	AS4SANOT	
SQMS-06D	ASBS06D	How much do you agree that you learn things quickly in science?	AS4SAQKY	



**Exhibit S1.1: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQMS-06E	ASBS06E	How much do you agree that your teacher tells you that you are good at science?		
SQMS-06F	ASBS06F	How much do you agree that science is harder for you than any other subject?		



Identification Label

**TIMSS 2011**

**Student  
Questionnaire**

**<Grade 4>**

<TIMSS>  
<National Research Center Name>  
<Address>



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International Study Center  
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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 .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I play sports .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I ride a skateboard .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

ASBG01

Are you a girl or a boy?

*Fill one circle only.*

Girl --

Boy --

### G2

ASBG02A

When were you born?

ASBG02B

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

**a) Month**

**b) Year**

January --

1998 --

February --

1999 --

March --

2000 --

April --

2001 --

May --

2002 --

June --

2003 --

July --

2004 --

August --

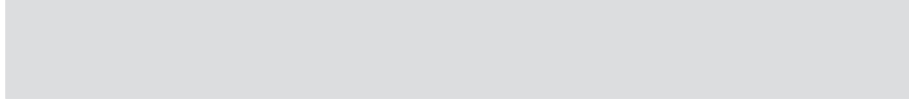
Other --

September --

October --

November --

December --



**G3**

ASBG03

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

*Fill one circle only.*

I always or 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 --

<Grade 4> Student Questionnaire

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**G4**

ASBG04

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

*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



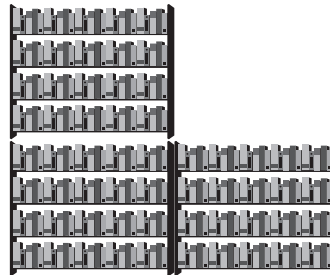
Enough to fill one bookcase (26–100 books) --  This shows 100 books



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) Computer .....  | <input type="radio"/> | <input type="radio"/> |
| ASBG05B | b) Study desk/table for your use .....                           | <input type="radio"/> | <input type="radio"/> |
| ASBG05C | c) Books of your very own (do not count your school books) ..... | <input type="radio"/> | <input type="radio"/> |
| ASBG05D | d) Your own room.....  | <input type="radio"/> | <input type="radio"/> |
| ASBG05E | e) Internet connection.....                                      | <input type="radio"/> | <input type="radio"/> |
| ASBG05F | f) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| ASBG05G | g) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| ASBG05H | h) <country-specific indicator of wealth>.....                   | <input type="radio"/> | <input type="radio"/> |
| ASBG05I | i) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| ASBG05J | j) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| ASBG05K | k) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |

**G6**

How often do you use a computer in each of these places?

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
ASBG06A	a) At home .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG06B	b) At school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG06C	c) Some other place .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**G7**

How often do the following things happen at home?

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
ASBG07A	a) My parents ask me what I am learning in school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG07B	b) I talk about my schoolwork with my parents .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG07C	c) My parents make sure that I set aside time for my homework .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG07D	d) My parents check if I do my homework .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Your School

### G8

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
ASBG08A	a) I like being in school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG08B	b) I feel safe when I am at school.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG08C	c) I feel like I belong at this school.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### G9

During this year, how often have any of the following things happened to you at school?

Fill **one** circle for each line.

		At least once a week	Once or twice a month	A few times a year	Never
ASBG09A	a) I was made fun of or called names--	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG09B	b) I was left out of games or activities by other students .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG09C	c) Someone spread lies about me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG09D	d) Something was stolen from me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG09E	e) I was hit or hurt by other student(s) (e.g., shoving, hitting, kicking).....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBG09F	f) I was made to do things I didn't want to do by other students .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Mathematics in school

### MS1

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
ASBM01A	a) I enjoy learning mathematics .....	○	○	○	○
ASBM01B	b) I wish I did not have to study mathematics .....	○	○	○	○
ASBM01C	c) Mathematics is boring .....	○	○	○	○
ASBM01D	d) I learn many interesting things in mathematics .....	○	○	○	○
ASBM01E	e) I like mathematics .....	○	○	○	○
ASBM01F	f) It is important to do well in mathematics .....	○	○	○	○

## MS2

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
ASBM02A	a) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBM02B	b) I think of things not related to the lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBM02C	c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBM02D	d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBM02E	e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**MS3**

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
ASBM03A	a) I usually do well in mathematics ---	○	○	○	○
ASBM03B	b) Mathematics is harder for me than for many of my classmates ----	○	○	○	○
ASBM03C	c) I am just not good at mathematics -	○	○	○	○
ASBM03D	d) I learn things quickly in mathematics -----	○	○	○	○
ASBM03E	e) I am good at working out difficult mathematics problems -----	○	○	○	○
ASBM03F	f) My teacher tells me I am good at mathematics -----	○	○	○	○
ASBM03G	g) Mathematics is harder for me than any other subject -----	○	○	○	○

## Science in school

### MS4

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
ASBS04A	a) I enjoy learning science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS04B	b) I wish I did not have to study science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS04C	c) I read about science in my spare time .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS04D	d) Science is boring .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS04E	e) I learn many interesting things in science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS04F	f) I like science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS04G	g) It is important to do well in science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**MS5**

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
ASBS05A	a) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS05B	b) I think of things not related to the lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS05C	c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS05D	d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ASBS05E	e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>









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# TIMSS 2011

## Student Questionnaire

<Grade 4>



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# Section 2

## Fourth Grade - Home Questionnaire



**Exhibit S1.2: Index of International Background Variables for the TIMSS 2011 Home Questionnaire - Fourth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
HQ-01A	ASBH01A	This survey was completed by mother, stepmother, or female guardian.
HQ-01B	ASBH01B	This survey was completed by father, stepfather, or male guardian.
HQ-01C	ASBH01C	This survey was completed by other.
HQ-02A	ASBH02A	Before your child began primary/elementary school, how often did you or someone else in your home read books with him or her?
HQ-02B	ASBH02B	Before your child began primary/elementary school, how often did you or someone else in your home tell stories to him or her?
HQ-02C	ASBH02C	Before your child began primary/elementary school, how often did you or someone else in your home sing songs with him or her?
HQ-02D	ASBH02D	Before your child began primary/elementary school, how often did you or someone else in your home play with alphabet toys with him or her?
HQ-02E	ASBH02E	Before your child began primary/elementary school, how often did you or someone else in your home talk about things you had done with him or her?
HQ-02F	ASBH02F	Before your child began primary/elementary school, how often did you or someone else in your home talk about what you had read with him or her?
HQ-02G	ASBH02G	Before your child began primary/elementary school, how often did you or someone else in your home play word games with him or her?
HQ-02H	ASBH02H	Before your child began primary/elementary school, how often did you or someone else in your home write letters or words with him or her?
HQ-02I	ASBH02I	Before your child began primary/elementary school, how often did you or someone else in your home read aloud signs and labels with him or her?
HQ-02J	ASBH02J	Before your child began primary/elementary school, how often did you or someone else in your home say counting rhymes or sing counting songs with him or her?
HQ-02K	ASBH02K	Before your child began primary/elementary school, how often did you or someone else in your home play with number toys with him or her?
HQ-02L	ASBH02L	Before your child began primary/elementary school, how often did you or someone else in your home count different things with him or her?
HQ-02M	ASBH02M	Before your child began primary/elementary school, how often did you or someone else in your home play games involving shapes with him or her?
HQ-02N	ASBH02N	Before your child began primary/elementary school, how often did you or someone else in your home play with building blocks or construction toys with him or her?
HQ-02O	ASBH02O	Before your child began primary/elementary school, how often did you or someone else in your home play board games or card games with him or her?
HQ-03A	ASBH03A	Did your child speak the <language of test> before he/she began school?
HQ-03B	ASBH03B	Did your child speak the <country-specific> before he/she began school?
HQ-03C	ASBH03C	Did your child speak the <country-specific> before he/she began school?
HQ-03D	ASBH03D	Did your child speak the <country-specific> before he/she began school?
HQ-03E	ASBH03E	Did your child speak the <country-specific> before he/she began school?
HQ-03F	ASBH03F	Did your child speak another language before he/she began school?

**Exhibit S1.2: Index of International Background Variables for the TIMSS 2011 Home Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
HQ-04A	ASBH04A	Did your child attend <ISCED Level 0>?
HQ-04B	ASBH04B	How long was he/she in <ISCED Level 0>?
HQ-05	ASBH05	How old was your child when he/she began primary/elementary school?
HQ-06A	ASBH06A	How well could your child recognize most of the letters of the alphabet when he/she began primary/elementary school?
HQ-06B	ASBH06B	How well could your child read some words when he/she began primary/elementary school?
HQ-06C	ASBH06C	How well could your child read sentences when he/she began primary/elementary school?
HQ-06D	ASBH06D	How well could your child write letters of the alphabet when he/she began primary/elementary school?
HQ-06E	ASBH06E	How well could your child write some words when he/she began primary/elementary school?
HQ-07A	ASBH07A	Could your child count by himself/herself when he/she began primary/elementary school?
HQ-07B	ASBH07B	Could your child recognize different shapes when he/she began primary/elementary school?
HQ-07C	ASBH07C	Could your child recognize the written numbers from 1–10 when he/she began primary/elementary school?
HQ-07D	ASBH07D	Could your child write the numbers from 1–10 when he/she began primary/elementary school?
HQ-07E	ASBH07E	Could your child do simple addition when he/she began primary/elementary school?
HQ-07F	ASBH07F	Could your child do simple subtraction when he/she began primary/elementary school?
HQ-08	ASBH08	On average, how much time does your child spend on homework in a day?
HQ-09A	ASBH09A	How often do you or someone in your home discuss your child's schoolwork with him/her?
HQ-09B	ASBH09B	How often do you or someone in your home help your child with his/her homework?
HQ-09C	ASBH09C	How often do you or someone in your home make sure your child sets aside time to do his/her homework?
HQ-09D	ASBH09D	How often do you or someone in your home ask your child what he/she learned in school?
HQ-09E	ASBH09E	How often do you or someone in your home check if your child has done his/her homework?
HQ-09F	ASBH09F	How often do you or someone in your home help your child practice his/her reading?
HQ-09G	ASBH09G	How often do you or someone in your home help your child practice his/her math skills?
HQ-09H	ASBH09H	How often do you or someone in your home talk with your child about what he/she is reading?
HQ-10A	ASBH10A	Do you think your child's school includes you in your child's education?

**Exhibit S1.2: Index of International Background Variables for the TIMSS 2011 Home Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
HQ-10B	ASBH10B	Do you think your child's school should make a greater effort to include you in your child's education?
HQ-10C	ASBH10C	Do you think your child's school provides a safe environment?
HQ-10D	ASBH10D	Do you think your child's school cares about your child's progress in school?
HQ-10E	ASBH10E	Do you think your child's school should do better at keeping you informed of his/her progress?
HQ-10F	ASBH10F	Do you think your child's school does a good job in helping him/her become better in reading?
HQ-10G	ASBH10G	Do you think your child's school does a good job in helping him/her become better in mathematics?
HQ-10H	ASBH10H	Do you think your child's school does a good job in helping him/her become better in science?
HQ-11	ASBH11	In a typical week, how much time do you usually spend reading for yourself at home, including books, magazines, newspapers, and materials for work (in print or electronically)?
HQ-12	ASBH12	When you are at home, how often do you read for your own enjoyment?
HQ-13A	ASBH13A	How much do you agree that you read only if you have to?
HQ-13B	ASBH13B	How much do you agree that you like talking about what you have read with other people?
HQ-13C	ASBH13C	How much do you agree that you like to spend your spare time reading?
HQ-13D	ASBH13D	How much do you agree that you read only if you need information?
HQ-13E	ASBH13E	How much do you agree that reading is an important activity in your home?
HQ-13F	ASBH13F	How much do you agree that you would like to have more time for reading?
HQ-13G	ASBH13G	How much do you agree that you enjoy reading?
HQ-14	ASBH14	About how many books are there in your home?
HQ-15A	ASBH15A	About how many children's books are there in your home?
HQ-15B	ASBH15B	Are these books mainly in <language of test>?
HQ-16A	ASBH16A	When talking at home with your child, what language does the child's father (or stepfather or male guardian) use most often?
HQ-16B	ASBH16B	When talking at home with your child, what language does the child's mother (or stepmother or female guardian) use most often?
HQ-17A	ASBH17A	What is the highest level of education completed by the child's father (or stepfather or male guardian)?
HQ-17	ASBH17B	What is the highest level of education completed by the child's mother (or stepmother or female guardian)?
HQ-18	ASBH18	How far in his/her education do you expect your child to go?



**Exhibit S1.2: Index of International Background Variables for the TIMSS 2011 Home Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
HQ-19A	ASBH19A	Which best describes the employment situation of the child's father (or stepfather or male guardian)?
HQ-19B	ASBH19B	Which best describes the employment situation of the child's mother (or stepmother or female guardian)?
HQ-20A	ASBH20A	What kind of work does the child's father (or stepfather or male guardian) do for his main job?
HQ-20B	ASBH20B	What kind of work does the child's mother (or stepmother or female guardian) do for her main job?



# PIRLS

Identification Label

## PIRLS & TIMSS 2011

### Learning to Read Survey

<Grade 4>

<PIRLS National  
Research Center Name>  
<Address>



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College

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# TIMSS

## Learning to Read Survey

Your child's class has been selected to participate in the Progress in International Reading Literacy Study (PIRLS) and the Trends in Mathematics and Science Study (TIMSS). PIRLS and TIMSS are research studies about how children learn to read and do mathematics and science. These studies are sponsored by the International Association for the Evaluation of Educational Achievement (IEA) and are being conducted in more than 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 or current <primary caregiver>, or jointly by both parents or <primary caregivers>.**

**1**

**This survey was completed by:**

Check **one** circle for each line.

	Yes	No	
Mother, stepmother, or female guardian -----	<input type="radio"/>	<input type="radio"/>	ASBH01A
Father, stepfather, or male guardian -----	<input type="radio"/>	<input type="radio"/>	ASBH01B
Other -----	<input type="radio"/>	<input type="radio"/>	ASBH01C

**Please turn the page**

**PIRLS & TIMSS 2011**

**Before Your Child Began Primary/Elementary School**

**2** 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.



- ASBH02A a) Read books ----- ○ — ○ — ○
- ASBH02B b) Tell stories ----- ○ — ○ — ○
- ASBH02C c) Sing songs ----- ○ — ○ — ○
- ASBH02D d) Play with alphabet toys (e.g., blocks with letters of the alphabet) ----- ○ — ○ — ○
- ASBH02E e) Talk about things you had done ----- ○ — ○ — ○
- ASBH02F f) Talk about what you had read ----- ○ — ○ — ○
- ASBH02G g) Play word games ----- ○ — ○ — ○
- ASBH02H h) Write letters or words ----- ○ — ○ — ○
- ASBH02I i) Read aloud signs and labels --- ○ — ○ — ○
- ASBH02J j) Say counting rhymes or sing counting songs ----- ○ — ○ — ○
- ASBH02K k) Play with number toys (e.g., blocks with numbers) --- ○ — ○ — ○
- ASBH02L l) Count different things ----- ○ — ○ — ○
- ASBH02M m) Play games involving shapes (e.g., shape sorting toys, puzzles) ----- ○ — ○ — ○
- ASBH02N n) Play with building blocks or construction toys ----- ○ — ○ — ○
- ASBH02O o) Play board games or card games ----- ○ — ○ — ○

**3**

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

If your child spoke more than one language at the same time, you can check "Yes" for more than one language.

Check **one** circle for each line.

- a) <language of test> ----- ○ — Yes — No ○
- b) <country-specific> ----- ○ — Yes — No ○
- c) <country-specific> ----- ○ — Yes — No ○
- d) <country-specific> ----- ○ — Yes — No ○
- e) <country-specific> ----- ○ — Yes — No ○
- f) Other ----- ○ — Yes — No ○

ASBH03A  
ASBH03B  
ASBH03C  
ASBH03D  
ASBH03E  
ASBH03F

**4** **A. Did your child attend <ISCED Level 0>?**

Check **one** circle only.

- Yes --- ○
  - No --- ○ →
- (If No, go to #5)

ASBH04A

**If Yes,**  
**B. How long was he/she in <ISCED Level 0>?**

Check **one** circle only.

- 3 years or more --- ○
- between 2 and 3 years --- ○
- 2 years --- ○
- between 1 and 2 years --- ○
- 1 year or less --- ○

ASBH04B

**Beginning Primary/  
Elementary School**

**5** ASBH05 **How old was your child when he/she began 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 primary/elementary school?**

Check **one** circle for each line.



- ASBH06A a) Recognize most of the letters of the alphabet -----
- ASBH06B b) Read some words -----
- ASBH06C c) Read sentences -----
- ASBH06D d) Write letters of the alphabet -----
- ASBH06E e) Write some words -----

**7** **Could your child do the following when he/she began primary/elementary school?**

Check **one** circle for each line.

- a) Count by himself/herself -----    
  - Up to 100 or higher
  - Up to 20
  - Up to 10
  - Not at all

ASBH07A

- b) Recognize different shapes (e.g., square, triangle, circle) -----    
  - More than 4 shapes
  - 3-4 shapes
  - 1-2 shapes
  - None

ASBH07B

- c) Recognize the written numbers from 1-10 -----    
  - All 10 numbers
  - 5-9 numbers
  - 1-4 numbers
  - None
- d) Write the numbers from 1-10 -----

ASBH07C

ASBH07D

- e) Do simple addition -----  
  - Yes
  - No
- f) Do simple subtraction -----

ASBH07E

ASBH07F

**Your Child's Schoolwork**

**8** **ASBH08** **On average, how much time does your child spend on homework in a day?**

Check **one** circle only.

- My child does not have homework ---
- 15 minutes or less ---
- 16–30 minutes ---
- 31–60 minutes ---
- More than 60 minutes ---

**9**

**9** **How often do you or someone else in your home do the following things with your child?**

Check **one** circle for each line.

- |  |   |         |
|--|---|---------|
|  | Every day or almost every day<br>Once or twice a week<br>Once or twice a month<br>Never or almost never |         |
| a) Discuss my child's schoolwork with him/her                | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09A |
| b) Help my child with his/her schoolwork                     | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09B |
| c) Make sure my child sets aside time to do his/her homework | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09C |
| d) Ask my child what he/she learned in school                | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09D |
| e) Check if my child has done his/her homework               | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09E |
| f) Help my child practice his/her reading                    | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09F |
| g) Help my child practice his/her math skills                | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09G |
| h) Talk with my child about what he/she is reading           | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> — <input type="radio"/>           | ASBH09H |

**Your Child's School**

**10** **What do you think of your child's school?**

Check **one** circle for each line.



- ASBH10A a) My child's school includes me in my child's education --- ○ — ○ — ○ — ○
- ASBH10B b) My child's school should make a greater effort to include me in my child's education ----- ○ — ○ — ○ — ○
- ASBH10C d) My child's school provides a safe environment ----- ○ — ○ — ○ — ○
- ASBH10D d) My child's school cares about my child's progress in school ----- ○ — ○ — ○ — ○
- ASBH10E e) My child's school should do better at keeping me informed of his/her progress ----- ○ — ○ — ○ — ○
- ASBH10F f) My child's school does a good job in helping him/her become better in reading ----- ○ — ○ — ○ — ○
- ASBH10G g) My child's school does a good job in helping him/her become better in mathematics ----- ○ — ○ — ○ — ○
- ASBH10H h) My child's school does a good job in helping him/her become better in science ----- ○ — ○ — ○ — ○

**Literacy in the Home**

**11** **In a typical week, how much time do you usually spend reading for yourself at home, including books, magazines, newspapers, and materials for work (in print or electronically)?**

ASBH11

Check **one** circle only.

- Less than one hour a week --- ○
- 1–5 hours a week --- ○
- 6–10 hours a week --- ○
- More than 10 hours a week --- ○

**12** **When you are at home, how often do you read for your own enjoyment?**

ASBH12

Check **one** circle only.

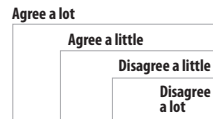
- Every day or almost every day --- ○
- Once or twice a week --- ○
- Once or twice a month --- ○
- Never or almost never --- ○



**13**

Please indicate how much you agree with the following statements about reading.

Check **one** circle for each line.



- ASBH13A a) I read only if I have to ----- ○ — ○ — ○ — ○
- ASBH13B b) I like talking about what I read with other people ----- ○ — ○ — ○ — ○
- ASBH13C c) I like to spend my spare time reading ----- ○ — ○ — ○ — ○
- ASBH13D d) I read only if I need information ----- ○ — ○ — ○ — ○
- ASBH13E e) Reading is an important activity in my home ----- ○ — ○ — ○ — ○
- ASBH13F f) I would like to have more time for reading ----- ○ — ○ — ○ — ○
- ASBH13G g) I enjoy reading ----- ○ — ○ — ○ — ○

**14**

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

ASBH14

Check **one** circle only.

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

**15**

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

ASBH15A

Check **one** circle only.

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

B. Are these books mainly in <language of test>?

ASBH15B

Check **one** circle only.

- Yes --- ○
- No --- ○



ASBH16A  
ASBH16B

**16** **When talking at home with your child, what language does the child's father (or stepfather or male guardian) use most often? What language does the child's mother (or stepmother or female guardian) use most often?**

Check **one** circle in each column.

	Child's father	Child's mother
a) <language of test> -----	<input type="radio"/>	<input type="radio"/>
b) <country-specific> -----	<input type="radio"/>	<input type="radio"/>
c) <country-specific> -----	<input type="radio"/>	<input type="radio"/>
d) <country-specific> -----	<input type="radio"/>	<input type="radio"/>
e) <country-specific> -----	<input type="radio"/>	<input type="radio"/>
f) Other -----	<input type="radio"/>	<input type="radio"/>
g) Not applicable -----	<input type="radio"/>	<input type="radio"/>

ASBH17A  
ASBH17B

**17** **What is the highest level of education completed by the child's father (or stepfather or male guardian) and mother (or stepmother or female guardian)?**

Check **one** circle in each column.

	Child's father	Child's mother
a) Did not go to school -----	<input type="radio"/>	<input type="radio"/>
b) Some <ISCED Level 1 or 2> -----	<input type="radio"/>	<input type="radio"/>
c) <ISCED Level 2> -----	<input type="radio"/>	<input type="radio"/>
d) <ISCED Level 3> -----	<input type="radio"/>	<input type="radio"/>
e) <ISCED Level 4> -----	<input type="radio"/>	<input type="radio"/>
f) <ISCED Level 5B> -----	<input type="radio"/>	<input type="radio"/>
g) <ISCED Level 5A, first degree> -----	<input type="radio"/>	<input type="radio"/>
h) Beyond <ISCED Level 5A, first degree> -----	<input type="radio"/>	<input type="radio"/>
i) Not applicable -----	<input type="radio"/>	<input type="radio"/>



**18** \_\_\_\_\_  
 ASBH18 **How far in his/her education do you expect your child to go?**

*Check one circle only.*

- Finish <ISCED Level 2>---
- Finish <ISCED Level 3>---
- Finish <ISCED Level 4>---
- Finish <ISCED Level 5B>---
- Finish <ISCED Level 5A, first degree>---
- Beyond <ISCED Level 5A, first degree>---

**19** \_\_\_\_\_  
 ASBH19A **Which best describes the employment situation of the child's father (or stepfather or male guardian) and mother (or stepmother or female guardian)?**  
 ASBH19B

*Check one circle in each column.*

- |  | <u>Child's father</u> | <u>Child's mother</u> |
|--|-----------------------|-----------------------|
| a) Working at least full-time for pay (this could be one or more full-time jobs or several part-time jobs that add up to full-time work) ----- | <input type="radio"/> | <input type="radio"/> |
| b) Working part-time only for pay -----  | <input type="radio"/> | <input type="radio"/> |
| c) Not working for pay -----   | <input type="radio"/> | <input type="radio"/> |
| d) Other -----   | <input type="radio"/> | <input type="radio"/> |
| e) Not applicable -----  | <input type="radio"/> | <input type="radio"/> |



**20**

ASBH20A  
ASBH20B

**What kind of work do the child's father (or stepfather or male guardian) and mother (or stepmother or female guardian) do for their main jobs?**

For each, check the circle for the job category that best describes what he/she does. Each category has a few examples to help you decide the correct category. If the father or mother is not working now, think about the last job he/she had.

Check **one** circle in each column.

	Child's father	Child's mother
<b>a) Has never worked for pay</b> -----	<input type="radio"/>	<input type="radio"/>
<b>b) Small Business Owner</b> ----- <small>Includes owners of small businesses (fewer than 25 employees) such as retail shops, services, restaurants</small>	<input type="radio"/>	<input type="radio"/>
<b>c) Clerk</b> ----- <small>Includes office clerks; secretaries; typists; data entry operators; customer service clerks</small>	<input type="radio"/>	<input type="radio"/>
<b>d) Service or Sales Worker</b> ----- <small>Includes travel attendants; restaurant service workers; personal care workers; protective service workers; junior military and police; salespersons; street vendors</small>	<input type="radio"/>	<input type="radio"/>
<b>e) Skilled Agricultural or Fishery Worker</b> ----- <small>Includes farmers; forestry workers; fishery workers; hunters and trappers</small>	<input type="radio"/>	<input type="radio"/>
<b>f) Craft or Trade Worker</b> ----- <small>Includes builders, carpenters, plumbers, electricians, metal workers; machine mechanics; handicraft workers</small>	<input type="radio"/>	<input type="radio"/>
<b>g) Plant or Machine Operator</b> ----- <small>Includes plant and machine operators; assembly-line operators; motor-vehicle drivers</small>	<input type="radio"/>	<input type="radio"/>
<b>h) General Laborers</b> ----- <small>Includes domestic helpers and cleaners; building caretakers; messengers, porters, and doorkeepers; farm, fishery, agricultural, and construction workers</small>	<input type="radio"/>	<input type="radio"/>
<b>i) Corporate Manager or Senior Official</b> ----- <small>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</small>	<input type="radio"/>	<input type="radio"/>
<b>j) Professional</b> ----- <small>Includes scientists; mathematicians; computer scientists; architects; engineers; life science and health professionals; teachers; legal professionals; social scientists; writers and artists; religious professionals</small>	<input type="radio"/>	<input type="radio"/>
<b>k) Technician or Associate Professional</b> ----- <small>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</small>	<input type="radio"/>	<input type="radio"/>
<b>l) Not applicable</b> -----	<input type="radio"/>	<input type="radio"/>

Thank You



BOSTON  
COLLEGE

timssandpirls.bc.edu

**PIRLS &  
TIMSS 2011**

**Learning  
to Read  
Survey**

**<Grade 4>**

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

20

Learning to Read Survey



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for the Evaluation of  
Educational Achievement



# Section 3

## Fourth Grade – Teacher Questionnaire



**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-01	ATBG01	By the end of this school year, how many years will you have been teaching altogether?	AT4GTAUT	
TQG-02	ATBG02	Are you female or male?	AT4GSEX	
TQG-03	ATBG03	How old are you?	AT4GAGE	
TQG-04	ATBG04	What is the highest level of formal education you have completed?	AT4GFEDC	
TQG-05AA	ATBG05AA	During your <post-secondary> education, was education—primary/elementary your major or main area of study?	AT4GPSEP	
TQG-05AB	ATBG05AB	During your <post-secondary> education, was education—secondary your major or main area of study?	AT4GPSES	
TQG-05AC	ATBG05AC	During your <post-secondary> education, was mathematics your major or main area of study?	AT4MPSMA	
TQG-05AD	ATBG05AD	During your <post-secondary> education, was science your major or main area of study?	AT4SPSSC	
TQG-05AE	ATBG05AE	During your <post-secondary> education, was <language of test> your major or main area of study?		
TQG-05AF	ATBG05AF	During your <post-secondary> education, was other your major or main area of study?	AT4GPSOT	
TQG-05BA	ATBG05BA	If your major or main area of study was education, was mathematics your <specialization>?	AT4MEDMA	
TQG-05BB	ATBG05BB	If your major or main area of study was education, was science your <specialization>?	AT4SEDSC	
TQG-05BC	ATBG05BC	If your major or main area of study was education, was language/reading your <specialization>?	AT4GEDLR	
TQG-05BD	ATBG05BD	If your major or main area of study was education, was other your <specialization>?	AT4GEDOT	
TQG-06A	ATBG06A	How would you characterize teachers' job satisfaction within your school?	AT4GCHTS	
TQG-06B	ATBG06B	How would you characterize teachers' understanding of the school's curricular goals within your school?	AT4GCHTU	
TQG-06C	ATBG06C	How would you characterize teachers' degree of success in implementing the school's curriculum within your school?	AT4GCHTC	
TQG-06D	ATBG06D	How would you characterize teachers' expectations for student achievement within your school?	AT4GCHES	
TQG-06E	ATBG06E	How would you characterize parental support for student achievement within your school?	AT4GCHPS	
TQG-06F	ATBG06F	How would you characterize parental involvement in school activities within your school?	AT4GCHPI	



**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-06G	ATBG06G	How would you characterize students' regard for school property within your school?	AT4GCHSR	
TQG-06H	ATBG06H	How would you characterize students' desire to do well in school within your school?	AT4GCHSD	
TQG-07A	ATBG07A	Thinking about your current school, indicate the extent to which you agree or disagree that this school is located in a safe neighborhood.	AT4GCUSN	
TQG-07B	ATBG07B	Thinking about your current school, indicate the extent to which you agree or disagree that you feel safe at this school.	AT4GCUSA	
TQG-07C	ATBG07C	Thinking about your current school, indicate the extent to which you agree or disagree that this school's security policies and practices are sufficient.	AT4GCUAS	
TQG-07D	ATBG07D	Thinking about your current school, indicate the extent to which you agree or disagree that the students behave in an orderly manner.		
TQG-07E	ATBG07E	Thinking about your current school, indicate the extent to which you agree or disagree that the students are respectful of the teachers.		
TQG-08A	ATBG08A	In your current school, how severe is the problem that the school building needs significant repair?	AT4GSPBR	Modified response options in 2011
TQG-08B	ATBG08B	In your current school, how severe is the problem that classrooms are overcrowded?	AT4GSPCO	Modified response options in 2011
TQG-08C	ATBG08C	In your current school, how severe is the problem that teachers have too many teaching hours?		Modified response options in 2011
TQG-08D	ATBG08D	In your current school, how severe is the problem that teachers do not have adequate workspace (e.g. for preparation, collaboration, or meeting with students)?	AT4GSPWO	Modified wording and response options in 2011
TQG-08E	ATBG08E	In your current school, how severe is the problem that teachers do not have adequate instructional materials and supplies?		
TQG-09AA	ATBG09AA	Do you use computers in your teaching for preparation?		
TQG-09AB	ATBG09AB	Do you use computers in your teaching for administration?		
TQG-09AC	ATBG09AC	Do you use computers in your teaching for classroom instruction?		
TQG-09BA	ATBG09BA	How much do you agree that you feel comfortable using computers in your teaching?		
TQG-09BB	ATBG09BB	How much do you agree you that when you have technical problems, you have ready access to computer support staff in your school?		
TQG-09BC	ATBG09BC	How much do you agree you that you receive adequate support for integrating computers in your teaching activities?		
TQG-10A	ATBG10A	How often do you discuss how to teach a particular topic with other teachers?	AT4GOTDC	Modified wording in 2011
TQG-10B	ATBG10B	How often do you collaborate in planning and preparing instructional materials with other teachers?	AT4GOTPM	Modified wording in 2011

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-10C	ATBG10C	How often do you share what you have learned about your teaching experiences with other teachers?		
TQG-10D	ATBG10D	How often do you visit another classroom to learn more about teaching?	AT4GOTVT	Modified wording in 2011
TQG-10E	ATBG10E	How often do you work together with other teachers to try out new ideas?		
TQG-11A	ATBG11A	How much do you agree that you are content with your profession as a teacher?		
TQG-11B	ATBG11B	How much do you agree that you are satisfied with being a teacher at this school?		
TQG-11C	ATBG11C	How much do you agree that you had more enthusiasm when you began teaching than you have now?		
TQG-11D	ATBG11D	How much do you agree that you do important work as a teacher?		
TQG-11E	ATBG11E	How much do you agree that you plan to continue as a teacher for as long as you can?		
TQG-11F	ATBG11F	How much do you agree that you are frustrated as a teacher?		
TQG-12A	ATBG12A	How many students are in this class?	AT4MSTUD AT4SSTUD	Separate for mathematics and science in 2007
TQG-12B	ATBG12B	How many of the students in #12A are in <fourth-grade>?	AT4MSTDQ AT4SSTDQ	Separate for mathematics and science in 2007
TQG-13	ATBG13	How many <fourth-grade> students experience difficulties understanding spoken <language of test>?		
TQG-14A	ATBG14A	Do you teach the class <language of test>/reading?		
TQG-14B	ATBG14B	Do you teach the class mathematics?		
TQG-14C	ATBG14C	Do you teach the class science?		
TQG-15A	ATBG15A	How often do you summarize what students should have learned from the lesson?		
TQG-15B	ATBG15B	How often do you relate the lesson to students' daily lives?		
TQG-15C	ATBG15C	How often do you use questioning to elicit reasons and explanations?		
TQG-15D	ATBG15D	How often do you encourage all students to improve their performance?		
TQG-15E	ATBG15E	How often do you praise students for good effort?		

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-15F	ATBG15F	How often do you bring interesting materials to class?		
TQG-16A	ATBG16A	In your view, to what extent does students lacking prerequisite knowledge or skills limit how you teach this class?		
TQG-16B	ATBG16B	In your view, to what extent does students suffering from lack of basic nutrition limit how you teach this class?		
TQG-16C	ATBG16C	In your view, to what extent does students suffering from not enough sleep limit how you teach this class?		
TQG-16D	ATBG16D	In your view, to what extent does students with special needs (e.g., physical disabilities, mental or emotional/psychological impairment) limit how you teach this class?	AT4MVMSS AT4SVSSS	Separate for mathematics and science in 2007
TQG-16E	ATBG16E	In your view, to what extent do disruptive students limit how you teach this class?	AT4MVMDS AT4SVSDS	Separate for mathematics and science in 2007
TQG-16F	ATBG16F	In your view, to what extent do uninterested students limit how you teach this class?	AT4MVMUS AT4SVSUS	Separate for mathematics and science in 2007
TQG-17A	ATBG17A	For the typical student in this class, how often do you meet or talk individually with the student's parents to discuss his/her learning progress?		
TQG-17B	ATBG17B	For the typical student in this class, how often do you send home a progress report on the student's learning?		
TQM-01A	ATBM01A	In a typical week, how much time (hours) do you spend teaching mathematics to the students in this class?		Hours and minutes not separate variables in 2007
TQM-01B	ATBM01B	In a typical week, how much time (minutes) do you spend teaching mathematics to the students in this class?	AT4MTIMT	Hours and minutes not separate variables in 2007
TQM-02A	ATBM02A	In teaching mathematics to this class, how confident do you feel answering students' questions about mathematics?		
TQM-02B	ATBM02B	In teaching mathematics to this class, how confident do you feel showing students a variety of problem solving strategies?		
TQM-02C	ATBM02C	In teaching mathematics to this class, how confident do you feel providing challenging tasks for capable students?		
TQM-02D	ATBM02D	In teaching mathematics to this class, how confident do you feel adapting your teaching to engage students' interest?		
TQM-02E	ATBM02E	In teaching mathematics to this class, how confident do you feel helping students appreciate the value of learning mathematics?		
TQM-03A	ATBM03A	In teaching mathematics to this class, how often do you usually ask students to listen to you explain how to solve problems?		
TQM-03B	ATBM03B	In teaching mathematics to this class, how often do you usually ask students to memorize rules, procedures, and facts?	AT4MASMF	Modified wording in 2011
TQM-03C	ATBM03C	In teaching mathematics to this class, how often do you usually ask students to work problems with your guidance?		

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-03D	ATBM03D	In teaching mathematics to this class, how often do you usually ask students to work problems together in the whole class with your direct guidance?		
TQM-03E	ATBM03E	In teaching mathematics to this class, how often do you usually ask students to work problems while you are occupied by other tasks?		
TQM-03F	ATBM03F	In teaching mathematics to this class, how often do you usually ask students to explain their answers?	AT4MASEA	
TQM-03G	ATBM03G	In teaching mathematics to this class, how often do you usually ask students to relate what they are learning in mathematics to their daily lives?	AT4MASDL	
TQM-03H	ATBM03H	In teaching mathematics to this class, how often do you usually ask students to take a written test or quiz?		
TQM-04A	ATBM04A	When you teach mathematics to this class, how do you use textbooks?	AT4MTBTC AT4MTXBU	Was two variables in 2007
TQM-04B	ATBM04B	When you teach mathematics to this class, how do you use workbooks or worksheets?		
TQM-04C	ATBM04C	When you teach mathematics to this class, how do you use concrete objects or materials that help students understand quantities or procedures?		
TQM-04D	ATBM04D	When you teach mathematics to this class, how do you use computer software for mathematics instruction?		
TQM-05	ATBM05	Are the students in this class permitted to use calculators during mathematics lessons?	AT4MCAML	
TQM-06A	ATBM06A	Do the students in this class have computer(s) available to use during their mathematics lessons?	AT4MCOMA	
TQM-06B	ATBM06B	Do any of the computer(s) have access to the Internet?	AT4MINTA	
TQM-06CA	ATBM06CA	How often do you have the students explore mathematics principles and concepts on the computer?		
TQM-06CB	ATBM06CB	How often do you have the students practice skills and procedures on the computer?		
TQM-06CC	ATBM06CC	How often do you have the students look up ideas and information on the computer?		
TQM-07AA	ATBM07AA	When have the students in the TIMSS class been taught the topic of concepts of whole numbers, including place value and ordering?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07AB	ATBM07AB	When have the students in the TIMSS class been taught the topic of adding, subtracting, multiplying, and/or dividing with whole numbers?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07AC	ATBM07AC	When have the students in the TIMSS class been taught the topic of concepts of fractions?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07AD	ATBM07AD	When have the students in the TIMSS class been taught adding and subtracting with fractions?	See Question TQ1-22 in 2007 for sub-topics	

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-07AE	ATBM07AE	When have the students in the TIMSS class been taught concepts of decimals, including place value and ordering?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07AF	ATBM07AF	When have the students in the TIMSS class been taught the topic of adding and subtracting with decimals?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07AG	ATBM07AG	When have the students in the TIMSS class been taught the topic of number sentences?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07AH	ATBM07AH	When have the students in the TIMSS class been taught the topic of number patterns?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07BA	ATBM07BA	When have the students in the TIMSS class been taught the topic of lines: measuring, estimating length of; parallel and perpendicular lines?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07BB	ATBM07BB	When have the students in the TIMSS class been taught the topic of comparing and drawing angles?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07BC	ATBM07BC	When have the students in the TIMSS class been taught the topic of using informal coordinate systems to locate points in a plane?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07BD	ATBM07BD	When have the students in the TIMSS class been taught the topic of elementary properties of common geometric shapes?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07BE	ATBM07BE	When have the students in the TIMSS class been taught the topic of reflections and rotations?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07BF	ATBM07BF	When have the students in the TIMSS class been taught the topic of relationships between two-dimensional and three-dimensional shapes?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07BG	ATBM07BG	When have the students in the TIMSS class been taught the topic of finding and estimating areas, perimeters and volumes?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07CA	ATBM07CA	When have the students in the TIMSS class been taught the topic of reading data from tables, pictographs, bar graphs, or pie charts?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07CB	ATBM07CB	When have the students in the TIMSS class been taught the topic of drawing conclusions from data displays?	See Question TQ1-22 in 2007 for sub-topics	
TQM-07CC	ATBM07CC	When have the students in the TIMSS class been taught the topic of displaying data using tables, pictographs, and bar graphs?	See Question TQ1-22 in 2007 for sub-topics	
TQM-08A	ATBM08A	By the end of this school year, approximately what percentage of teaching time will you have spent on the number content area for the students in this class?	AT4MTTNU	
TQM-08B	ATBM08B	By the end of this school year, approximately what percentage of teaching time will you have spent on the geometric shapes and measures content area for the students in this class?	AT4MTTGM	
TQM-08C	ATBM08C	By the end of this school year, approximately what percentage of teaching time will you have spent on the data display content area for the students in this class?	AT4MTTDD	

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-08D	ATBM08D	By the end of this school year, approximately what percentage of teaching time will you have spent on other content areas for the students in this class?	AT4MCOTH	
TQM-09A	ATBM09A	How often do you usually assign mathematics homework to the students in this class?		
TQM-09B	ATBM09B	When you assign mathematics homework to the students in this class, about how many minutes do you usually assign?	AT4MHWKM	Modified response options in 2011
TQM-09CA	ATBM09CA	How often do you correct mathematics homework assignments and give feedback to students for this class?		
TQM-09CB	ATBM09CB	How often do you discuss the mathematics homework assignments in class?		
TQM-09CC	ATBM09CC	How often do you monitor whether or not the mathematics homework assignments were completed for this class?		
TQM-10A	ATBM10A	How much emphasis do you place on the evaluation of students' ongoing work to monitor students' progress in mathematics?		
TQM-10B	ATBM10B	How much emphasis do you place on the classroom tests to monitor students' progress in mathematics?		
TQM-10C	ATBM10C	How much emphasis do you place on the national or regional achievement tests to monitor students' progress in mathematics?		
TQM-11A	ATBM11A	In the past two years, have you participated in professional development in mathematics content?	AT4MPDMT	
TQM-11B	ATBM11B	In the past two years, have you participated in professional development in mathematics pedagogy/instruction?	AT4MPDMP	
TQM-11C	ATBM11C	In the past two years, have you participated in professional development in mathematics curriculum?	AT4MPDMC	
TQM-11D	ATBM11D	In the past two years, have you participated in professional development in integrating information technology into mathematics?	AT4MPDIT	
TQM-11E	ATBM11E	In the past two years, have you participated in professional development in mathematics assessment?	AT4MPDMA	
TQM-11F	ATBM11F	In the past two years, have you participated in professional development in addressing individual students' needs?		
TQM-12AA	ATBM12AA	How well prepared do you feel you are to teach concepts of whole numbers, including place value and ordering?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12AB	ATBM12AB	How well prepared do you feel you are to teach adding, subtracting, multiplying and/or dividing with whole numbers?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12AC	ATBM12AC	How well prepared do you feel you are to teach concepts of fractions?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12AD	ATBM12AD	How well prepared do you feel you are to teach adding and subtracting with fractions?	See Question TQ1-11 in 2007 for sub-topics	

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-12AE	ATBM12AE	How well prepared do you feel you are to teach concepts of decimals, including place value and ordering?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12AF	ATBM12AF	How well prepared do you feel you are to teach adding and subtracting with decimals?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12AG	ATBM12AG	How well prepared do you feel you are to teach number sentences?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12AH	ATBM12AH	How well prepared do you feel you are to teach number patterns?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12BA	ATBM12BA	How well prepared do you feel you are to teach lines: measuring, estimating of; parallel and perpendicular lines?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12BB	ATBM12BB	How well prepared do you feel you are to teach comparing and drawing angles?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12BC	ATBM12BC	How well prepared do you feel you are to teach using informal coordinate systems to locate points in a plane?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12BD	ATBM12BD	How well prepared do you feel you are to teach elementary properties of common geometric shapes?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12BE	ATBM12BE	How well prepared do you feel you are to teach reflections and rotations?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12BF	ATBM12BF	How well prepared do you feel you are to teach relationships between two-dimensional and three-dimensional shapes?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12BG	ATBM12BG	How well prepared do you feel you are to teach finding and estimating areas, perimeters and volumes?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12CA	ATBM12CA	How well prepared do you feel you are to teach reading data from tables, pictographs, bar graphs, or pie charts?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12CB	ATBM12CB	How well prepared do you feel you are to teach drawing conclusions from data displays?	See Question TQ1-11 in 2007 for sub-topics	
TQM-12CC	ATBM12CC	How well prepared do you feel you are to teach displaying data using tables, pictographs, and bar graphs?	See Question TQ1-11 in 2007 for sub-topics	
TQS-01A	ATBS01A	Is science taught mainly as a separate subject to the students in this class?	AT4SSBJ	
TQS-01BA	ATBS01BA	In a typical week, how much time (hours) do you spend teaching science to the students in this class?		Hours and minutes not separate variables in 2007

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-01BB	ATBS01BB	In a typical week, how much time (minutes) do you spend teaching science to the students in this class?	AT4SYMWT AT4SNMWT	Hours and minutes not separate variables in 2007. Science variables separate in 2007.
TQS-02A	ATBS02A	In teaching science to this class, how confident do you feel answering students' questions about science?		
TQS-02B	ATBS02B	In teaching science to this class, how confident do you feel explaining science concepts or principles by doing science experiments?		
TQS-02C	ATBS02C	In teaching science to this class, how confident do you feel providing challenging tasks for capable students?		
TQS-02D	ATBS02D	In teaching science to this class, how confident do you feel adapting your teaching to engage students' interest?		
TQS-02E	ATBS02E	In teaching science to this class, how confident do you feel helping students appreciate the value of learning science?		
TQS-03A	ATBS03A	In teaching science to this class, how often do you usually ask students to observe natural phenomena such as the weather or a plant growing and describe what they see?	AT4SCSOS	
TQS-03B	ATBS03B	In teaching science to this class, how often do you usually ask students to watch you demonstrate an experiment or investigation?	AT4SCSWE	Modified wording in 2007
TQS-03C	ATBS03C	In teaching science to this class, how often do you usually ask students to design or plan experiments or investigations?	AT4SCSDP	
TQS-03D	ATBS03D	In teaching science to this class, how often do you usually ask students to conduct experiments or investigations?	AT4SCSDI	
TQS-03E	ATBS03E	In teaching science to this class, how often do you usually ask students to read their textbooks or other resource materials?	AT4SCSRO	
TQS-03F	ATBS03F	In teaching science to this class, how often do you usually ask students to memorize facts and principles?	AT4SCSHF	
TQS-03G	ATBS03G	In teaching science to this class, how often do you usually ask students to give explanations about something they are studying?	AT4SCSGS	
TQS-03H	ATBS03H	In teaching science to this class, how often do you usually ask students to relate what they are learning in science to their daily lives?	AT4SCSDL	
TQS-03I	ATBS03I	In teaching science to this class, how often do you usually ask students to do field work outside of class?		
TQS-03J	ATBS03J	In teaching science to the students in this class, how often do you usually ask students to take a written test or quiz?		
TQS-04A	ATBS04A	When you teach science to this class, how do you use textbooks?	AT4STBTC AT4STXBU	Was two variables in 2007
TQS-04B	ATBS04B	When you teach science to this class, how do you use workbooks or worksheets?		
TQS-04C	ATBS04C	When you teach science to this class, how do you use science equipment and materials?		



**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-04D	ATBS04D	When you teach science to this class, how do you use computer software for science instruction?		
TQS-04E	ATBS04E	When you teach science to this class, how do you use reference materials?		
TQS-05A	ATBS05A	Do the students in this class have computer(s) available to use when you are teaching science?	AT4SCOMA	
TQS-05B	ATBS05B	Do any of the computer(s) have access to the Internet?	AT4SINTA	
TQS-05CA	ATBS05CA	How often do you have the students practice skills and procedures on the computer?		
TQS-05CB	ATBS05CB	How often do you have the students look up ideas and information on the computer?		
TQS-05CC	ATBS05CC	How often do you have the students do scientific procedures or experiments on the computer?		
TQS-05CD	ATBS05CD	How often do you have students study natural phenomena through simulations on the computer?		
TQS-06AA	ATBS06AA	When have the students in the TIMSS class been taught the topic of major body structures and their functions in humans and other organisms?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06AB	ATBS06AB	When have the students in the TIMSS class been taught the topic of life cycles and reproduction in plants and animals?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06AC	ATBS06AC	When have the students in the TIMSS class been taught the topic of physical features, behavior, and survival of organisms living in different environments?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06AD	ATBS06AD	When have the students in the TIMSS class been taught the topic of relationships in a given community?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06AE	ATBS06AE	When have the students in the TIMSS class been taught the topic of changes in environments?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06AF	ATBS06AF	When have the students in the TIMSS class been taught the topic of human health?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06BA	ATBS06BA	When have the students in the TIMSS class been taught the topic of states of matter and differences in their physical properties including changes in state of matter by heating and cooling?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06BB	ATBS06BB	When have the students in the TIMSS class been taught the topic of classification of objects/materials based on physical properties?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06BC	ATBS06BC	When have the students in this class been taught the topic of forming and separating mixtures?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06BD	ATBS06BD	When have the students in the TIMSS class been taught the topic of familiar changes in materials?	See Question TQ1-36 in 2007 for sub-topics	

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-06BE	ATBS06BE	When have the students in the TIMSS class been taught the topic of common energy sources/forms and their practical uses?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06BF	ATBS06BF	When have the students in the TIMSS class been taught the topic of light?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06BG	ATBS06BG	When have the students in the TIMSS class been taught the topic of electrical circuits and properties of magnets?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06BH	ATBS06BH	When have the students in the TIMSS class been taught the topic of forces that cause objects to move?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06CA	ATBS06CA	When have the students in the TIMSS class been taught the topic of water on Earth and air?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06CB	ATBS06CB	When have the students in the TIMSS class been taught the topic of common features of Earth's landscape and relationship to human use?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06CC	ATBS06CC	When have the students in the TIMSS class been taught the topic of weather conditions from day to day or over the seasons?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06CD	ATBS06CD	When have the students in the TIMSS class been taught the topic of fossils of animals and plants?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06CE	ATBS06CE	When have the students in the TIMSS class been taught the topic of Earth's solar system?	See Question TQ1-36 in 2007 for sub-topics	
TQS-06CF	ATBS06CF	When have the students in the TIMSS class been taught the topic of day, night, and shadows due to Earth's rotation and its relationship to the Sun?	See Question TQ1-36 in 2007 for sub-topics	
TQS-07A	ATBS07A	By the end of this school year, approximately what percentage of teaching time will you have spent on the life science content area?	AT4SPTLS	
TQS-07B	ATBS07B	By the end of this school year, approximately what percentage of teaching time will you have spent on the physical science content area?	AT4SPTPS	
TQS-07C	ATBS07C	By the end of this school year, approximately what percentage of teaching time will you have spent on the earth science content area?	AT4SPTES	
TQS-07D	ATBS07D	By the end of this school year, approximately what percentage of teaching time will you have spent on other science content area?	AT4SCOTH	
TQS-08A	ATBS08A	How often do you usually assign science homework to the students in this class?		
TQS-08B	ATBS08B	When you assign science homework to the students in this class, about how many minutes do you usually assign?	AT4SHWKM	Modified response options in 2011
TQS-08CA	ATBS08CA	How often do you correct science homework assignments and give feedback to students for this class?		
TQS-08CB	ATBS08CB	How often do you discuss the science homework assignments in class?		

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-08CC	ATBS08CC	How often do you monitor whether or not the science homework assignments were completed for this class?		
TQS-09A	ATBS09A	How much emphasis do you place on the evaluation of students' ongoing work to monitor students' progress in science?		
TQS-09B	ATBS09B	How much emphasis do you place on classroom tests to monitor students' progress in science?		
TQS-09C	ATBS09C	How much emphasis do you place on national or regional achievement tests to monitor students' progress in science?		
TQS-10A	ATBS10A	In the past two years, have you participated in professional development in science content?	AT4SPDST	
TQS-10B	ATBS10B	In the past two years, have you participated in professional development in science pedagogy/instruction?	AT4SPDSP	
TQS-10C	ATBS10C	In the past two years, have you participated in professional development in science curriculum?	AT4SPDSC	
TQS-10D	ATBS10D	In the past two years, have you participated in professional development in integrating information technology into science?	AT4SPDIT	
TQS-10E	ATBS10E	In the past two years, have you participated in professional development in science assessment?	AT4SPDSA	
TQS-10F	ATBS10F	In the past two years, have you participated in professional development in addressing individual students' needs?		
TQS-11AA	ATBS11AA	How well prepared do you feel you are to teach major body structures and their functions in humans and other organisms?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11AB	ATBS11AB	How well prepared do you feel you are to teach life cycles and reproduction in plants and animals?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11AC	ATBS11AC	How well prepared do you feel you are to teach physical features, behavior, and survival of organisms living in different environments?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11AD	ATBS11AD	How well prepared do you feel you are to teach relationships in a given community?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11AE	ATBS11AE	How well prepared do you feel you are to teach changes in environments?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11AF	ATBS11AF	How well prepared do you feel you are to teach human health?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11BA	ATBS11BA	How well prepared do you feel you are to teach states of matter and differences in their physical properties including changes in state of matter by heating and cooling?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11BB	ATBS11BB	How well prepared do you feel you are to teach classification of objects/materials based on physical properties?	See Question TQ1-28 in 2007 for sub-topics	

**Exhibit S1.3: Index of International Background Variables for the TIMSS 2011 Teacher Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-11BC	ATBS11BC	How well prepared do you feel you are to teach forming and separating mixtures?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11BD	ATBS11BD	How well prepared do you feel you are to teach familiar changes in materials?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11BE	ATBS11BE	How well prepared do you feel you are to teach common energy sources/forms and their practical uses?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11BF	ATBS11BF	How well prepared do you feel you are to teach light?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11BG	ATBS11BG	How well prepared do you feel you are to teach electrical circuits and properties of magnets?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11BH	ATBS11BH	How well prepared do you feel you are to teach forces that cause objects to move?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11CA	ATBS11CA	How well prepared do you feel you are to teach water on Earth and air?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11CB	ATBS11CB	How well prepared do you feel you are to teach common features of Earth's landscape and relationship to human use?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11CC	ATBS11CC	How well prepared do you feel you are to teach weather conditions from day to day or over the seasons?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11CD	ATBS11CD	How well prepared do you feel you are to teach fossils of animals and plants?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11CE	ATBS11CE	How well prepared do you feel you are to teach Earth's solar system?	See Question TQ1-28 in 2007 for sub-topics	
TQS-11CF	ATBS11CF	How well prepared do you feel you are to teach day, night, and shadows due to Earth's rotation and its relationship to the Sun?	See Question TQ1-28 in 2007 for sub-topics	

Identification Label

# TIMSS 2011

## Teacher Questionnaire

<Grade 4>

<TIMSS>  
<National Research Center Name>  
<Address>



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College

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## Teacher Questionnaire

Your school has agreed to participate in TIMSS 2011 (Trends in International Mathematics and Science Study), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS measures trends in student achievement in mathematics and science and studies differences in national education systems in more than 60 countries in order to help improve teaching and learning worldwide.

This questionnaire is addressed to teachers of <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 45 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 2011

## About You

**G1** **ATBG01** **By the end of this school year, how many years will you have been teaching altogether?**

\_\_\_\_\_ years  
Please **round** to the nearest whole number.

**G2** **ATBG02** **Are you female or male?**

Check **one** circle only.

Female --

Male --

**G3** **ATBG03** **How old are you?**

Check **one** circle only.

Under 25 --

25–29 --

30–39 --

40–49 --

50–59 --

60 or more --

**G4** **ATBG04** **What is the highest level of formal education you have completed?**

Check **one** circle only.

Did not complete <ISCED Level 3> --

Finished <ISCED Level 3> --

Finished <ISCED Level 4> --

Finished <ISCED Level 5B> --

Finished <ISCED Level 5A, first degree> --

Finished <ISCED Level 5A, second degree> or higher --

**G5** **A. During your <post-secondary> education, what was your major or main area(s) of study?**

Check **one** circle for each line.

- |                                       | Yes                   | No                    |          |
|---------------------------------------|-----------------------|-----------------------|----------|
| a) Education—Primary/Elementary ----- | <input type="radio"/> | <input type="radio"/> | ATBG05AA |
| b) Education—Secondary -----          | <input type="radio"/> | <input type="radio"/> | ATBG05AB |
| c) Mathematics -----                  | <input type="radio"/> | <input type="radio"/> | ATBG05AC |
| d) Science -----                      | <input type="radio"/> | <input type="radio"/> | ATBG05AD |
| e) <language of test> -----           | <input type="radio"/> | <input type="radio"/> | ATBG05AE |
| f) Other -----                        | <input type="radio"/> | <input type="radio"/> | ATBG05AF |

**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.

- |                           | Yes                   | No                    |          |
|---------------------------|-----------------------|-----------------------|----------|
| a) Mathematics -----      | <input type="radio"/> | <input type="radio"/> | ATBG05BA |
| b) Science -----          | <input type="radio"/> | <input type="radio"/> | ATBG05BB |
| c) Language/reading ----- | <input type="radio"/> | <input type="radio"/> | ATBG05BC |
| d) Other subject -----    | <input type="radio"/> | <input type="radio"/> | ATBG05BD |

**About Your School**

**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' job satisfaction -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
ATBG06B	b) Teachers' understanding of the school's curricular goals -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
ATBG06C	c) Teachers' degree of success in implementing the school's curriculum -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
ATBG06D	d) Teachers' expectations for student achievement -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
ATBG06E	e) Parental support for student achievement -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
ATBG06F	f) Parental involvement in school activities -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
ATBG06G	g) Students' regard for school property -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
ATBG06H	h) Students' desire to do well in school -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

**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	
	a) This school is located in a safe neighborhood -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG07A
	b) I feel safe at this school -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG07B
	c) This school's security policies and practices are sufficient -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG07C
	d) The students behave in an orderly manner -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG07D
	e) The students are respectful of the teachers -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG07E

**G8**

In your current school, how severe is each problem?

Check **one** circle for each line.

		Not a problem Minor problem Moderate problem Serious problem	
	a) The school building needs significant repair -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG08A
	b) Classrooms are overcrowded -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG08B
	c) Teachers have too many teaching hours -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG08C
	d) Teachers do not have adequate workspace (e.g., for preparation, collaboration, or meeting with students) -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG08D
	e) Teachers do not have adequate instructional materials and supplies -----	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	ATBG08E

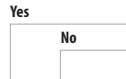


**About Being a Teacher**

**G9**

**A. Do you use computers in your teaching in any of the following ways?**

Check **one** circle for each line.



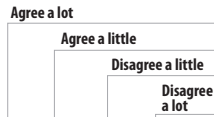
ATBG09AA  
ATBG09AB  
ATBG09AC

- a) For preparation ----- ○ — ○
- b) For administration ----- ○ — ○
- c) In your classroom instruction ----- ○ — ○

**If Yes to “classroom instruction”**

**B. How much do you agree with the following statements about using computers in your classroom instruction?**

Check **one** circle for each line.



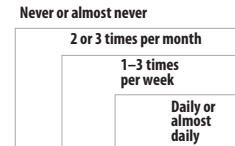
ATBG09BA  
ATBG09BB  
ATBG09BC

- a) I feel comfortable using computers in my teaching ---- ○ — ○ — ○ — ○
- b) When I have technical problems, I have ready access to computer support staff in my school ----- ○ — ○ — ○ — ○
- c) I receive adequate support for integrating computers in my teaching activities ----- ○ — ○ — ○ — ○

**G10**

**How often do you have the following types of interactions with other teachers?**

Check **one** circle for each line.



- a) Discuss how to teach a particular topic ----- ○ — ○ — ○ — ○
- b) Collaborate in planning and preparing instructional materials ----- ○ — ○ — ○ — ○
- c) Share what I have learned about my teaching experiences ----- ○ — ○ — ○ — ○
- d) Visit another classroom to learn more about teaching - ○ — ○ — ○ — ○
- e) Work together to try out new ideas ----- ○ — ○ — ○ — ○

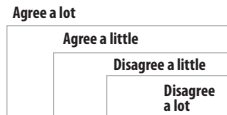
ATBG10A  
ATBG10B  
ATBG10C  
ATBG10D  
ATBG10E

**About Teaching the  
<PIRLS/TIMSS> Class**

**G11**

How much do you agree with the following statements?

Check **one** circle for each line.



- ATBG11A a) I am content with my profession as a teacher ----- ○ — ○ — ○ — ○
- ATBG11B b) I am satisfied with being a teacher at this school ----- ○ — ○ — ○ — ○
- ATBG11C c) I had more enthusiasm when I began teaching than I have now ----- ○ — ○ — ○ — ○
- ATBG11D d) I do important work as a teacher ----- ○ — ○ — ○ — ○
- ATBG11E e) I plan to continue as a teacher for as long as I can ---- ○ — ○ — ○ — ○
- ATBG11F f) I am frustrated as a teacher --- ○ — ○ — ○ — ○

**G12**

A. How many students are in this class?

ATBG12A

\_\_\_\_\_ students  
Write in a number.

B. How many of the students in #G12A are in <fourth grade>?

ATBG12B

\_\_\_\_\_ <fourth-grade> students  
Write in a number.

**G13**

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

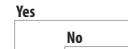
ATBG13

\_\_\_\_\_ students in this class  
Write in a number.

**G14**

Which of the following subjects do you teach to this class?

Check **one** circle for each line.



- a) I teach the class <language of test>/reading -- ○ — ○ ATBG14A
- b) I teach the class mathematics ----- ○ — ○ ATBG14B
- c) I teach the class science ----- ○ — ○ ATBG14C



**G15**

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

- ATBG15A a) Summarize what students should have learned from the lesson ----- ○ — ○ — ○ — ○
- ATBG15B b) Relate the lesson to students' daily lives ----- ○ — ○ — ○ — ○
- ATBG15C c) Use questioning to elicit reasons and explanations ----- ○ — ○ — ○ — ○
- ATBG15D d) Encourage all students to improve their performance --- ○ — ○ — ○ — ○
- ATBG15E e) Praise students for good effort ----- ○ — ○ — ○ — ○
- ATBG15F f) Bring interesting materials to class ----- ○ — ○ — ○ — ○

**G16**

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

Check **one** circle for each line.

Not applicable  
Not at all  
Some  
A lot

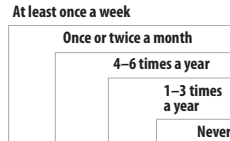
- ATBG16A a) Students lacking prerequisite knowledge or skills ----- ○ — ○ — ○ — ○
- ATBG16B b) Students suffering from lack of basic nutrition ----- ○ — ○ — ○ — ○
- ATBG16C c) Students suffering from not enough sleep ----- ○ — ○ — ○ — ○
- ATBG16D d) Students with special needs (e.g., physical disabilities, mental or emotional/psychological impairment) --- ○ — ○ — ○ — ○
- ATBG16E e) Disruptive students ----- ○ — ○ — ○ — ○
- ATBG16F f) Uninterested students ----- ○ — ○ — ○ — ○



**G17**

For the typical student in this class, how often do you do these things?

Check **one** circle for each line.



ATBG17A

a) Meet or talk individually with the student's parents to discuss his/her learning progress -----○-○-○-○-○

ATBG17B

b) Send home a progress report on the student's learning -----○-○-○-○-○

**Teaching Mathematics to the <PIRLS/TIMSS> Class**

Questions M1–M3 ask about mathematics instruction for the <fourth-grade> students in the <PIRLS/TIMSS> class.

**M1**  
**In a typical week, how much time do you spend teaching mathematics to the students in this class?**

ATBM01A  
 ATBM01B

\_\_\_\_\_ hours and \_\_\_\_\_ minutes per week  
 Write in the hours and minutes.

**M2**  
**In teaching mathematics to this class, how confident do you feel to do the following?**

ATBM02A  
 ATBM02B  
 ATBM02C  
 ATBM02D  
 ATBM02E

Check **one** circle for each line.

Very confident  
 Somewhat confident  
 Not confident

- a) Answer students' questions about mathematics ----- ○ — ○ — ○
- b) Show students a variety of problem solving strategies ----- ○ — ○ — ○
- c) Provide challenging tasks for capable students ----- ○ — ○ — ○
- d) Adapt my teaching to engage students' interest ----- ○ — ○ — ○
- e) Help students appreciate the value of learning mathematics ----- ○ — ○ — ○

**M3**  
**In teaching mathematics to this class, how often do you usually ask students to do the following?**

Check **one** circle for each line.

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

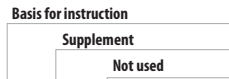
- a) Listen to me explain how to solve problems ----- ○ — ○ — ○ — ○ ATBM03A
- b) Memorize rules, procedures, and facts ----- ○ — ○ — ○ — ○ ATBM03B
- c) Work problems (individually or with peers) with my guidance ○ — ○ — ○ — ○ ATBM03C
- d) Work problems together in the whole class with direct guidance from me ----- ○ — ○ — ○ — ○ ATBM03D
- e) Work problems (individually or with peers) while I am occupied by other tasks ----- ○ — ○ — ○ — ○ ATBM03E
- f) Explain their answers ----- ○ — ○ — ○ — ○ ATBM03F
- g) Relate what they are learning in mathematics to their daily lives ----- ○ — ○ — ○ — ○ ATBM03G
- h) Take a written test or quiz ----- ○ — ○ — ○ — ○ ATBM03H

**Resources for Teaching Mathematics**

Questions M4–M6 ask about resources for teaching mathematics to the <fourth-grade> students in the <PIRLS/TIMSS> class.

**M4**  
When you teach mathematics to this class, how do you use the following resources?

Check **one** circle for each line.



- ATBM04A a) Textbooks -----  —  —
- ATBM04B b) Workbooks or worksheets -----  —  —
- ATBM04C c) Concrete objects or materials that help students understand quantities or procedures -----  —  —
- ATBM04D d) Computer software for mathematics instruction -----  —  —

**M5**  
Are the students in this class permitted to use calculators during mathematics lessons?

Check **one** circle only.

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

**M6**  
A. Do the students in this class have computer(s) available to use during their mathematics lessons?

ATBM06A

Check **one** circle only.

- Yes ---
  - No ---  →
- (If No, go to #M7)

**If Yes,**  
B. Do any of the computer(s) have access to the Internet?

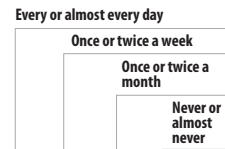
ATBM06B

Check **one** circle only.

- Yes ---
- No ---

C. How often do you have the students do the following computer activities during mathematics lessons?

Check **one** circle for each line.



- a) Explore mathematics principles and concepts -----  —  —  —
- b) Practice skills and procedures -  —  —  —
- c) Look up ideas and information -----  —  —  —

ATBM06CA

ATBM06CB

ATBM06CC

## Mathematics Topics Taught

Questions M7–M8 ask about the topics taught and the content covered in teaching mathematics to the <fourth-grade> students in the <PIRLS/TIMSS> class.

**M7**

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**
- ATBM07AA a) Concepts of whole numbers, including place value and ordering ----- ○ — ○ — ○
- ATBM07AB b) Adding, subtracting, multiplying, and/or dividing with whole numbers ----- ○ — ○ — ○
- ATBM07AC c) Concepts of fractions (fractions as parts of a whole or of a collection, or as a location on a number line; comparing and ordering fractions) ----- ○ — ○ — ○
- ATBM07AD d) Adding and subtracting with fractions ----- ○ — ○ — ○
- ATBM07AE e) Concepts of decimals, including place value and ordering ----- ○ — ○ — ○
- ATBM07AF f) Adding and subtracting with decimals ----- ○ — ○ — ○
- ATBM07AG g) Number sentences (finding the missing number, modeling simple situations with number sentences) ----- ○ — ○ — ○
- ATBM07AH h) Number patterns (extending number patterns and finding missing terms) ----- ○ — ○ — ○
- B. Geometric Shapes and Measures**
- ATBM07BA a) Lines: measuring, estimating length of; parallel and perpendicular lines ----- ○ — ○ — ○
- ATBM07BB b) Comparing and drawing angles ----- ○ — ○ — ○
- ATBM07BC c) Using informal coordinate systems to locate points in a plane (e.g., in square B4) ----- ○ — ○ — ○
- ATBM07BD d) Elementary properties of common geometric shapes ----- ○ — ○ — ○
- ATBM07BE e) Reflections and rotations ----- ○ — ○ — ○
- ATBM07BF f) Relationships between two-dimensional and three-dimensional shapes ----- ○ — ○ — ○
- ATBM07BG g) Finding and estimating areas, perimeters, and volumes ----- ○ — ○ — ○
- C. Data Display**
- ATBM07CA a) Reading data from tables, pictographs, bar graphs, or pie charts ----- ○ — ○ — ○
- ATBM07CB b) Drawing conclusions from data displays ----- ○ — ○ — ○
- ATBM07CC c) Displaying data using tables, pictographs, and bar graphs ----- ○ — ○ — ○

**Mathematics Content Coverage**

**M8**

By the end of this school year, approximately what percentage of teaching time for mathematics will you have spent during this school year on each of the following mathematics content areas for the students in this class?

Write in the percentage for each.

- |         |  |
|---------|--|
| ATBM08A | a) Number (includes computation with whole numbers, fractions, decimals and pre-algebraic concepts, including number patterns) ----- % |
| ATBM08B | b) Geometric Shapes and Measures (includes two- and three-dimensional shapes, length, area and volume) ----- %                         |
| ATBM08C | c) Data Display (includes reading, making, and interpreting tables and graphs) ----- %   |
| ATBM08D | d) Other ----- %   |
|         | <b>Total = 100%</b>  |

**Mathematics Homework**

Question M9 asks about mathematics homework for the <fourth-grade> students in the <PIRLS/TIMSS> class.

**M9**

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

ATBM09A

Check **one** circle only.

- I do not assign mathematics homework ---
- (Go to #M10)
- 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.)**

ATBM09B

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<br>Sometimes<br>Never or almost never         |          |
| a) Correct assignments and give feedback to students ----- | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> | ATBM09CA |
| b) Discuss the homework in class -----                     | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> | ATBM09CB |
| c) Monitor whether or not the homework was completed ----- | <input type="radio"/> — <input type="radio"/> — <input type="radio"/> | ATBM09CC |



**Mathematics Assessment**

Question M10 asks about mathematics assessment for the <fourth-grade> students in the <PIRLS/TIMSS> class.

**M10**

How much emphasis do you place on the following sources to monitor students' progress in mathematics?

Check **one** circle for each line.



ATBM10A

a) Evaluation of students' ongoing work ----- ○ — ○ — ○

ATBM10B

b) Classroom tests (for example, teacher-made or textbook tests) ----- ○ — ○ — ○

ATBM10C

c) National or regional achievement tests ----- ○ — ○ — ○

**Preparation to Teach Mathematics**

**M11**

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

Check **one** circle for each line.



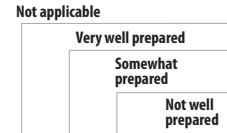
- a) Mathematics content ----- ○ — ○ ATBM11A
- b) Mathematics pedagogy/instruction ----- ○ — ○ ATBM11B
- c) Mathematics curriculum ----- ○ — ○ ATBM11C
- d) Integrating information technology into mathematics ----- ○ — ○ ATBM11D
- e) Mathematics assessment ----- ○ — ○ ATBM11E
- f) Addressing individual students' needs ----- ○ — ○ ATBM11F



**M12**

**How well prepared do you feel you are to teach the following mathematics topics?  
If a topic is not in the <fourth-grade> curriculum or you are not responsible for teaching this topic, please choose  
“Not applicable.”**

Check **one** circle for each line.



**A. Number**

- ATBM12AA a) Concepts of whole numbers, including place value and ordering ----- ○ — ○ — ○ — ○
- ATBM12AB b) Adding, subtracting, multiplying and/or dividing with whole numbers ----- ○ — ○ — ○ — ○
- ATBM12AC c) Concepts of fractions (fractions as parts of a whole or of a collection, or as a location on a number line; comparing and ordering fractions) ----- ○ — ○ — ○ — ○
- ATBM12AD d) Adding and subtracting with fractions ----- ○ — ○ — ○ — ○
- ATBM12AE e) Concepts of decimals, including place value and ordering ----- ○ — ○ — ○ — ○
- ATBM12AF f) Adding and subtracting with decimals ----- ○ — ○ — ○ — ○
- ATBM12AG g) Number sentences (finding the missing number, modeling simple situations with number sentences) ----- ○ — ○ — ○ — ○
- ATBM12AH h) Number patterns (extending number patterns and finding missing terms) ----- ○ — ○ — ○ — ○

**B. Geometric Shapes and Measures**

- ATBM12BA a) Lines: measuring, estimating length of; parallel and perpendicular lines ----- ○ — ○ — ○ — ○
- ATBM12BB b) Comparing and drawing angles ----- ○ — ○ — ○ — ○
- ATBM12BC c) Using informal coordinate systems to locate points in a plane (e.g., in square B4) ----- ○ — ○ — ○ — ○
- ATBM12BD d) Elementary properties of common geometric shapes ----- ○ — ○ — ○ — ○
- ATBM12BE e) Reflections and rotations ----- ○ — ○ — ○ — ○
- ATBM12BF f) Relationships between two-dimensional and three-dimensional shapes ----- ○ — ○ — ○ — ○
- ATBM12BG g) Finding and estimating areas, perimeters, and volumes ----- ○ — ○ — ○ — ○

**C. Data Display**

- ATBM12CA a) Reading data from tables, pictographs, bar graphs, or pie charts ----- ○ — ○ — ○ — ○
- ATBM12CB b) Drawing conclusions from data displays ----- ○ — ○ — ○ — ○
- ATBM12CC c) Displaying data using tables, pictographs, and bar graphs ----- ○ — ○ — ○ — ○

### Teaching Science to the <PIRLS/TIMSS> Class

Questions S1–S3 ask about science instruction for the <fourth-grade> students in the <PIRLS/TIMSS> class.

**S1**

ATBS01A

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

Check **one** circle only.

Yes ---

No ---

ATBS01BA

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

\_\_\_\_\_ hours and \_\_\_\_\_ minutes per week  
Write in the hours and minutes.

ATBS01BB

**S2**

**In teaching science to this class, how confident do you feel to do the following?**

Check **one** circle for each line.

Very confident  
Somewhat confident  
Not confident

a) Answer students' questions about science -----  —  —

ATBS02A

b) Explain science concepts or principles by doing science experiments -----  —  —

ATBS02B

c) Provide challenging tasks for capable students -----  —  —

ATBS02C

d) Adapt my teaching to engage students' interest -----  —  —

ATBS02D

e) Help students appreciate the value of learning science -----  —  —

ATBS02E

**Resources for Teaching Science**

**S3**

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

Check **one** circle for each line.



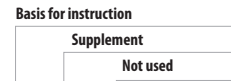
- ATBS03A a) Observe natural phenomena such as the weather or a plant growing and describe what they see ----- ○ — ○ — ○ — ○
- ATBS03B b) Watch me demonstrate an experiment or investigation --- ○ — ○ — ○ — ○
- ATBS03C c) Design or plan experiments or investigations ----- ○ — ○ — ○ — ○
- ATBS03D d) Conduct experiments or investigations ----- ○ — ○ — ○ — ○
- ATBS03E e) Read their textbooks or other resource materials ----- ○ — ○ — ○ — ○
- ATBS03F f) Have students memorize facts and principles ----- ○ — ○ — ○ — ○
- ATBS03G g) Give explanations about something they are studying ----- ○ — ○ — ○ — ○
- ATBS03H h) Relate what they are learning in science to their daily lives ----- ○ — ○ — ○ — ○
- ATBS03I i) Do field work outside the class ----- ○ — ○ — ○ — ○
- ATBS03J j) Take a written test or quiz ----- ○ — ○ — ○ — ○

Questions S4–S5 ask about resources for teaching science to the <fourth-grade> students in the <PIRLS/ TIMSS> class.

**S4**

When you teach science to this class, how do you use the following resources?

Check **one** circle for each line.



- a) Textbooks ----- ○ — ○ — ○ ATBS04A
- b) Workbooks or worksheets ----- ○ — ○ — ○ ATBS04B
- c) Science equipment and materials ----- ○ — ○ — ○ ATBS04C
- d) Computer software for science instruction ----- ○ — ○ — ○ ATBS04D
- e) Reference materials (e.g., encyclopedia, dictionary) ○ — ○ — ○ ATBS04E



**S5**

ATBS05A **A. Do the students in this class have computer(s) available to use when you are teaching science?**

Check **one** circle only.

Yes---   
 No---    
 (If No, go to #56)

ATBS05B **B. Do any of the computer(s) have access to the Internet?**

Check **one** circle only.

Yes---   
 No---

**C. How often do you have the students do the following computer activities during science lessons?**

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

- ATBS05CA a) Practice skills and procedures -
- ATBS05CB b) Look up ideas and information -----
- ATBS05CC c) Do scientific procedures or experiments -----
- ATBS05CD d) Study natural phenomena through simulations -----

### Science Topics Taught

Questions S6–S7 ask about the topics taught and the content covered in teaching science to the <fourth-grade> students in the <PIRLS/TIMSS> class.

S6

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

- ATBS06AA a) Major body structures and their functions in humans and other organisms (plants and animals) -----  —  —
- ATBS06AB b) Life cycles and reproduction in plants and animals -----  —  —
- ATBS06AC c) Physical features, behavior, and survival of organisms living in different environments -----  —  —
- ATBS06AD d) Relationships in a given community (e.g., simple food chains, predator-prey relationships) -----  —  —
- ATBS06AE e) Changes in environments (effects of human activity, pollution and its prevention) -----  —  —
- ATBS06AF f) Human health (e.g., transmission/prevention of communicable diseases, signs of health/illness, diet, exercise) -----  —  —

#### B. Physical Science

- ATBS06BA a) States of matter (solids, liquids, gases) and differences in their physical properties (shape, volume), including changes in state of matter by heating and cooling -----  —  —
- ATBS06BB b) Classification of objects/materials based on physical properties (e.g., weight/mass, volume, magnetic attraction) -----  —  —
- ATBS06BC c) Forming and separating mixtures -----  —  —
- ATBS06BD d) Familiar changes in materials (e.g., decaying, burning, rusting, cooking) -----  —  —
- ATBS06BE e) Common energy sources/forms and their practical uses (e.g., the Sun, electricity, water, wind) -----  —  —
- ATBS06BF f) Light (e.g., sources, behavior) -----  —  —
- ATBS06BG g) Electrical circuits and properties of magnets -----  —  —
- ATBS06BH h) Forces that cause objects to move (e.g., gravity, push/pull forces) -----  —  —

#### C. Earth Science

- ATBS06CA a) Water on Earth (location, types, and movement) and air (composition, proof of its existence, uses) -----  —  —
- ATBS06CB b) Common features of Earth’s landscape (e.g., mountains, plains, rivers, deserts) and relationship to human use (e.g., farming, irrigation, land development) -----  —  —
- ATBS06CC c) Weather conditions from day to day or over the seasons -----  —  —
- ATBS06CD d) Fossils of animals and plants (age, location, formation) -----  —  —
- ATBS06CE e) Earth’s solar system (planets, Sun, moon) -----  —  —
- ATBS06CF f) Day, night, and shadows due to Earth’s rotation and its relationship to the Sun -----  —  —

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<Grade 4> Teacher Questionnaire

**Science Content Coverage**

**S7**

By the end of this school year, approximately what percentage of teaching time for science will you have spent during this school year on each of the following science content areas for the students in this class?

Write in the percentage for each.

- ATBS07A a) Life science (includes environmental issues) ----- %
- ATBS07B b) Physical science (includes topics in physics and chemistry) ----- %
- ATBS07C c) Earth science (includes Earth and the solar system) ----- %
- ATBS07D d) Other ----- %

**Total = 100%**

**Science Homework**

Question S8 asks about science homework for the <fourth-grade> students in the <PIRLS/TIMSS> class.

**S8**

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

ATBS08A

Check **one** circle only.

I do not assign science homework ---  (Go to #59)

- 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.)**

ATBS08B

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

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

ATBS08CA

ATBS08CB

ATBS08CC

**Science Assessment**

Question S9 asks about science assessment for the <fourth-grade> students in the <PIRLS/TIMSS> class.

**S9**

How much emphasis do you place on the following sources to monitor students' progress in science?

Check **one** circle for each line.



ATBS09A

a) Evaluation of students' ongoing work ----- ○ — ○ — ○

ATBS09B

b) Classroom tests (for example, teacher-made or textbook tests) ----- ○ — ○ — ○

ATBS09C

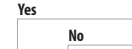
c) National or regional achievement tests ----- ○ — ○ — ○

**Preparation to Teach Science**

**S10**

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

Check **one** circle for each line.



- a) Science content ----- ○ — ○ ATBS10A
- b) Science pedagogy/instruction ----- ○ — ○ ATBS10B
- c) Science curriculum ----- ○ — ○ ATBS10C
- d) Integrating information technology into science ----- ○ — ○ ATBS10D
- e) Science assessment ----- ○ — ○ ATBS10E
- f) Addressing individual students' needs ----- ○ — ○ ATBS10F



S11

**How well prepared do you feel you are to teach the following science topics?**

**If a topic is not in the <fourth-grade> curriculum or you are not responsible for teaching this topic, please choose “Not applicable.”**

Check **one** circle for each line.

Not applicable  
Very well prepared  
Somewhat prepared  
Not well prepared

**A. Life Science**

- ATBS11AA a) Major body structures and their functions in humans and other organisms (plants and animals) -----○—○—○—○
- ATBS11AB b) Life cycles and reproduction in plants and animals -----○—○—○—○
- ATBS11AC c) Physical features, behavior, and survival of organisms living in different environments -----○—○—○—○
- ATBS11AD d) Relationships in a given community (e.g., simple food chains, predator-prey relationships) -----○—○—○—○
- ATBS11AE e) Changes in environments (effects of human activity, pollution and its prevention) -----○—○—○—○
- ATBS11AF f) Human health (e.g., transmission/prevention of communicable diseases, signs of health/illness, diet, exercise) -----○—○—○—○

**B. Physical Science**

- ATBS11BA a) States of matter (solids, liquids, gases) and differences in their physical properties (shape, volume), including changes in state of matter by heating and cooling -----○—○—○—○
- ATBS11BB b) Classification of objects/materials based on physical properties (e.g., weight/mass, volume, magnetic attraction) -----○—○—○—○
- ATBS11BC c) Forming and separating mixtures -----○—○—○—○
- ATBS11BD d) Familiar changes in materials (e.g., decaying, burning, rusting, cooking) -----○—○—○—○
- ATBS11BE e) Common energy sources/forms and their practical uses (e.g., the Sun, electricity, water, wind) -----○—○—○—○
- ATBS11BF f) Light (e.g., sources, behavior) -----○—○—○—○
- ATBS11BG g) Electrical circuits and properties of magnets -----○—○—○—○
- ATBS11BH h) Forces that cause objects to move (e.g., gravity, push/pull forces) -----○—○—○—○

**C. Earth Science**

- ATBS11CA a) Water on Earth (location, types, and movement) and air (composition, proof of its existence, uses) -----○—○—○—○
- ATBS11CB b) Common features of Earth’s landscape (e.g., mountains, plains, rivers, deserts) and relationship to human use (e.g., farming, irrigation, land development) -----○—○—○—○
- ATBS11CC c) Weather conditions from day to day or over the seasons -----○—○—○—○
- ATBS11CD d) Fossils of animals and plants (age, location, formation) -----○—○—○—○
- ATBS11CE e) Earth’s solar system (planets, Sun, moon) -----○—○—○—○
- ATBS11CF f) Day, night, and shadows due to Earth’s rotation and its relationship to the Sun -----○—○—○—○

# Thank You

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

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BOSTON  
COLLEGE

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# TIMSS 2011

## Teacher Questionnaire

<Grade 4>



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for the Evaluation of  
Educational Achievement



# Section 4

## Fourth Grade – School Questionnaire



**Exhibit S1.4: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Fourth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-01	ACBG01	What is the total enrollment of students in your school as of <first day of month PIRLS/TIMSS testing begins, 2010/2011>?	AC4GTENR	
SCQ-02	ACBG02	What is the total enrollment of <fourth-grade> students in your school as of <first day of month PIRLS/TIMSS testing begins, 2010/2011>?	AC4GEENR	
SCQ-03A	ACBG03A	Approximately what percentage of students in your school come from economically disadvantaged homes?	AC4GSBED	
SCQ-03B	ACBG03B	Approximately what percentage of students in your school come from economically affluent homes?	AC4GSBEA	
SCQ-04	ACBG04	Approximately what percentage of students in your school have <language of test> as their native language?	AC4GNALA	
SCQ-05A	ACBG05A	How many people live in the city, town, or area where your school is located?	AC4GCOMU	
SCQ-05B	ACBG05B	Which best describes the immediate area in which your school is located?		
SCQ-05C	ACBG05C	Which best characterizes the average income level of the school's immediate area?		
SCQ-06A	ACBG06A	How many days per year is your school open for instruction?	AC4GDYSO	
SCQ-06BA	ACBG06BA	What is the total instructional time (hours), excluding breaks, in a typical day?	AC4GHTIT	
SCQ-06BB	ACBG06BB	What is the total instructional time (minutes), excluding breaks, in a typical day?	AC4GMTIT	
SCQ-06C	ACBG06C	In one calendar week, how many days is the school open for instruction?	AC4GDSOI	
SCQ-07	ACBG07	What is the total number of computers that can be used for instructional purposes by <fourth-grade> students?	AC4GCMP5	Modified wording in 2011
SCQ-08A	ACBG08A	Does your school have a science laboratory that can be used by <fourth-grade> students?	AC4SSLAB	Modified wording in 2011
SCQ-09	ACBG09	Does your school have a school library?		
SCQ-09A	ACBG09A	Approximately how many books with different titles does your school library have?		
SCQ-09B	ACBG09B	Approximately how many titles of magazines and other periodicals does your school library have?		
SCQ-10AA	ACBG10AA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of instructional materials?	AC4GST01	
SCQ-10AB	ACBG10AB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of supplies?	AC4GST02	Modified wording in 2011
SCQ-10AC	ACBG10AC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of school buildings and grounds?	AC4GST03	

**Exhibit S1.4: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-10AD	ACBG10AD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of heating/cooling and lighting systems?	AC4GST04	
SCQ-10AE	ACBG10AE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of instructional space?	AC4GST05	
SCQ-10AF	ACBG10AF	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of technologically competent staff?		
SCQ-10AG	ACBG10AG	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computers for instruction?	AC4GMT07 AC4SST13	Separate for mathematics and science in 2007
SCQ-10BA	ACBG10BA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of teachers with a specialization in reading?		
SCQ-10BB	ACBG10BB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computer software for reading instruction?		
SCQ-10BC	ACBG10BC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of library books?		
SCQ-10BD	ACBG10BD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of audio-visual resources for reading instruction?		
SCQ-10CA	ACBG10CA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of teachers with a specialization in mathematics?		
SCQ-10CB	ACBG10CB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computer software for mathematics instruction?	AC4GMT08	
SCQ-10CC	ACBG10CC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of library materials relevant to mathematics instruction?	AC4GMT10	
SCQ-10CD	ACBG10CD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of audio-visual resources for mathematics instruction?	AC4GMT11	
SCQ-10CE	ACBG10CE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of calculators for mathematics instruction?	AC4GMT09	
SCQ-10DA	ACBG10DA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of teachers with a specialization in science?		
SCQ-10DB	ACBG10DB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computer software for science instruction?	AC4SST14	
SCQ-10DC	ACBG10DC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of library materials relevant to science instruction?	AC4SST16	
SCQ-10DD	ACBG10DD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of audio-visual resources for science instruction?	AC4SST17	
SCQ-10DE	ACBG10DE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of science equipment and materials?	AC4SST12	
SCQ-11AA	ACBG11AA	How often does your school inform parents about their child's learning progress?		
SCQ-11AB	ACBG11AB	How often does your school inform parents about the behavior and well-being of their child at school?		

**Exhibit S1.4: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-11AC	ACBG11AC	How often does your school discuss parents' concerns or wishes about their child's learning?		
SCQ-11AD	ACBG11AD	How often does your school support individual parents in helping their child with schoolwork?		
SCQ-11BA	ACBG11BA	How often does your school ask parents to volunteer for school projects, programs, and trips?	AC4GAPVO	Modified wording and response options in 2011
SCQ-11BB	ACBG11BB	How often does your school ask parents to serve on school committees?	AC4GAPSC	Modified wording and response options in 2011
SCQ-11CA	ACBG11CA	How often does your school inform parents about the overall academic achievement of the school?		
SCQ-11CB	ACBG11CB	How often does your school inform parents about school accomplishments?		
SCQ-11CC	ACBG11CC	How often does your school inform parents about the educational goals and pedagogic principles of the school?		
SCQ-11CD	ACBG11CD	How often does your school inform parents about the rules of the school?		
SCQ-11CE	ACBG11CE	How often does your school discuss parents' concerns or wishes about the school's organization?		
SCQ-11CF	ACBG11CF	How often does your school provide parents with additional learning materials for their child to use at home?		
SCQ-11CG	ACBG11CG	How often does your school organize workshops or seminars for parents on learning or pedagogical issues?		
SCQ-12A	ACBG12A	How would you characterize teachers' job satisfaction within your school?	AC4GCHTS	
SCQ-12B	ACBG12B	How would you characterize teachers' understanding of the school's curricular goals within your school?	AC4GCHTU	
SCQ-12C	ACBG12C	How would you characterize teachers' degree of success in implementing the school's curriculum within your school?	AC4GCHTC	
SCQ-12D	ACBG12D	How would you characterize teachers' expectations for student achievement within your school?	AC4GCHES	
SCQ-12E	ACBG12E	How would you characterize parental support for student achievement within your school?	AC4GCHPS	
SCQ-12F	ACBG12F	How would you characterize parental involvement in school activities within your school?	AC4GCHPI	
SCQ-12G	ACBG12G	How would you characterize students' regard for school property within your school?	AC4GCHSR	
SCQ-12H	ACBG12H	How would you characterize students' desire to do well within your school?	AC4GCHSD	
SCQ-13AA	ACBG13AA	To what degree is arriving late at school a problem among <fourth-grade> students in your school?	AC4GSP01	Modified response options in 2011



**Exhibit S1.4: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-13AB	ACBG13AB	To what degree is absenteeism a problem among <fourth-grade> students in your school?	AC4GSP02	Modified response options in 2011
SCQ-13AC	ACBG13AC	To what degree is classroom disturbance a problem among <fourth-grade> students in your school?	AC4GSP05	Modified response options in 2011
SCQ-13AD	ACBG13AD	To what degree is cheating a problem among <fourth-grade> students in your school?	AC4GSP06	Modified response options in 2011
SCQ-13AE	ACBG13AE	To what degree is profanity a problem among <fourth-grade> students in your school?	AC4GSP07	Modified response options in 2011
SCQ-13AF	ACBG13AF	To what degree is vandalism a problem among <fourth-grade> students in your school?	AC4GSP08	Modified response options in 2011
SCQ-13AG	ACBG13AG	To what degree is theft a problem among <fourth-grade> students in your school?	AC4GSP09	Modified response options in 2011
SCQ-13AH	ACBG13AH	To what degree is intimidation or verbal abuse among students a problem among <fourth-grade> students in your school?	AC4GSP10	Modified response options in 2011
SCQ-13AI	ACBG13AI	To what degree is physical fights among students a problem among <fourth-grade> students in your school?	AC4GSP11	Modified wording and response options in 2011
SCQ-13AJ	ACBG13AJ	To what degree is intimidation or verbal abuse of teachers or staff a problem among <fourth-grade> students in your school?	AC4GSP12	Modified response options in 2011
SCQ-13BA	ACBG13BA	To what degree is arriving late or leaving early a problem among teachers in your school?		
SCQ-13BB	ACBG13BB	To what degree is absenteeism a problem among teachers in your school?		
SCQ-14A	ACBG14A	In your school, are observations by the principal or senior staff used to evaluate the practice of <fourth-grade> teachers?	AC4MEPOS	
SCQ-14B	ACBG14B	In your school, are observations by inspectors, or other persons external to the school used to evaluate the practice of <fourth-grade> teachers?	AC4MEPOE	
SCQ-14C	ACBG14C	In your school, is student achievement used to evaluate the practice of <fourth-grade> teachers?	AC4MEPSA	
SCQ-14D	ACBG14D	In your school, is teacher peer review used to evaluate the practice of <fourth-grade> teachers?	AC4MEPTR	
SCQ-15A	ACBG15A	During the past year, approximately how much time have you spent promoting the school's educational vision or goals in your role as a school principal?		
SCQ-15B	ACBG15B	During the past year, approximately how much time have you spent developing the school's curricular and educational goals in your role as a school principal?		
SCQ-15C	ACBG15C	During the past year, approximately how much time have you spent monitoring teachers' implementation of the school's educational goals in their teaching in your role as a school principal?		
SCQ-15D	ACBG15D	During the past year, approximately how much time have you spent monitoring students' learning progress to ensure that the school's educational goals are reached in your role as a school principal?		
SCQ-15E	ACBG15E	During the past year, approximately how much time have you spent keeping an orderly atmosphere in the school in your role as a school principal?		

**Exhibit S1.4: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-15F	ACBG15F	During the past year, approximately how much time have you spent ensuring that there are clear rules for student behavior in your role as a school principal?		
SCQ-15G	ACBG15G	During the past year, approximately how much time have you spent addressing disruptive student behavior in your role as a school principal?		
SCQ-15H	ACBG15H	During the past year, approximately how much time have you spent creating a climate of trust among teachers in your role as a school principal?		
SCQ-15I	ACBG15I	During the past year, approximately how much time have you spent initiating a discussion to help teachers who have problems in the classroom in your role as a school principal?		
SCQ-15J	ACBG15J	During the past year, approximately how much time have you spent advising teachers who have questions or problems with their teaching in your role as a school principal?		
SCQ-15K	ACBG15K	During the past year, approximately how much time have you spent visiting other schools or attending educational conferences for new ideas in your role as a school principal?		
SCQ-15L	ACBG15L	During the past year, approximately how much time have you spent initiating educational projects or improvements in your role as a school principal?		
SCQ-15M	ACBG15M	During the past year, approximately how much time have you spent participating in professional development activities specifically for school principals in your role as a school principal?		
SCQ-16A	ACBG16A	About how many of the students in your school can recognize most of the letters of the alphabet when they begin primary/elementary school?		
SCQ-16B	ACBG16B	About how many of the students in your school can read some words when they begin primary/elementary school?		
SCQ-16C	ACBG16C	About how many of the students in your school can read sentences when they begin primary/elementary school?		
SCQ-16D	ACBG16D	About how many of the students in your school can write letters of the alphabet when they begin primary/elementary school?		
SCQ-16E	ACBG16E	About how many of the students in your school can write some words when they begin primary/elementary school?		
SCQ-16F	ACBG16F	About how many of the students in your school can count up to 100 or higher when they begin primary/elementary school?		
SCQ-16G	ACBG16G	About how many of the students in your school can recognize all 10 written numbers from 1-10 when they begin primary/elementary school?		
SCQ-16H	ACBG16H	About how many of the students in your school can write all 10 numbers from 1-10 when they begin primary/elementary school?		
SCQ-17A	ACBG17A	At which grade does knowing letters of the alphabet first receive a major emphasis in instruction in your school?		
SCQ-17B	ACBG17B	At which grade does knowing letter-sound relationships first receive a major emphasis in instruction in your school?		
SCQ-17C	ACBG17C	At which grade does reading words first receive a major emphasis in instruction in your school?		

**Exhibit S1.4: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-17D	ACBG17D	At which grade does reading isolated sentences first receive a major emphasis in instruction in your school?		
SCQ-17E	ACBG17E	At which grade does reading connected text first receive a major emphasis in instruction in your school?		
SCQ-17F	ACBG17F	At which grade does locating information within the text first receive a major emphasis in instruction in your school?		
SCQ-17G	ACBG17G	At which grade does identifying the main idea of a text first receive a major emphasis in instruction in your school?		
SCQ-17H	ACBG17H	At which grade does explaining or supporting their understanding of a text first receive a major emphasis in instruction in your school?		
SCQ-17I	ACBG17I	At which grade does comparing a text with personal experience first receive a major emphasis in instruction in your school?		
SCQ-17J	ACBG17J	At which grade does comparing different texts first receive a major emphasis in instruction in your school?		
SCQ-17K	ACBG17K	At which grade do making predictions about what will happen next in a text first receive a major emphasis in instruction in your school?		
SCQ-17L	ACBG17L	At which grade does making generalizations and drawing inferences based on a text first receive a major emphasis in instruction in your school?		
SCQ-17M	ACBG17M	At which grade does describing the style or structure of a text first receive a major emphasis in instruction in your school?		
SCQ-17N	ACBG17N	At which grade does determining the author's perspective or intention first receive a major emphasis in instruction in your school?		
SCQ-18A	ACBG18A	Compared with other areas of the curriculum, how much emphasis does your school place on teaching reading to students in <grades 1-4>?		
SCQ-18B	ACBG18B	Compared with other areas of the curriculum, how much emphasis does your school place on teaching writing to students in <grades 1-4>?		
SCQ-18C	ACBG18C	Compared with other areas of the curriculum, how much emphasis does your school place on teaching speaking/listening to students in <grades 1-4>?		
SCQ-19	ACBG19	For students in <fourth-grade> and below, does your school make provisions for reading instruction in mother tongue for students whose mother tongue is not <language of test>?		



Identification Label

# TIMSS 2011

## School Questionnaire

<Grade 4>

<TIMSS>

<National Research Center Name>

<Address>



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College

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## School Questionnaire

Your school has agreed to participate in TIMSS 2011 (Trends in International Mathematics and Science Study), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS measures trends in student achievement in mathematics and science, and studies differences in national education systems in more than 60 countries in order to help improve teaching and learning worldwide.

This questionnaire is addressed to 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 2011

**School Enrollment and Characteristics**

**1** \_\_\_\_\_  
**ACBG01** What is the total enrollment of students in your school as of <first day of month PIRLS/TIMSS testing begins, 2010/2011>?

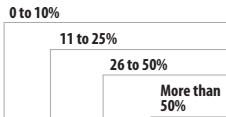
\_\_\_\_\_ students  
 Write in a number.

**2** \_\_\_\_\_  
**ACBG02** What is the total enrollment of <fourth-grade> students in your school as of <first day of month PIRLS/TIMSS testing begins, 2010/2011>?

\_\_\_\_\_ students  
 Write in a 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 -----

**4** \_\_\_\_\_  
**ACBG04** 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** \_\_\_\_\_  
**ACBG05A** A. How many people live in the city, town, or area where your school is located?

Check **one** circle only.

- More than 500,000 people --
- 100,001 to 500,000 people --
- 50,001 to 100,000 people --
- 15,001 to 50,000 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?**

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 ---

**C. Which best characterizes the average income level of the school's immediate area?**

Check **one** circle only.

- High ---
- Medium ---
- Low ---

**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.

ACBG06BA

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

ACBG06BB

\_\_\_\_\_ hours and \_\_\_\_\_ minutes  
Write in the number of hours and 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**

**7** \_\_\_\_\_

**What is the total number of computers that can be used for instructional purposes by <fourth-grade> students?**

ACBG07

\_\_\_\_\_ computers  
Write in the number.

**8** \_\_\_\_\_

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

ACBG08

Check **one** circle only.

- Yes ---
- No ---

**9** \_\_\_\_\_

**Does your school have a school library?**

ACBG09

Check **one** circle only.

- Yes ---
- No ---

(If No, go to #10)

**If Yes,**

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

ACBG09A

Check **one** circle only.

- 250 or fewer ---
- 251–500 ---
- 501–2,000 ---
- 2,001–5,000 ---
- 5,001–10,000 ---
- More than 10,000 ---

**B. Approximately how many titles of magazines and other periodicals does your school library have?**

ACBG09B

Check **one** circle only.

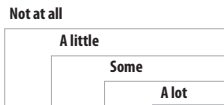
- 0 ---
- 1–5 ---
- 6–10 ---
- 11–30 ---
- 31 or more ---



10

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

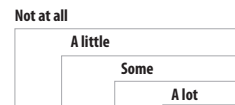
Check **one** circle for each line.



**A. General School Resources**

- ACBG10AA a) Instructional materials (e.g., textbooks)-----○—○—○—○
  - ACBG10AB b) Supplies (e.g., papers, pencils)-----○—○—○—○
  - ACBG10AC c) School buildings and grounds -----○—○—○—○
  - ACBG10AD d) Heating/cooling and lighting systems-----○—○—○—○
  - ACBG10AE e) Instructional space (e.g., classrooms)-----○—○—○—○
  - ACBG10AF f) Technologically competent staff-----○—○—○—○
  - ACBG10AG g) Computers for instruction -----○—○—○—○
- B. Resources for Reading Instruction**
- ACBG10BA a) Teachers with a specialization in reading -----○—○—○—○
  - ACBG10BB b) Computer software for reading instruction-----○—○—○—○
  - ACBG10BC c) Library books -----○—○—○—○
  - ACBG10BD d) Audio-visual resources for reading instruction-----○—○—○—○

Check **one** circle for each line.



**C. Resources for Mathematics Instruction**

- a) Teachers with a specialization in mathematics -----○—○—○—○
- b) Computer software for mathematics instruction-----○—○—○—○
- c) Library materials relevant to mathematics instruction----○—○—○—○
- d) Audio-visual resources for mathematics instruction-----○—○—○—○
- e) Calculators for mathematics instruction-----○—○—○—○

**D. Resources for Science Instruction**

- a) Teachers with a specialization in science -----○—○—○—○
- b) Computer software for science instruction -----○—○—○—○
- c) Library materials relevant to science instruction -----○—○—○—○
- d) Audio-visual resources for science instruction -----○—○—○—○
- e) Science equipment and materials -----○—○—○—○

- ACBG10CA
- ACBG10CB
- ACBG10CC
- ACBG10CD
- ACBG10CE
- ACBG10DA
- ACBG10DB
- ACBG10DC
- ACBG10DD
- ACBG10DE

**Involving Parents in Your School**

**11**

**A. How often does your school do the following for parents concerning individual students?**

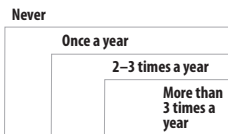
Check **one** circle for each line.



- ACBG11AA a) Inform parents about their child's learning progress -----  -  -  -
- ACBG11AB b) Inform parents about the behavior and well-being of their child at school -----  -  -  -
- ACBG11AC c) Discuss parents' concerns or wishes about their child's learning -----  -  -  -
- ACBG11AD d) Support individual parents in helping their child with schoolwork -----  -  -  -

**B. How often does your school ask parents to do the following?**

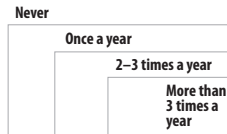
Check **one** circle for each line.



- ACBG11BA a) Volunteer for school projects, programs, and trips -----  -  -  -
- ACBG11BB b) Serve on school committees -----  -  -  -

**C. How often does your school do the following for parents in general?**

Check **one** circle for each line.



- ACBG11CA a) Inform parents about the overall academic achievement of the school (e.g., results of national tests, results of inspections of learning) -----  -  -  -
- ACBG11CB b) Inform parents about school accomplishments (e.g., tournament results, facility improvements) -----  -  -  -
- ACBG11CC c) Inform parents about the educational goals and pedagogic principles of the school -----  -  -  -
- ACBG11CD d) Inform parents about the rules of the school -----  -  -  -
- ACBG11CE e) Discuss parents' concerns or wishes about the school's organization (e.g., rules and regulations, time tables, safety measures) -----  -  -  -
- ACBG11CF f) Provide parents with additional learning materials (e.g., books, computer software) for their child to use at home -----  -  -  -
- ACBG11CG g) Organize workshops or seminars for parents on learning or pedagogical issues -----  -  -  -

**School Climate**

**12**

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

Check **one** circle for each line.

		Very high High Medium Low Very low	
ACBG12A	a) Teachers' job satisfaction-----	<input type="radio"/>	<input type="radio"/>
ACBG12B	b) Teachers' understanding of the school's curricular goals-----	<input type="radio"/>	<input type="radio"/>
ACBG12C	c) Teachers' degree of success in implementing the school's curriculum-----	<input type="radio"/>	<input type="radio"/>
ACBG12D	d) Teachers' expectations for student achievement-----	<input type="radio"/>	<input type="radio"/>
ACBG12E	e) Parental support for student achievement-----	<input type="radio"/>	<input type="radio"/>
ACBG12F	f) Parental involvement in school activities-----	<input type="radio"/>	<input type="radio"/>
ACBG12G	g) Students' regard for school property-----	<input type="radio"/>	<input type="radio"/>
ACBG12H	h) Students' desire to do well in school-----	<input type="radio"/>	<input type="radio"/>

**13**

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

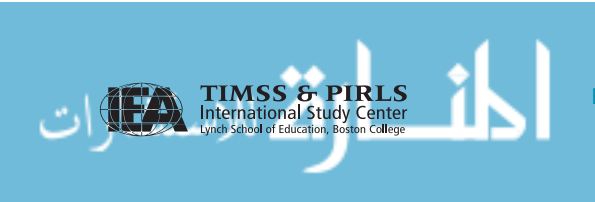
Check **one** circle for each line.

		Not a problem Minor problem Moderate problem Serious problem	
	a) Arriving late at school-----	<input type="radio"/>	ACBG13AA
	b) Absenteeism (i.e., unjustified absences)-----	<input type="radio"/>	ACBG13AB
	c) Classroom disturbance-----	<input type="radio"/>	ACBG13AC
	d) Cheating-----	<input type="radio"/>	ACBG13AD
	e) Profanity-----	<input type="radio"/>	ACBG13AE
	f) Vandalism-----	<input type="radio"/>	ACBG13AF
	g) Theft-----	<input type="radio"/>	ACBG13AG
	h) Intimidation or verbal abuse among students (including texting, emailing, etc.)-----	<input type="radio"/>	ACBG13AH
	i) Physical fights among students-----	<input type="radio"/>	ACBG13AI
	j) Intimidation or verbal abuse of teachers or staff (including texting, emailing, etc.)-----	<input type="radio"/>	ACBG13AJ

B. 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	
	a) Arriving late or leaving early--	<input type="radio"/>	ACBG13BA
	b) Absenteeism-----	<input type="radio"/>	ACBG13BB



**Teachers in Your School**

**14**

**In your school, are any of the following used to evaluate the practice of <fourth-grade> teachers?**

Check **one** circle for each line.

- |         |   |                       |                       |
|---------|---|-----------------------|-----------------------|
|         |   | Yes                   | No                    |
| ACBG14A | a) Observations by the principal or senior staff -----                      | <input type="radio"/> | <input type="radio"/> |
| ACBG14B | b) Observations by inspectors or other persons external to the school ----- | <input type="radio"/> | <input type="radio"/> |
| ACBG14C | c) Student achievement -----  | <input type="radio"/> | <input type="radio"/> |
| ACBG14D | d) Teacher peer review -----  | <input type="radio"/> | <input type="radio"/> |

**Leadership Activities**

**15**

**During the past year, approximately how much time have you spent on the following school leadership activities in your role as a school principal?**

Check **one** circle for each line.

- |  |   |                       |                       |                       |         |
|--|---|-----------------------|-----------------------|-----------------------|---------|
|  |   | No time               | Some time             | A lot of time         |         |
|  | a) Promoting the school's educational vision or goals -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15A |
|  | b) Developing the school's curricular and educational goals -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15B |
|  | c) Monitoring teachers' implementation of the school's educational goals in their teaching -----          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15C |
|  | d) Monitoring students' learning progress to ensure that the school's educational goals are reached ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15D |
|  | e) Keeping an orderly atmosphere in the school -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15E |
|  | f) Ensuring that there are clear rules for student behavior -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15F |
|  | g) Addressing disruptive student behavior -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15G |
|  | h) Creating a climate of trust among teachers -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15H |
|  | i) Initiating a discussion to help teachers who have problems in the classroom -----                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15I |
|  | j) Advising teachers who have questions or problems with their teaching -----                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15J |
|  | k) Visiting other schools or attending educational conferences for new ideas -----                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15K |
|  | l) Initiating educational projects or improvements -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15L |
|  | m) Participating in professional development activities specifically for school principals -----          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | ACBG15M |

**School Readiness**

**16**

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

Check **one** circle for each line.

		Less than 25%	25–50%	51–75%	More than 75%
ACBG16A	a) Recognize most of the letters of the alphabet -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ACBG16B	b) Read some words -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ACBG16C	c) Read sentences -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ACBG16D	d) Write letters of the alphabet -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ACBG16E	e) Write some words -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ACBG16F	f) Count up to 100 or higher -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ACBG16G	g) Recognize all 10 written numbers from 1–10 -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ACBG16H	h) Write all 10 numbers from 1–10 -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Reading in Your School**

**17**

At which grade do the following reading skills and strategies **first** receive a **major emphasis** in instruction in your school?

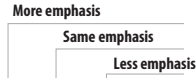
Check **one** circle for each line.

		<First grade> or earlier	<Second grade>	<Third grade>	<Fourth grade>	Not in these grades
	a) Knowing letters of the alphabet -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	b) Knowing letter-sound relationships -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	c) Reading words -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	d) Reading isolated sentences -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	e) Reading connected text -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	f) Locating information within the text -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	g) Identifying the main idea of a text -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	h) Explaining or supporting understanding of a text -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	i) Comparing a text with personal experience -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	j) Comparing different texts -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	k) Making predictions about what will happen next in a text -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	l) Making generalizations and drawing inferences based on a text -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	m) Describing the style or structure of a text -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	n) Determining the author's perspective or intention -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**18**

Compared with other areas of the curriculum (e.g., mathematics and science), how much emphasis does your school place on teaching the following language and literacy skills to students in <grades 1 to 4>?

Check **one** circle for each line.



- ACBG18A a) Reading ----- ○ — ○ — ○
- ACBG18B b) Writing (not handwriting) --- ○ — ○ — ○
- ACBG18C c) Speaking/listening  
(oral language) ----- ○ — ○ — ○

**19**

ACBG19 For students in <fourth grade> and below, does your school make provisions for reading instruction in mother tongue for students whose mother tongue is not <language of test>?

Check **one** circle only.

- Yes --- ○
- No --- ○

# Thank You

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

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BOSTON  
COLLEGE

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# TIMSS 2011

## School Questionnaire

<Grade 4>



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# Section 5

## Fourth Grade – Curriculum Questionnaire



**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQG-01	GEN01	What is your country's name for the grade(s) tested in TIMSS and/or PIRLS 2011, in English (e.g., grade 4, grade 8)?
CQG-02	GEN02	In your country, what is the stated official policy or regulation on students' age of entry into primary school (ISCED Level 1)?
CQG-02A	GEN02A	What is the practice in your country, if the stated official policy on students' age of entry into primary school allows some parental discretion or choice?
CQG-02B	GEN02B	In your country, has the official stated policy on students' age of entry into primary school changed in the last 10 years?
CQG-02C	GEN02C	If the official state policy on students' age of entry into primary school has changed in the last 10 years, how did the policy change and when was the change made?
CQG-03	GEN03	Is the preprimary education (ISCED Level 0) mandatory for children in your country?
CQG-03A	GEN03A	If preprimary education (ISCED Level 0) is mandatory for children in your country, how many years are students required to attend preprimary education (e.g., 1 year, 2 years, 3 years, more than 3 years)?
CQG-03BA	GEN03BA	If preprimary education (ISCED Level 0) is not mandatory for children in your country, is public preprimary education available?
CQG-03BB	GEN03BB	If preprimary education (ISCED Level 0) is not mandatory for children in your country, are licensed early childhood education providers available?
CQG-03BC	GEN03BC	If preprimary education (ISCED Level 0) is not mandatory for children in your country, are there other types of preprimary education available?
CQG-03BT	GEN03BT	If preprimary education (ISCED Level 0) is not mandatory for children in your country, what is another type of preprimary education that is available?
CQG-03T	GEN03T	Is the preprimary education (ISCED Level 0) mandatory for children in your country? Comments:
CQG-04	GEN04	What are the ages and/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 national curriculum for preprimary education (ISCED Level 0)?
CQG-06A	GEN06A	If your country has a national curriculum for preprimary education (ISCED Level 0), are language, reading, or writing skills part of the preprimary curriculum?
CQG-06AT	GEN06AT	Does your country have a national curriculum for preprimary education (ISCED Level 0)? Please describe:
CQG-06B	GEN06B	Is mathematics (e.g., counting, learning shapes) part of the preprimary curriculum in your country?
CQG-06BT	GEN06BT	Is mathematics (e.g., counting, learning shapes) part of the preprimary curriculum in your country? Please describe:
CQG-06C	GEN06C	Is science (e.g., nature study, weather) part of the preprimary curriculum in your country?
CQG-06CT	GEN06CT	Is science (e.g., nature study, weather) part of the preprimary curriculum in your country? Please describe:

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQG-07	GEN07	Does your country have a policy on the promotion and retention of students across grades 1-8?
CQG-07T	GEN07T	Does your country have a policy on the promotion and retention of students across grades 1-8? Please describe:
CQG-08	GEN08	Does your country have a nationally mandated number of school days per year?
CQG-08T	GEN08T	Does your country have a nationally mandated number of school days per year? Please describe:
CQG-09	GEN09	What is the main preparation route(s) for teachers of students in the fourth grade?
CQG-09AA	GEN09AA	According to the main preparation route(s) for teachers of students in the fourth grade, is supervised practicum during the teacher education program required?
CQG-09AAT	GEN09AAT	If supervised practicum during the teacher education program is a requirement for being a teacher of students in the fourth grade, how long is this period?
CQG-09AB	GEN09AB	According to the main preparation route(s) for teachers of students in the fourth grade, is passing a qualifying exam (e.g., licensing, certification) required?
CQG-09AC	GEN09AC	According to the main preparation route(s) for teachers of students in the fourth grade, is completion of a probationary teaching period required?
CQG-09ACT	GEN09ACT	If completion of a probationary teaching period is a requirement for being a teacher of students in the fourth grade, how long is this period?
CQG-09AD	GEN09AD	According to the main preparation route(s) for teachers of students in the fourth grade, is completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance) required?
CQG-09AE	GEN09AE	Are there other requirements according to the main preparation route(s) for teachers of students in the fourth grade?
CQG-09AET	GEN09AET	Are there other requirements according to the main preparation route(s) for teachers of students in the fourth grade? Please specify:
CQG-09B	GEN09B	If the main preparation route(s) for teachers of students in the eighth grade differ from those in the fourth grade, what is their main preparation route?
CQG-09CA	GEN09CA	If the requirements are different than the fourth grade, is supervised practicum during the teacher education program a requirement for teachers of students in the eighth grade?
CQG-09CAT	GEN09CAT	If supervised practicum during the teacher education program is a requirement for being a teacher of students in the eighth grade, how long is this period?
CQG-09CB	GEN09CB	If the requirements are different than the fourth grade, is passing a qualifying exam (e.g., licensing, certification) a requirement for teachers of students in the eighth grade?
CQG-09CC	GEN09CC	If the requirements are different than the fourth grade, is completion of a probationary teaching period a requirement for teachers of students in the eighth grade?
CQG-09CCT	GEN09CCT	If completion of a probationary teaching period is a requirement for being a teacher of students in the eighth grade, how long is this period?
CQG-09CD	GEN09CD	If the requirements are different than the fourth grade, is completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance) a requirement for teachers of students in the eighth grade?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQG-09CE	GEN09CE	If the requirements are different than the fourth grade, are there other requirements for teachers of students in the eighth grade?
CQG-09CET	GEN09CET	If the requirements are different than the fourth grade, are there other requirements for teachers of students in the eighth grade? Please specify:
CQG-10AA	GEN10AA	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in Language(s) 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-10AB	GEN10AB	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in Mathematics 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-10AC	GEN10AC	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in Science 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-10B	GEN10B	What are the grades at which the exams are given by the educational authority in your country (e.g., National Ministry of Education) and the purpose of each exam?
CQG-10C	GEN10C	Does your country have a national or regional policy for make accommodations for students with special needs taking national or regional tests given by the educational authority in your country (e.g., the National Ministry of Education)?
CQG-10CT	GEN10CT	If your country does have a national or regional policy to make accommodations for students with special needs taking national or regional tests, what is the policy?
CQG-10D	GEN10D	If there are not exams administered by an educational authority in your country (e.g., National Ministry of Education), is there a similar process that has consequences for individual students?
CQG-11	GEN11	Is there a national/regional policy to encourage parental involvement in the schools attended by fourth-grade students?
CQG-11TA	GEN11TA	Is there a national/regional policy to encourage parental involvement in the schools attended by fourth-grade students? If yes...What is the policy?
CQG-11TB	GEN11TB	Is there a national/regional policy to encourage parental involvement in the schools attended by fourth-grade students? If no...Comments:
CQG-12	GEN12	Is there a national/regional policy to encourage parental involvement in the schools attended by eighth-grade students (e.g., the same as fourth grade, different than fourth grade, no national/regional policy)?
CQG-12T	GEN12T	If there is a national/regional policy to encourage parental involvement in the schools attended by eighth-grade students that differs from that of fourth-grade students, what is the policy?
<b>Mathematics</b>		
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	Does your country have a national curriculum that covers mathematics instruction at the fourth grade of primary/elementary school? If yes...Comments:
CQM4-01TB	MA401TB	Does your country have a national curriculum that covers mathematics instruction at the fourth grade of primary/elementary school? 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 current mathematics curriculum introduced that covers mathematics instruction at the fourth grade of primary/elementary school for the majority of students assessed in TIMSS 2010/2011?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQM4-02AT	MA402AT	In what year was the current mathematics curriculum introduced that covers mathematics instruction at the fourth grade of primary/elementary school for the majority of students assessed in TIMSS 2010/2011? Comments:
CQM4-02B	MA402B	Is the mathematics curriculum that covers mathematics instruction at the fourth grade of primary/elementary school for the majority of students being revised for students assessed in TIMSS 2010/2011?
CQM4-03BTA	MA402BTA	Is the mathematics curriculum that covers mathematics instruction at the fourth grade of primary/elementary school for the majority of students being revised for students assessed in TIMSS 2010/2011? If yes...Please explain:
CQM4-03BTB	MA402BTB	Is the mathematics curriculum that covers mathematics instruction at the fourth grade of primary/elementary school for the majority of students being revised for students assessed in TIMSS 2010/2011? If no...Comments:
CQM4-03	MA403	For the primary/elementary school mathematics curriculum, what is the grade structure?
CQM4-04A	MA404A	Does the mathematics curriculum for primary/elementary school prescribe goals and objectives?
CQM4-04B	MA404B	Does the mathematics curriculum for primary/elementary school prescribe instructional processes or methods?
CQM4-04C	MA404C	Does the mathematics curriculum for primary/elementary school prescribe materials (e.g., textbooks, or instructional materials)?
CQM4-04D	MA404D	Does the mathematics curriculum for primary/elementary school prescribe assessment methods/activities?
CQM4-04E	MA404E	Does the mathematics curriculum for primary/elementary school prescribe other?
CQM4-04ET	MA404ET	Does the mathematics curriculum for primary/elementary school prescribe other? Please specify:
CQM4-04T	MA404T	What does the mathematics curriculum for primary/elementary school prescribe? Comments:
CQM4-05	MA405	Is there a process for approving the textbooks used for mathematics instruction?
CQM4-05T	MA405T	If there is a process for approving the textbooks used for mathematics instruction, what is the process?
CQM4-06A	MA406A	Does the national curriculum contain statements/policies about the use of calculators in grade 4 mathematics instruction?
CQM4-06AT	MA406AT	If the national curriculum does contain statements/policies about the use of calculators in grade 4 mathematics instruction, what are the statements/policies?
CQM4-06B	MA406B	Does the national curriculum contain statements/policies about the use of calculators in grade 4 mathematics tests or examinations?
CQM4-06BTA	MA406BT	If the national curriculum does contain statements/policies about the use of calculators in grade 4 mathematics tests or examinations, what are the statements/policies?
CQM4-06BTB	MA406BTB	Does the national curriculum contain statements/policies about the use of calculators in grade 4 mathematics tests or examinations? Comments:
CQM4-07	MA407	Does the national curriculum contain statements/policies about the use of computers in grade 4 mathematics instruction?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQM4-07TA	MA407TA	If the national curriculum does contain statements/policies about the use of computers in grade 4 mathematics instruction, what are the statements/policies?
CQM4-07TB	MA407TB	Does the national curriculum contain statements/policies about the use of computers in grade 4 mathematics instruction? Comments:
CQM4-08A	MA408A	How much emphasis does the mathematics curriculum for primary/elementary school place on mastering basic skills and procedures?
CQM4-08B	MA408B	How much emphasis does the mathematics curriculum for primary/elementary school place on applying mathematics in real-life contexts?
CQM4-08C	MA408C	How much emphasis does the mathematics curriculum for primary/elementary school place on reasoning mathematically?
CQM4-08CT	MA408CT	How much emphasis does the mathematics curriculum for primary/elementary school place on certain mathematical skills? Comment:
CQM4-09AA	MA409AA	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught concepts of whole numbers, including place value and ordering, by the end of grade 4?
CQM4-09AAA	MA409AAA	Across grades from preprimary to upper secondary education, at what grade(s) are concepts of whole numbers, including place value and ordering, primarily intended to be taught?
CQM4-09AB	MA409AB	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught adding, subtracting, multiplying, and/or dividing with whole numbers, by the end of grade 4?
CQM4-09AAB	MA409AAB	Across grades from preprimary to upper secondary education, at what grade(s) are adding, subtracting, multiplying, and/or dividing with whole numbers primarily intended to be taught?
CQM4-09AC	MA409AC	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught concepts of fractions (fractions as part of a whole or of a collection, or as a location on a number line; comparing and ordering fractions), by the end of grade 4?
CQM4-09AAC	MA409AAC	Across grades from preprimary to upper secondary education, at what grade(s) are concepts of fractions (fractions as part of a whole or of a collection, or as a location on a number line; comparing and ordering fractions) primarily intended to be taught?
CQM4-09AD	MA409AD	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught adding and subtracting with fractions by the end of grade 4?
CQM4-09AAD	MA409AAD	Across grades from preprimary to upper secondary education, at what grade(s) are adding and subtracting with fractions primarily intended to be taught?
CQM4-09AE	MA409AE	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught concepts of decimals, including place value and ordering, by the end of grade 4?
CQM4-09AAE	MA409AAE	Across grades from preprimary to upper secondary education, at what grade(s) are concepts of decimals, including place value and ordering, primarily intended to be taught?
CQM4-09AF	MA409AF	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught adding and subtracting with decimals by the end of grade 4?
CQM4-09AAF	MA409AAF	Across grades from preprimary to upper secondary education, at what grade(s) are adding and subtracting with decimals primarily intended to be taught?
CQM4-09AG	MA409AG	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught number sentences (finding the missing number, modeling simple situations with number sentences), by the end of grade 4?
CQM4-09AG	MA409AAG	Across grades from preprimary to upper secondary education, at what grade(s) are number sentences (finding the missing number, modeling simple situations with number sentences) primarily intended to be taught?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQM4-09AH	MA409AH	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught number patterns (extending number patterns, finding missing terms), by the end of grade 4?
CQM4-09AAH	MA409AAH	Across grades from preprimary to upper secondary education, at what grade(s) are number patterns (extending number patterns, finding missing terms) primarily intended to be taught?
CQM4-09AT	MA409AT	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught number topics or skills by the end of grade 4? Across grades from preprimary to upper secondary education, at what grade(s) are number topics primarily intended to be taught? Comments:
CQM4-09BA	MA409BA	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught lines (measuring, estimating length of; parallel and perpendicular) by the end of grade 4?
CQM4-09BAA	MA409BAA	Across grades from preprimary to upper secondary education, at what grade(s) are lines (measuring, estimating length of; parallel and perpendicular) primarily intended to be taught?
CQM4-09BB	MA409BB	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught comparing and drawing angles by the end of grade 4?
CQM4-09BAB	MA409BAB	Across grades from preprimary to upper secondary education, at what grade(s) are comparing and drawing angles primarily intended to be taught?
CQM4-09BC	MA409BC	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught using informal coordinate systems to locate points in a plane (e.g., in square B4) by the end of grade 4?
CQM4-09BAC	MA409BAC	Across grades from preprimary to upper secondary education, at what grade(s) is using informal coordinate systems to locate points in a plane (e.g., in square B4) primarily intended to be taught?
CQM4-09BD	MA409BD	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught the elementary properties of common geometric shapes by the end of grade 4?
CQM4-09BAD	MA409BAD	Across grades from preprimary to upper secondary education, at what grade(s) are the elementary properties of common geometric shapes primarily intended to be taught?
CQM4-09BE	MA409BE	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught reflections and rotations by the end of grade 4?
CQM4-09BAE	MA409BAE	Across grades from preprimary to upper secondary education, at what grade(s) are reflections and rotations primarily intended to be taught?
CQM4-09BF	MA409BF	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught relationships between two-dimensional and three-dimensional shapes by the end of grade 4?
CQM4-09BAF	MA409BAF	Across grades from preprimary to upper secondary education, at what grade(s) are relationships between two-dimensional and three-dimensional shapes primarily intended to be taught?
CQM4-09BG	MA409BG	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught finding and estimating areas, perimeters, and volumes by the end of grade 4?
CQM4-09BAG	MA409BAG	Across grades from preprimary to upper secondary education, at what grade(s) are finding and estimating areas, perimeters, and volumes primarily intended to be taught?
CQM4-09BT	MA409BT	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught geometry topics or skills by the end of grade 4? Across grades from preprimary to upper secondary education, at what grade(s) are geometry topics primarily intended to be taught? Comments:
CQM4-09CA	MA409CA	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught reading data from tables, pictographs, bar graphs, or pie charts by the end of grade 4?
CQM4-09CAA	MA409CAA	Across grades from preprimary to upper secondary education, at what grade(s) is reading data from tables, pictographs, bar graphs, or pie charts primarily intended to be taught?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQM4-09CB	MA409CB	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught drawing conclusions from data displays by the end of grade 4?
CQM4-CAB	MA409CAB	Across grades from preprimary to upper secondary education, at what grade(s) are drawing conclusions from data displays primarily intended to be taught?
CQM4-09CC	MA409CC	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught displaying data using tables, pictographs, and bar graphs by the end of grade 4?
CQM4-09CAC	MA409CAC	Across grades from preprimary to upper secondary education, at what grade(s) are displaying data using tables, pictographs, and bar graphs primarily intended to be taught?
CQM4-09CT	MA409CT	According to the national mathematics curriculum, what proportion of grade 4 students should have been taught data display topics or skills by the end of grade 4? Across grades from preprimary to upper secondary education, at what grade(s) are data display topics primarily intended to be taught? Comments:
CQM4-10A	MA410A	Is the mathematics curriculum made available in the form of official publication containing the curriculum?
CQM4-10B	MA410B	Is the mathematics curriculum made available in the form of ministry notes and directives?
CQM4-10C	MA410C	Is the mathematics curriculum made available in the form of mandated or recommended textbooks?
CQM4-10D	MA410D	Is the mathematics curriculum made available in the form of instructional or pedagogical guide?
CQM4-10E	MA410E	Is the mathematics curriculum made available in the form of specifically developed or recommended instructional activities?
CQM4-10F	MA410F	Is the mathematics curriculum made available in the form of other?
CQM4-10FT	MA410FT	Is the mathematics curriculum made available in the form of other? Please specify:
CQM4-10T	MA410T	In what form is the mathematics curriculum made available? Comments:
CQM4-11	MA411	Does the curriculum prescribe the percentage of total instructional time to be devoted to mathematics instruction at the fourth grade of primary/elementary school?
CQM4-11T	MA411T	If the curriculum does prescribe the percentage of total instructional time to be devoted to mathematics instruction at the fourth grade of primary/elementary school, what is the percentage?
CQM4-11AT	MA411AT	Does the curriculum prescribe the percentage of total instructional time to be devoted to mathematics instruction at the fourth grade of primary/elementary school? Comments:
CQM4-12A	MA412A	Is the mathematics curriculum implementation evaluated by visits by inspectors/supervisors?
CQM4-12B	MA412B	Is the mathematics curriculum implementation evaluated by research programs?
CQM4-12C	MA412C	Is the mathematics curriculum implementation evaluated by school self-evaluation?
CQM4-12D	MA412D	Is the mathematics curriculum implementation evaluated by national or regional assessments?



**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQM4-12E	MA412E	Is the mathematics curriculum implementation evaluated by other?
CQM4-12ET	MA412ET	Is the mathematics curriculum implementation evaluated by other? Please specify:
CQM4-12T	MA412T	How is the mathematics curriculum implementation evaluated? Comments:
<b>Science</b>		
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	Does your country have a national curriculum that covers science instruction at the fourth grade of primary/elementary school? If yes...Comments:
CQS4-01TB	SC401TB	If your country does not have a national curriculum that covers science instruction at the fourth grade of primary/elementary school, 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 current science curriculum introduced for the students assessed in TIMSS 2010/2011?
CQS4-02AT	SC402AT	In what year was the current science curriculum introduced for the students assessed in TIMSS 2010/2011? Comments:
CQS4-02B	SC402B	Is the science curriculum currently being revised for the students being assessed in TIMSS 2010/2011?
CQS4-02BTA	SC402BTA	Is the science curriculum currently being revised for the students being assessed in TIMSS 2010/2011? If yes...Comments:
CQS4-02BTB	SC402BTB	Is the science curriculum currently being revised for the students being assessed in TIMSS 2010/2011? If no...Comments:
CQS4-03	SC403	For the primary/elementary school science curriculum, what is the grade structure?
CQS4-04A	SC404A	Does the science curriculum prescribe goals and objectives?
CQS4-04B	SC404B	Does the science curriculum prescribe instructional processes or methods?
CQS4-04C	SC404C	Does the science curriculum prescribe materials (e.g., textbooks or instructional materials)?
CQS4-04D	SC404D	Does the science curriculum prescribe assessment methods/activities?
CQS4-04E	SC404E	Does the science curriculum prescribe other?
CQS4-04ET	SC404ET	Does the science curriculum prescribe other? Please specify:
CQS4-04T	SC404T	What does the science curriculum prescribe?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS4-05	SC405	Is there a process for approving the textbooks used for science instruction?
CQS4-05T	SC405T	If there is a process for approving the textbooks used for science instruction, what is this process?
CQS4-06	SC406	Does the national curriculum contain statements/policies about the use of computers in grade 4 science?
CQS4-06TA	SC406TA	If the national curriculum does contain statements/policies about the use of computers in grade 4 science, what are the statements/policies?
CQS4-06TB	SC406TB	Does the national curriculum contain statements/policies about the use of computers in grade 4 science? Comments:
CQS4-07A	SC407A	How much emphasis does the national science curriculum place on knowing basic science facts and principles?
CQS4-07B	SC407B	How much emphasis does the national science curriculum place on applying science in real-life contexts?
CQS4-07C	SC407C	How much emphasis does the national science curriculum place on providing explanations or justifications about what is being studied?
CQS4-07D	SC407D	How much emphasis does the national science curriculum place on designing or planning experiments or investigations?
CQS4-07E	SC407E	How much emphasis does the national science curriculum place on conducting experiments or investigations?
CQS4-07T	SC407T	How much emphasis does the national science curriculum place on specific aspects of science instruction?
CQS4-08AA	SC408AA	According to the national science curriculum, what proportion of grade 4 students should have been taught major body structures and their functions in humans and other organisms (plants and animals) by the end of grade 4?
CQS4-08AAA	SC408AAA	Across grades from preprimary through upper secondary, at what grade(s) are major body structures and their functions in humans and other organisms (plants and animals) primarily intended to be taught?
CQS4-08AB	SC408AB	According to the national science curriculum, what proportion of grade 4 students should have been taught life cycles and reproduction in plants and animals by the end of grade 4?
CQS4-08AAB	SC408AAB	Across grades from preprimary through upper secondary, at what grade(s) are life cycles and reproduction in plants and animals primarily intended to be taught?
CQS4-08AC	SC408AC	According to the national science curriculum, what proportion of grade 4 students should have been taught physical features, behavior, and survival of organisms living in different environments by the end of grade 4?
CQS4-08AAC	SC408AAC	Across grades from preprimary through upper secondary, at what grade(s) are physical features, behavior, and survival of organisms living in different environments primarily intended to be taught?
CQS4-08AD	SC408AD	According to the national science curriculum, what proportion of grade 4 students should have been taught relationships in a given community (e.g., simple food chains, predator-prey relationships) by the end of grade 4?
CQS4-08AAD	SC408AAD	Across grades from preprimary through upper secondary, at what grade(s) are relationships in a given community (e.g., simple food chains, predator-prey relationships) primarily intended to be taught?
CQS4-08AE	SC408AE	According to the national science curriculum, what proportion of grade 4 students should have been taught changes in environments (effects of human activity, pollution and its prevention) by the end of grade 4?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS4-08AAE	SC408AAE	Across grades from preprimary through upper secondary, at what grade(s) are changes in environments (effects of human activity, pollution and its prevention) primarily intended to be taught?
CQS4-08AF	SC408AF	According to the national science curriculum, what proportion of grade 4 students should have been taught human health (e.g., transmission/prevention of communicable diseases, signs of health/illness, diet, exercise) by the end of grade 4?
CQS4-08AAF	SC408AAF	Across grades from preprimary through upper secondary, at what grade(s) are human health (e.g., transmission/prevention of communicable diseases, signs of health/illness, diet, exercise) primarily intended to be taught?
CQS4-08AT	SC408AT	According to the national science curriculum, what proportion of grade 4 students should have been taught life science topics or skills by the end of grade 4; Across grades from preprimary through upper secondary, at what grade(s) are life science topics primarily intended to be taught? Comments:
CQS4-08BA	SC408BA	According to the national science curriculum, what proportion of grade 4 students should have been taught states of matter (solids, liquids, gases) and differences in their physical properties (shape, volume), including changes in state of matter by heating and cooling, by the end of grade 4?
CQS4-08BAA	SC408BAA	Across grades from preprimary through upper secondary, at what grade(s) are states of matter (solids, liquids, gases) and differences in their physical properties (shape, volume), including changes in state of matter by heating and cooling, primarily intended to be taught?
CQS4-08BB	SC408BB	According to the national science curriculum, what proportion of grade 4 students should have been taught classification of objects/materials based on physical properties (e.g., weight/mass, volume, magnetic attraction) by the end of grade 4?
CQS4-08BAB	SC408BAB	Across grades from preprimary through upper secondary, at what grade(s) are classification of objects/materials based on physical properties (e.g., weight/mass, volume, magnetic attraction) primarily intended to be taught?
CQS4-08BC	SC408BC	According to the national science curriculum, what proportion of grade 4 students should have been taught forming and separating mixtures by the end of grade 4?
CQS4-08BAC	SC408BAC	Across grades from preprimary through upper secondary, at what grade(s) are forming and separating mixtures primarily intended to be taught?
CQS4-08BD	SC408BD	According to the national science curriculum, what proportion of grade 4 students should have been taught familiar changes in materials (e.g., decaying, burning, rusting, cooking) by the end of grade 4?
CQS4-08BAD	SC408BAD	Across grades from preprimary through upper secondary, at what grade(s) are changes in materials (e.g., decaying, burning, rusting, cooking) primarily intended to be taught?
CQS4-08BE	SC408BE	According to the national science curriculum, what proportion of grade 4 students should have been taught common energy sources/forms and their practical uses (e.g., the Sun, electricity, water, wind) by the end of grade 4?
CQS4-08BAE	SC408BAE	Across grades from preprimary through upper secondary, at what grade(s) are common energy sources/forms and their practical uses (e.g., the Sun, electricity, water, wind) primarily intended to be taught?
CQS4-08BF	SC408BF	According to the national science curriculum, what proportion of grade 4 students should have been taught light (e.g., sources, behavior) by the end of grade 4?
CQS4-08BAF	SC408BAF	Across grades from preprimary through upper secondary, at what grade(s) are light (e.g., sources, behavior) primarily intended to be taught?
CQS4-08BG	SC408BG	According to the national science curriculum, what proportion of grade 4 students should have been taught electrical circuits and properties of magnets by the end of grade 4?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS4-08BAG	SC408BAG	Across grades from preprimary through upper secondary, at what grade(s) are electrical circuits and properties of magnets primarily intended to be taught?
CQS4-08BH	SC408BH	According to the national science curriculum, what proportion of grade 4 students should have been taught forces that cause objects to move (e.g., gravity, push/pull forces) by the end of grade 4?
CQS4-08BAH	SC408BAH	Across grades from preprimary through upper secondary, at what grade(s) are forces that cause objects to move (e.g., gravity, push/pull forces) primarily intended to be taught?
CQS4-08BT	SC408BT	According to the national science curriculum, what proportion of grade 4 students should have been taught physical science topics or skills by the end of grade 4; Across grades from preprimary through upper secondary, at what grade(s) are physical science topics primarily intended to be taught? Comments:
CQS4-08CA	SC408CA	According to the national science curriculum, what proportion of grade 4 students should have been taught water on Earth (location, types, movement) and air (composition, proof of its existence, uses) by the end of grade 4?
CQS4-08CAA	SC408CAA	Across grades from preprimary through upper secondary, at what grade(s) are water on Earth (location, types, movement) and air (composition, proof of its existence, uses) primarily intended to be taught?
CQS4-08CB	SC408CB	According to the national science curriculum, what proportion of grade 4 students should have been taught common features of Earth's landscape (e.g., mountains, plains, rivers, deserts) and relationships to human use (e.g., farming, irrigation, land development) by the end of grade 4?
CQS4-08CAB	SC408CAB	Across grades from preprimary through upper secondary, at what grade(s) are common features of Earth's landscape (e.g., mountains, plains, rivers, deserts) and relationships to human use (e.g., farming, irrigation, land development) primarily intended to be taught?
CQS4-08CC	SC408CC	According to the national science curriculum, what proportion of grade 4 students should have been taught weather conditions (day to day or across seasons) by the end of grade 4?
CQS4-08CAC	SC408CAC	Across grades from preprimary through upper secondary, at what grade(s) are weather conditions (day to day or across seasons) primarily intended to be taught?
CQS4-08CD	SC408CD	According to the national science curriculum, what proportion of grade 4 students should have been taught fossils of animals and plants (age, location, formation) by the end of grade 4?
CQS4-08CAD	SC408CAD	Across grades from preprimary through upper secondary, at what grade(s) are fossils of animals and plants (age, location, formation) primarily intended to be taught?
CQS4-08CE	SC408CE	According to the national science curriculum, what proportion of grade 4 students should have been taught Earth's solar system (planets, Sun, moon) by the end of grade 4?
CQS4-08CAE	SC408CAE	Across grades from preprimary through upper secondary, at what grade(s) are Earth's solar system (planets, Sun, moon) primarily intended to be taught?
CQS4-08CF	SC408CF	According to the national science curriculum, what proportion of grade 4 students should have been taught day, night, and shadows due to Earth's rotation and its relationship to the Sun by the end of grade 4?
CQS4-08CAF	SC408CAF	Across grades from preprimary through upper secondary, at what grade(s) are day, night, and shadows due to Earth's rotation and its relationship to the Sun primarily intended to be taught?
CQS4-08CT	SC408CT	According to the national science curriculum, what proportion of grade 4 students should have been taught Earth science topics or skills by the end of grade 4; Across grades from preprimary through upper secondary, at what grade(s) are Earth science topics primarily intended to be taught? Comments:
CQS4-09A	SC409A	Is the science curriculum made available in the form of official publication containing the curriculum?
CQS4-09B	SC409B	Is the science curriculum made available in the form of ministry notes and directives?

**Exhibit S1.5: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Fourth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS4-09C	SC409C	Is the science curriculum made available in the form of mandated or recommended textbooks?
CQS4-09D	SC409D	Is the science curriculum made available in the form of instructional or pedagogical guide?
CQS4-09E	SC409E	Is the science curriculum made available in the form of specifically developed or recommended instructional activities?
CQS4-09F	SC409F	Is the science curriculum made available in the form of other?
CQS4-09FT	SC409FT	Is the science curriculum made available in the form of other? Please specify:
CQS4-09T	SC409T	In what form is the science curriculum made available? Comments:
CQS4-10	SC410	Does the curriculum prescribe the percentage of total instructional time to be devoted to science instruction at the fourth grade of primary/elementary school?
CQS4-10T	SC410T	If the curriculum does prescribe the percentage of total instructional time to be devoted to science instruction at the fourth grade of primary/elementary school, what is the percentage?
CQS4-10AT	SC410AT	Does the curriculum prescribe the percentage of total instructional time to be devoted to science instruction at the fourth grade of primary/elementary school? Comments:
CQS4-11A	SC411A	Is the science curriculum implementation evaluated by visits by inspectors/supervisors?
CQS4-11B	SC411B	Is the science curriculum implementation evaluated by research programs?
CQS4-11C	SC411C	Is the science curriculum implementation evaluated by school self-evaluation?
CQS4-11D	SC411D	Is the science curriculum implementation evaluated by national or regional assessments?
CQS4-11E	SC411E	Is the science curriculum implementation evaluated by other?
CQS4-11ET	SC411ET	Is the science curriculum implementation evaluated by other? Please specify:
CQS4-11T	SC411T	How is the science curriculum implementation evaluated? Comments:



# TIMSS 2011 Curriculum Questionnaire

TIMSS & PIRLS 2011 Curriculum Questionnaire

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# GENERAL MODULE

*To be completed by all countries participating  
in TIMSS and/or PIRLS*



TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

GEN01

1. What is your country's name for the grade(s) tested in TIMSS and/or PIRLS 2011, in English (e.g., grade 4, grade 8)?

GEN02

2. 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 6<sup>th</sup> birthday"; "Children must be 6 years old by the end of June to begin school the following September".*

GEN02A

- A. 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".*

GEN02B

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

*Check one circle only.*

Yes---

No---

GEN02C

*If Yes....*

C. How did the policy change, and when was the change made?

TIMSS & PIRLS 2011 Curriculum Questionnaire

Questions 3-5 ask about the years of schooling provided in your country, beginning with preprimary education.

3. Is preprimary education (ISCED Level 0) mandatory for children in your country?

Check **one** circle only.

Yes---

No---

If Yes....

GEN03

A. How many years are students required to attend preprimary education?

1 year-----

2 years-----

3 years-----

More than 3 years----

If No....

GEN03A

B. What types of preprimary education are available, but not mandatory?

Check **one** circle for each line.

GEN03BA

GEN03BB

GEN03BC

GEN03BT

a) Public preprimary education -----

b) Licensed early childhood education providers-----

c) Other-----

Please specify:

Yes No

GEN03T

Any other comments about preprimary education:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN04

4. What are the ages and/or grades of compulsory education in your country?

*Example: "Ages 6-16; Grades 1-9".*

GEN05

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

*Example: "Grades 1-12".*

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

GEN06

6. Does your country have a national curriculum for preprimary education (ISCED Level 0)?

Check **one** circle only.

Yes---

No---

GEN06A

If Yes....

- A. Are language, reading, and writing skills part of the preprimary curriculum?

Check **one** circle only.

Yes---

No---

GEN06AT

Please describe:

GEN06B

- B. Is mathematics (e.g., counting, learning shapes) part of the preprimary curriculum?

Check **one** circle only.

Yes---

No---

GEN06BT

Please describe:

GEN06C

C. Is science (e.g., nature study, weather) part of the preprimary curriculum?

Check **one** circle only.

Yes---

No---

GEN06CT

Please describe:

GEN07

7. 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---

GEN07T

Please describe:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN08

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

*Check **one** circle only.*

Yes---

No---

GEN08T

Please describe:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

GEN09

9. 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".*

- A. 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
GEN09AA	a) Supervised practicum during the teacher education program----- <i>If Yes...</i> How long is this period? _____	<input type="radio"/>	<input type="radio"/>
GEN09AAT			
GEN09AB	b) Passing a qualifying examination (e.g., licensing, certification)-----	<input type="radio"/>	<input type="radio"/>
GEN09AC	c) Completion of a probationary teaching period----- <i>If Yes...</i> How long is this period? _____	<input type="radio"/>	<input type="radio"/>
GEN09ACT			
GEN09AD	d) Completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance) -----	<input type="radio"/>	<input type="radio"/>
GEN09AE	e) Other----- Please specify:	<input type="radio"/>	<input type="radio"/>
GEN09AET	_____		



TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

GEN09B

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

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.*

GEN09CA

a) Supervised practicum during the teacher education program-----

**Yes No**  
—

GEN09CAT

*If Yes...*  
How long is this period? \_\_\_\_\_

GEN09CB

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

—

GEN09CC

c) Completion of a probationary teaching period-----  
*If Yes...*

—

GEN09CCT

How long is this period? \_\_\_\_\_

GEN09CD

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

—

GEN09CE

e) Other-----  
Please specify:

—

GEN09CET

\_\_\_\_\_

10. A. Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in the following subjects 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 for each line.

- |         |                      | Yes                   | No                    |
|---------|----------------------|-----------------------|-----------------------|
| GEN10AA | a) Language(s) ----- | <input type="radio"/> | <input type="radio"/> |
| GEN10AB | b) Mathematics-----  | <input type="radio"/> | <input type="radio"/> |
| GEN10AC | c) Science-----      | <input type="radio"/> | <input type="radio"/> |

- GEN10B B. Please describe the grades at which the exams are given 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."*

- GEN10C C. Does your country have a national or regional policy to make accommodations for students with special needs taking national or regional tests?

*Examples: "Providing materials in Braille for visually impaired students";  
"Providing instructions in sign language for hearing impaired students".*

Check **one** circle only.

- Yes---   
No---

- GEN10CT If Yes...  
What is the policy?

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN10D

D. If there are not exams, is there a similar process that has consequences for individual students?

*Example: "Teacher recommendations"*

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN11

11. Is there a national/regional policy to encourage parental involvement in the schools attended by **fourth-grade** students?

*Example: "Parents must be included in school governing bodies".*

Check **one** circle only.

Yes---

No---

GEN11TA

*If Yes...*  
What is the policy?

GEN11TB

*If No...*  
Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN12

12. Is there a national/regional policy to encourage parental involvement in the schools attended by **eighth-grade** students?

*Check **one** circle only.*

- Yes, same as fourth grade---
- Yes, but different than fourth grade---
- No---

GEN12T

*If different from fourth grade...*  
What is the policy?

TIMSS & PIRLS 2011 Curriculum Questionnaire

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# MATHEMATICS MODULE GRADE 4 (TIMSS Grade 4 Module, Part 1)

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

## TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

MA401

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

Check **one** circle only.

Yes---

No---

MA401TA

If Yes...

Comments:

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?

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

Question 2 pertains to the mathematics curriculum that was in effect for the students assessed in TIMSS 2010/2011.

MA402A

2. A. In what year was the current mathematics curriculum introduced?

*Refers to the national 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.*

MA402AT

Comments:

MA402B

B. Is the mathematics curriculum being revised?

*Check **one** circle only.*

Yes--- No--- 

MA402BTA

*If Yes...*  
Please explain:

MA402BTB

*If No...*  
Comments:



TIMSS & PIRLS 2011 Curriculum Questionnaire

MA403

3. For the primary/elementary school mathematics curriculum, what is the grade structure?

*Refers to the national 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.*

*Examples: "Grades 1-5"; "Grades 1-3, 4-5"; "Grade 1, 2-4"*

4. What does the mathematics curriculum prescribe?

*Refers to the national 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.*

*Check one circle for each line.*

MA404A

a) Goals and objectives-----  Yes  No

MA404B

b) Instructional processes or methods-----  Yes  No

MA404C

c) Materials (e.g., textbooks, or instructional materials)-----  Yes  No

MA404D

d) Assessment methods/activities-----  Yes  No

MA404E

e) Other-----  Yes  No

MA404ET

Please specify:  
\_\_\_\_\_

MA404T

Comments:

MA405

5. Is there a process for approving the textbooks used for mathematics instruction?

Check **one** circle only.

Yes---

No---

MA405T

*If Yes...*

Please describe the process:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

MA406A

6. A. Does the national curriculum contain statements/policies about the use of calculators in grade 4 mathematics instruction?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

MA406AT

If Yes...

What are the statements/policies?

MA406B

- B. Does the national curriculum contain statements/policies about the use of calculators in grade 4 mathematics tests or examinations?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

MA406BTA

If Yes...

What are the statements/policies?

MA406BTB

Comments:

MA407

7. Does the national curriculum contain statements/policies about the use of computers in grade 4 mathematics?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

MA407TA

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

MA407TB

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

8. How much emphasis does the national mathematics curriculum place on the following?

*Refers to the national 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.*

Check **one** circle for each line.

	None	Very Little	Some	A lot
MA408A a) Mastering basic skills and procedures-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MA408B b) Applying mathematics in real-life contexts-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MA408C c) Reasoning mathematically-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MA408CT

Comments:

9. (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 to 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., finding missing terms in part A topic (h)), please explain in the comment field.*

*Refers to the national 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.*

		<b>(i) Proportion of grade 4 students expected to be taught topic</b>			<b>(ii) Grade(s) topic is expected to be taught</b> preprimary (PP) through the end of upper secondary (G12)							
		Check <b>one</b> circle for each line.										
		All or almost all students	Only the more able students	Not included in the curriculum through grade 4								
<b>A. Number</b>												
MA409AA	a) Concepts of whole numbers, including place value and ordering-----	○-----○-----○			PP	G1	G2	G3	G4	G5	G6	MA409AAA
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
MA409AB	b) Adding, subtracting, multiplying, and/or dividing with whole numbers-----	○-----○-----○			PP	G1	G2	G3	G4	G5	G6	MA409AAB
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

TIMSS & PIRLS 2011 Curriculum Questionnaire

MA409AC	<p>c) Concepts of fractions (fractions as parts of a whole or of a collection, or as a location on a number line; comparing and ordering fractions) -----</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA409AAC
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA409AD	<p>d) Adding and subtracting with fractions-----</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA409AAD
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA409AE	<p>e) Concepts of decimals, including place value and ordering-----</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA409AAE
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA409AF	<p>f) Adding and subtracting with decimals-----</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA409AAF
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA409AG	<p>g) Number sentences (finding the missing number, modeling simple situations with number sentences) -----</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA409AAG
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA409AH	<p>h) Number patterns (extending number patterns and finding missing terms) ---</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA409AAH
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA409AT	<p>Comments:</p> <div style="border: 1px solid black; height: 40px; width: 100%;"></div>																														

TIMSS & PIRLS 2011 Curriculum Questionnaire

		(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught									
		Check <i>one</i> circle for each line.			preprimary (PP) through the end of upper secondary (G12)									
		All or almost all students	Only the more able students	Not included in the curriculum through grade 4										
<b>B. Geometric Shapes and Measures</b>														
MA409BA	a) Lines: measuring, estimating length of; parallel and perpendicular lines-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA409BAA	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA409BB	b) Comparing and drawing angles---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA409BAB	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA409BC	c) Using informal coordinate systems to locate points in a plane (e.g., in square B4)-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA409BAC	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA409BD	d) Elementary properties of common geometric shapes--	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA409BAD	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA409BE	e) Reflections and rotations-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA409BAE	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA409BF	f) Relationships between two-dimensional and three-dimensional shapes-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA409BAF	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			



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MA409BG

g) Finding and estimating areas, perimeters and volumes-----	PP	G1	G2	G3	G4	G5	G6
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	G7	G8	G9	G10	G11	G12	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

MA409BAG

MA409BT

Comments:

		(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught							
		Check <i>one</i> circle for each line.			preprimary (PP) through the end of upper secondary (G12)							
		All or almost all students	Only the more able students	Not included in the curriculum through grade 4								
<b>C. Data Display</b>												
MA409CA	a) Reading data from tables, pictographs, bar graphs, or pie charts-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	MA409CAA
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MA409CB	b) Drawing conclusions from data displays-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	MA409CAB
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MA409CC	c) Displaying data using tables, pictographs, and bar graphs-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	MA409CAC
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MA409CT	Comments:											

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

10. In what form is the mathematics curriculum made available?

*Refers to the national 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.*

Check **one** circle for each line.

		Yes	No
MA410A	a) Official publication containing the curriculum-----	<input type="radio"/>	<input type="radio"/>
MA410B	b) Ministry notes and directives-----	<input type="radio"/>	<input type="radio"/>
MA410C	c) Mandated or recommended textbooks-----	<input type="radio"/>	<input type="radio"/>
MA410D	d) Instructional or pedagogical guide-----	<input type="radio"/>	<input type="radio"/>
MA410E	e) Specifically developed or recommended instructional activities--	<input type="radio"/>	<input type="radio"/>
MA410F	f) Other-----	<input type="radio"/>	<input type="radio"/>
MA410FT	Please specify: _____		
MA410T	Comments:		

MA411

11. Does the curriculum prescribe the percentage of **total** instructional time to be devoted to **mathematics** instruction at the fourth grade of primary/elementary school?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

MA411T

*If Yes...*  
Please specify the percentage.

MA411AT

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

12. How is the mathematics curriculum implementation evaluated?

*Refers to the national 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.*

Check **one** circle for each line.

	Yes	No
MA412A	a) Visits by inspectors/supervisors----- <input type="radio"/> <input type="radio"/>	
MA412B	b) Research programs----- <input type="radio"/> <input type="radio"/>	
MA412C	c) School self-evaluation----- <input type="radio"/> <input type="radio"/>	
MA412D	d) National or regional assessments----- <input type="radio"/> <input type="radio"/>	
MA412E	e) Other----- <input type="radio"/> <input type="radio"/>	
MA412ET	Please specify: _____	

MA412T

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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# SCIENCE MODULE GRADE 4 (TIMSS Grade 4 Module, Part 2)

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

TIMSS & PIRLS 2011 Curriculum Questionnaire

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SC401

1. 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?

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

Question 2 pertains to the science curriculum that was in effect for the students assessed in TIMSS 2010/2011.

SC402A

2. A. In what year was the current science curriculum introduced?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

SC402AT

Comments:

SC402B

B. Is the science curriculum currently being revised?

Check **one** circle only.

Yes--- No--- 

SC402BTA

*If Yes...*

Please explain:

SC402BTB

*If No...*

Comments:



TIMSS & PIRLS 2011 Curriculum Questionnaire

SC403

3. For the primary/elementary school science curriculum, what is the grade structure?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

*Examples: "Grades 1-5"; "Grades 1-3, 4-5"; "Grade 1, 2-4"*

4. What does the science curriculum prescribe?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

*Check **one** circle for each line.*

SC404A

a) Goals and objectives-----

Yes No

SC404B

b) Instructional processes or methods-----

SC404C

c) Materials (e.g., textbooks, or instructional materials)-----

SC404D

d) Assessment methods/activities-----

SC404E

e) Other-----

SC404ET

Please specify: \_\_\_\_\_

\_\_\_\_\_

SC404T

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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SC405

5. Is there a process for approving the textbooks used for science instruction?

*Check one circle only.*

Yes---

No---

SC405T

*If Yes...*

Please describe the process:

## TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

SC406

6. Does the national curriculum contain statements/policies about the use of computers in grade 4 science?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

Check **one** circle only.

Yes---

No---

SC406TA

*If Yes...*

What are the statements/policies?

SC406TB

Comments:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

7. How much emphasis does the national science curriculum place on the following?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

Check **one** circle for each line.

		None	Very Little	Some	A lot
SC407A	a) Knowing basic science facts and principles-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC407B	b) Applying science in real-life contexts-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC407C	c) Providing explanations or justifications about what is being studied-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC407D	d) Designing and planning experiments or investigations-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC407E	e) Conducting experiments or investigations-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SC407T

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

8. (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.*

Across grades from preprimary through upper secondary, 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., pollution in part A topic (e)), please explain in the comment field.*

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

	(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught							
	All or almost all students	Only the more able students	Not included in the curriculum through grade 4	preprimary (PP) through the end of upper secondary (G12)							
	Check <b>one</b> circle for each line.										
<b>A. Life Science</b>											
SC408AA	a) Major body structures and their functions in humans and other organisms (plants and animals) -----			PP	G1	G2	G3	G4	G5	G6	SC408AAA
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				G7	G8	G9	G10	G11	G12		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SC408AB	b) Life cycles and reproduction in plants and animals-----			PP	G1	G2	G3	G4	G5	G6	SC408AAB
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
				G7	G8	G9	G10	G11	G12		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TIMSS & PIRLS 2011 Curriculum Questionnaire

SC408AC	c) Physical features, behavior, and survival of organisms living in different environments-----		<table border="1"> <thead> <tr> <th>PP</th> <th>G1</th> <th>G2</th> <th>G3</th> <th>G4</th> <th>G5</th> <th>G6</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <th>G7</th> <th>G8</th> <th>G9</th> <th>G10</th> <th>G11</th> <th>G12</th> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC408AAC
PP	G1	G2	G3	G4	G5	G6																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
G7	G8	G9	G10	G11	G12																											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																											
SC408AD	d) Relationships in a given community (e.g., simple food chains, predator-prey relationships) -----		<table border="1"> <thead> <tr> <th>PP</th> <th>G1</th> <th>G2</th> <th>G3</th> <th>G4</th> <th>G5</th> <th>G6</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <th>G7</th> <th>G8</th> <th>G9</th> <th>G10</th> <th>G11</th> <th>G12</th> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC408AAD
PP	G1	G2	G3	G4	G5	G6																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
G7	G8	G9	G10	G11	G12																											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																											
SC408AE	e) Changes in environments (effects of human activity, pollution and its prevention) -----		<table border="1"> <thead> <tr> <th>PP</th> <th>G1</th> <th>G2</th> <th>G3</th> <th>G4</th> <th>G5</th> <th>G6</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <th>G7</th> <th>G8</th> <th>G9</th> <th>G10</th> <th>G11</th> <th>G12</th> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC408AAE
PP	G1	G2	G3	G4	G5	G6																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
G7	G8	G9	G10	G11	G12																											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																											
SC408AF	f) Human health (e.g., transmission/prevention of communicable diseases, signs of health/illness, diet, exercise) ----		<table border="1"> <thead> <tr> <th>PP</th> <th>G1</th> <th>G2</th> <th>G3</th> <th>G4</th> <th>G5</th> <th>G6</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <th>G7</th> <th>G8</th> <th>G9</th> <th>G10</th> <th>G11</th> <th>G12</th> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC408AAF
PP	G1	G2	G3	G4	G5	G6																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
G7	G8	G9	G10	G11	G12																											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																											
SC408AT	Comments:	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>																														

TIMSS & PIRLS 2011 Curriculum Questionnaire

	(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught							
	Check <i>one</i> circle for each line.			preprimary (PP) through the end of upper secondary (G12)							
	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	
SC408BA	<b>B. Physical Science</b>										SC408BAA
	a) States of matter (solids, liquids, gases) and differences in their physical properties (shape, volume), including changes in state of matter by heating and cooling-----	○-----○-----○			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SC408BB	b) Classification of objects/materials based on physical properties (e.g., weight/mass, volume, magnetic attraction) -----	○-----○-----○			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	c) Forming and separating mixtures-----	○-----○-----○			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SC408BC	d) Familiar changes in materials (e.g., decaying, burning, rusting, cooking) -----	○-----○-----○			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TIMSS & PIRLS 2011 Curriculum Questionnaire

SC408BE

e) Common energy sources/forms and their practical uses (e.g., the Sun, electricity, water, wind) -----

\_\_\_\_\_  \_\_\_\_\_

PP	G1	G2	G3	G4	G5	G6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G7	G8	G9	G10	G11	G12	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SC408BAE

SC408BF

f) Light (e.g., sources, behavior)

\_\_\_\_\_  \_\_\_\_\_

PP	G1	G2	G3	G4	G5	G6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G7	G8	G9	G10	G11	G12	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SC408BAF

SC408BG

g) Electrical circuits and properties of magnets-----

\_\_\_\_\_  \_\_\_\_\_

PP	G1	G2	G3	G4	G5	G6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G7	G8	G9	G10	G11	G12	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SC408BAG

SC408BH

h) Forces that cause objects to move (e.g., gravity, push/pull forces) -

\_\_\_\_\_  \_\_\_\_\_

PP	G1	G2	G3	G4	G5	G6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G7	G8	G9	G10	G11	G12	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SC408BAH

SC408BT

Comments:



TIMSS & PIRLS 2011 Curriculum Questionnaire

	(i) Proportion of grade 4 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught								
	All or almost all students	Only the more able students	Not included in the curriculum through grade 4	preprimary (PP) through the end of upper secondary (G12)								
	Check <i>one</i> circle for each line.											
<b>C. Earth Science</b>												
SC408CA	a) Water on Earth (location, types, and movement) and air (composition, proof of its existence, uses)---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC408CAA
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SC408CB	b) Common features of Earth's landscape (e.g., mountains, plains, rivers, deserts) and relationship to human use (e.g., farming, irrigation, land development) ----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC408CAB
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SC408CC	c) Weather conditions from day to day or over the seasons-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC408CAC
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SC408CD	d) Fossils of animals and plants (age, location, formation) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC408CAD
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SC408CE	e) Earth's solar system (planets, Sun, moon) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC408CAE
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TIMSS & PIRLS 2011 Curriculum Questionnaire

SC408CF

f) Day, night, and shadows due to Earth's rotation and its relationship to the Sun-----							
	PP	G1	G2	G3	G4	G5	G6
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	G7	G8	G9	G10	G11	G12	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SC408CAF

SC408CT

Comments:

## TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

9. In what form is the science curriculum made available?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

*Check **one** circle for each line.*

		Yes	No
SC409A	a) Official publication containing the curriculum-----	<input type="radio"/>	<input type="radio"/>
SC409B	b) Ministry notes and directives-----	<input type="radio"/>	<input type="radio"/>
SC409C	c) Mandated or recommended textbooks-----	<input type="radio"/>	<input type="radio"/>
SC409D	d) Instructional or pedagogical guide-----	<input type="radio"/>	<input type="radio"/>
SC409E	e) Specifically developed or recommended instructional activities---	<input type="radio"/>	<input type="radio"/>
SC409F	f) Other-----	<input type="radio"/>	<input type="radio"/>
SC409FT	Please specify: _____		
SC409T	Comments:		
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>		

TIMSS & PIRLS 2011 Curriculum Questionnaire

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SC410

10. Does the curriculum prescribe the percentage of **total** instructional time to be devoted to **science** instruction at the fourth grade of primary/elementary school?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

Check **one** circle only.

Yes---

No---

SC410T

*If Yes...*

Please specify the percentage:

SC410AT

Comments:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

11. How is the science curriculum implementation evaluated?

*Refers to the national curriculum that covers science instruction at the fourth grade of primary/elementary schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.*

Check **one** circle for each line.

	Yes	No
SC411A	a) Visits by inspectors/supervisors----- <input type="radio"/> <input type="radio"/>	
SC411B	b) Research programs----- <input type="radio"/> <input type="radio"/>	
SC411C	c) School self-evaluation----- <input type="radio"/> <input type="radio"/>	
SC411D	d) National or regional assessments----- <input type="radio"/> <input type="radio"/>	
SC411E	e) Other----- <input type="radio"/> <input type="radio"/>	
SC411ET	Please specify: _____	

SC411T

Comments:



# Section 6

**Eighth Grade Student Questionnaire –  
General/Integrated Science Version**

**&**

**Eighth Grade Student Questionnaire –  
Separate Science Subjects Version**



Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade

TIMSS 2011 General/ Integrated Question Number	TIMSS 2011 General/ Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQIS-01	BSBG01	SQSS-01	BSBG01	Are you a girl or a boy?	BS4GSEX	
SQIS-02A	BSBG02A	SQSS-02A	BSBG02A	What month were you born in?	BS4GBRTM	
SQIS-02B	BSBG02B	SQSS-02B	BSBG02B	What year were you born in?	BS4GBRTY	
SQIS-03	BSBG03	SQSS-03	BSBG03	How often do you speak <language of test> at home?	BS4GOLAN	
SQIS-04	BSBG04	SQSS-04	BSBG04	About how many books are there in your home?	BS4GBOOK	
SQIS-05A	BSBG05A	SQSS-05A	BSBG05A	Do you have a computer at your home?	BS4GTH02	
SQIS-05B	BSBG05B	SQSS-05B	BSBG05B	Do you have a study desk/table for your use at your home?	BS4GTH03	
SQIS-05C	BSBG05C	SQSS-05C	BSBG05C	Do you have books of your very own at your home?		
SQIS-05D	BSBG05D	SQSS-05D	BSBG05D	Do you have your own room at your home?		
SQIS-05E	BSBG05E	SQSS-05E	BSBG05E	Do you have an Internet connection at your home?	BS4GTH05	
SQIS-05F	BSBG05F	SQSS-05F	BSBG05F	Do you have <country specific> at your home?	BS4GTH06	
SQIS-05IS	BSBG05G	SQSS-05G	BSBG05G	Do you have <country specific> at your home?	BS4GTH07	
SQIS-05H	BSBG05H	SQSS-05H	BSBG05H	Do you have <country specific> at your home?	BS4GTH08	
SQIS-05I	BSBG05I	SQSS-05I	BSBG05I	Do you have <country specific> at your home?	BS4GTH09	
SQIS-05J	BSBG05J	SQSS-05J	BSBG05J	Do you have <country specific> at your home?		
SQIS-05K	BSBG05K	SQSS-05K	BSBG05K	Do you have <country specific> at your home?		
SQIS-06A	BSBG06A	SQSS-06A	BSBG06A	What is the highest level of education completed by your mother <or stepmother or female guardian>?	BS4GMFED	
SQIS-06B	BSBG06B	SQSS-06B	BSBG06B	What is the highest level of education completed by your father <or stepfather or male guardian>?	BS4GFMED	
SQIS-07	BSBG07	SQSS-07	BSBG07	How far in your education do you expect to go?	BS4GHFSG	Modified response options in 2011
SQIS-08A	BSBG08A	SQSS-08A	BSBG08A	Was your mother <or stepmother or female guardian> born in <country>?	BS4GMBRN	
SQIS-08B	BSBG08B	SQSS-08B	BSBG08B	Was your father <or stepfather or male guardian> born in <country>?	BS4GFBRN	
SQIS-09A	BSBG09A	SQSS-09A	BSBG09A	Were you born in <country>?	BS4GBORN	
SQIS-09B	BSBG09B	SQSS-09B	BSBG09B	If you were not born in <country>, how old were you when you came to <country>?	BS4GBRNC	
SQIS-10A	BSBG10A	SQSS-10A	BSBG10A	How often do you use a computer at home?	BS4GCHOM	Modified response options in 2011
SQIS-10B	BSBG10B	SQSS-10B	BSBG10B	How often do you use a computer at school?	BS4GCSCH	Modified response options in 2011
SQIS-10IS	BSBG10C	SQSS-10C	BSBG10C	How often do you use a computer at some other place?	BS4GCELS	Modified response options in 2011
SQIS-11A	BSBG11A	SQSS-11A	BSBG11A	How often do your parents ask what you learned in school?		
SQIS-11B	BSBG11B	SQSS-11B	BSBG11B	How often do you talk about schoolwork with your parents at home?		
SQIS-11IS	BSBG11C	SQSS-11C	BSBG11C	How often do your parents make sure that you set aside time for your homework?		
SQIS-11D	BSBG11D	SQSS-11D	BSBG11D	How often do your parents check if you do your homework?		
SQIS-12A	BSBG12A	SQSS-12A	BSBG12A	How much do you agree that you like being in school?	BS4GALBS	



**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/ Integrated Question Number	TIMSS 2011 General/ Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQIS-12B	BSBG12B	SQSS-12B	BSBG12B	How much do you agree that you feel safe when you are at school?		
SQIS-12IS	BSBG12C	SQSS-12C	BSBG12C	How much do you agree that you feel like you belong at your school?		
SQIS-13A	BSBG13A	SQSS-13A	BSBG13A	During this year, how often were you made fun of or called names at school?		
SQIS-13B	BSBG13B	SQSS-13B	BSBG13B	During this year, how often were you left out of games or activities by other students at school?		
SQIS-13IS	BSBG13C	SQSS-13C	BSBG13C	During this year, how often did someone spread lies about you at school?		
SQIS-13D	BSBG13D	SQSS-13D	BSBG13D	During this year, how often was something stolen from you at school?		
SQIS-13E	BSBG13E	SQSS-13E	BSBG13E	During this year, how often were you hit or hurt by other student(s) at school?		
SQIS-13F	BSBG13F	SQSS-13F	BSBG13F	During this year, how often were you made to do things you didn't want to do by other students at school?		
SQIS-14A	BSBM14A	SQSS-14A	BSBM14A	How much do you agree that you enjoy learning mathematics?	BS4MAENJ	
SQIS-14B	BSBM14B	SQSS-14B	BSBM14B	How much do you agree that you wish you did not have to study mathematics?		
SQIS-14C	BSBM14C	SQSS-14C	BSBM14C	How much do you agree that mathematics is boring?	BS4MABOR	
SQIS-14D	BSBM14D	SQSS-14D	BSBM14D	How much do you agree that you learn many interesting things in mathematics?		
SQIS-14E	BSBM14E	SQSS-14E	BSBM14E	How much do you agree that you like mathematics?	BS4MALIK	
SQIS-14F	BSBM14F	SQSS-14F	BSBM14F	How much do you agree that it is important to do well in mathematics?		
SQIS-15A	BSBM15A	SQSS-15A	BSBM15A	How much do you agree that you know what your teacher expects you to do in your mathematics lessons?		
SQIS-15B	BSBM15B	SQSS-15B	BSBM15B	How much do you agree that you think of things not related to the lesson in your mathematics lessons?		
SQIS-15C	BSBM15C	SQSS-15C	BSBM15C	How much do you agree that your teacher is easy to understand in your mathematics lessons?		
SQIS-15D	BSBM15D	SQSS-15D	BSBM15D	How much do you agree that you are interested in what your teacher is saying in your mathematics lessons?		
SQIS-15E	BSBM15E	SQSS-15E	BSBM15E	How much do you agree that your teacher gives you interesting things to do in your mathematics lessons?		
SQIS-16A	BSBM16A	SQSS-16A	BSBM16A	How much do you agree that you usually do well in mathematics?	BS4MAWEL	
SQIS-16B	BSBM16B	SQSS-16B	BSBM16B	How much do you agree that mathematics is more difficult for you than for many of your classmates?	BS4MACLM	
SQIS-16C	BSBM16C	SQSS-16C	BSBM16C	How much do you agree that mathematics is not one of your strengths?	BS4MASTR	
SQIS-16D	BSBM16D	SQSS-16D	BSBM16D	How much do you agree that you learn things quickly in mathematics?	BS4MAQKY	
SQIS-16E	BSBM16E	SQSS-16E	BSBM16E	How much do you agree that mathematics makes you confused and nervous?		

**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/Integrated Question Number	TIMSS 2011 General/Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQIS-16F	BSBM16F	SQSS-16F	BSBM16F	How much do you agree that you are good at working out difficult mathematics problems?		
SQIS-16IS	BSBM16G	SQSS-16G	BSBM16G	How much do you agree that your teacher thinks you can do well in mathematics <programs/classes/lessons> with difficult materials?		
SQIS-16H	BSBM16H	SQSS-16H	BSBM16H	How much do you agree that your teacher tells you that you are good at mathematics?		
SQIS-16I	BSBM16I	SQSS-16I	BSBM16I	How much do you agree that mathematics is harder for you than any other subject?		
SQIS-16J	BSBM16J	SQSS-16J	BSBM16J	How much do you agree that learning mathematics will help you in your daily life?	BS4MAHDL	
SQIS-16K	BSBM16K	SQSS-16K	BSBM16K	How much do you agree that you need mathematics to learn other school subjects?	BS4MAOSS	
SQIS-16L	BSBM16L	SQSS-16L	BSBM16L	How much do you agree that you need to do well in mathematics to get into the <university> of your choice?	BS4MAUNI	
SQIS-16IS	BSBM16M	SQSS-16M	BSBM16M	How much do you agree that you need to do well in mathematics to get the job you want?	BS4MAGET	
SQIS-16N	BSBM16N	SQSS-16N	BSBM16N	How much do you agree that you would like a job that involves using mathematics?		
SQIS-17A	BSBS17A	--	--	How much do you agree that you enjoy learning science?	BS4SAENJ	
SQIS-17B	BSBS17B	--	--	How much do you agree that you wish you did not have to study science?		
SQIS-17C	BSBS17C	--	--	How much do you agree that you read about science in your spare time?		
SQIS-17D	BSBS17D	--	--	How much do you agree that science is boring?	BS4SABOR	
SQIS-17E	BSBS17E	--	--	How much do you agree that you learn many interesting things in science?		
SQIS-17F	BSBS17F	--	--	How much do you agree that you like science?	BS4SALIK	
SQIS-17IIS	BSBS17G	--	--	How much do you agree that it is important to do well in science?		
SQIS-18A	BSBS18A	--	--	How much do you agree that you know what your teacher expects you to do in your science lessons?		
SQIS-18B	BSBS18B	--	--	How much do you agree that you think of things not related to the lesson in your science lessons?		
SQIS-18C	BSBS18C	--	--	How much do you agree that your teacher is easy to understand in your science lessons?		
SQIS-18D	BSBS18D	--	--	How much do you agree that you are interested in what your teacher is saying in your science lessons?		
SQIS-18E	BSBS18E	--	--	How much do you agree that your teacher gives you interesting things to do in your science lessons?		
SQIS-19A	BSBS19A	--	--	How much do you agree that you usually do well in science?	BS4SAWEL	
SQIS-19B	BSBS19B	--	--	How much do you agree that science is more difficult for you than for many of your classmates?	BS4SACLM	
SQIS-19C	BSBS19C	--	--	How much do you agree that science is not one of your strengths?	BS4SASTR	

**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/ Integrated Question Number	TIMSS 2011 General/ Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SQIS-19D	BSBS19D	--	--	How much do you agree that you learn things quickly in science?	BS4SAQKY	
SQIS-19E	BSBS19E	--	--	How much do you agree that science makes you confused and nervous?		
SQIS-19F	BSBS19F	--	--	How much do you agree that you are good at working out difficult science problems?		
SQIS-19IIS	BSBS19G	--	--	How much do you agree that your teacher thinks you can do well in science <programs/classes/lessons> with difficult materials?		
SQIS-19H	BSBS19H	--	--	How much do you agree that your teacher tells you that you are good at science?		
SQIS-19I	BSBS19I	--	--	How much do you agree that science is harder for you than any other subject?		
SQIS-19J	BSBS19J	--	--	How much do you agree that learning science will help you in your daily life?	BS4SAHDL	
SQIS-19K	BSBS19K	--	--	How much do you agree that you need science to learn other school subjects?	BS4SAOSS	
SQIS-19L	BSBS19L	--	--	How much do you agree that you need to do well in science to get into the <university> of your choice?	BS4SAUNI	
SQIS-19M	BSBS19M	--	--	How much do you agree that you need to do well in science to get the job you want?	BS4SAGET	
SQIS-19N	BSBS19N	--	--	How much do you agree that you would like a job that involves using science?		
SQIS-20A	BSBM20A	--	--	How often does your teacher give you homework in mathematics?	BS4MOHWG	
SQIS-20B	BSBM20B	--	--	When your teacher gives you mathematics homework, about how many minutes do you usually spend on your homework?	BS4MSHWM	
SQIS-21A	BSBS21A	--	--	How often does your teacher give you homework in science?	BS4SOHWG	
SQIS-21B	BSBS21B	--	--	When your teacher gives you science homework, about how many minutes do you usually spend on your homework?	BS4SSHWM	
--	--	SQSS-17	BSBB17	Are you studying biology in school this year?	BS4BSBIO	
--	--	SQSS-18A	BSBB18A	How much do you agree that you enjoy learning biology?	BS4BAENJ	
--	--	SQSS-18B	BSBB18B	How much do you agree that you wish you did not have to study biology?		
--	--	SQSS-18C	BSBB18C	How much do you agree that you read about biology in your spare time?		
--	--	SQSS-18D	BSBB18D	How much do you agree that biology is boring?	BS4BABOR	
--	--	SQSS-18E	BSBB18E	How much do you agree that you learn many interesting things in biology?		
--	--	SQSS-18F	BSBB18F	How much do you agree that you like biology?	BS4BALIK	
--	--	SQSS-18G	BSBB18G	How much do you agree that it is important to do well in biology?		
--	--	SQSS-19A	BSBB19A	How much do you agree that you know what your teacher expects you to do in your biology lessons?		

**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/Integrated Question Number	TIMSS 2011 General/Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
--	--	SQSS-19B	BSBB19B	How much do you agree that you think of things not related to the lesson in your biology lessons?		
--	--	SQSS-19C	BSBB19C	How much do you agree that your teacher is easy to understand in your biology lessons?		
--	--	SQSS-19D	BSBB19D	How much do you agree that you are interested in what your teacher is saying in your biology lessons?		
--	--	SQSS-19E	BSBB19E	How much do you agree that your teacher gives you interesting things to do in your biology lessons?		
--	--	SQSS-20A	BSBB20A	How much do you agree that you usually do well in biology?	BS4BAWEL	
--	--	SQSS-20B	BSBB20B	How much do you agree that biology is more difficult for you than for many of your classmates?	BS4BACLM	
--	--	SQSS-20C	BSBB20C	How much do you agree that biology is not one of your strengths?	BS4BASTR	
--	--	SQSS-20D	BSBB20D	How much do you agree that you learn things quickly in biology?	BS4BAQKY	
--	--	SQSS-20E	BSBB20E	How much do you agree that biology makes you confused and nervous?		
--	--	SQSS-20F	BSBB20F	How much do you agree that you are good at working out difficult biology problems?		
--	--	SQSS-20G	BSBB20G	How much do you agree that your teacher thinks you can do well in biology <programs/classes/lessons> with difficult materials?		
--	--	SQSS-20H	BSBB20H	How much do you agree that your teacher tells you that you are good at biology?		
--	--	SQSS-20I	BSBB20I	How much do you agree that biology is harder for you than any other subject?		
--	--	SQSS-20J	BSBB20J	How much do you agree that learning biology will help you in your daily life?	BS4BAHDL	
--	--	SQSS-20K	BSBB20K	How much do you agree that you need biology to learn other school subjects?	BS4BAOSS	
--	--	SQSS-20L	BSBB20L	How much do you agree that you need to do well in biology to get into the <university> of your choice?	BS4BAUNI	
--	--	SQSS-20M	BSBB20M	How much do you agree that you need to do well in biology to get the job you want?	BS4BAGET	
--	--	SQSS-20N	BSBB20N	How much do you agree that you would like a job that involves using biology?		
--	--	SQSS-21	BSBE21	Are you studying earth science in school this year?	BS4EARTH	
--	--	SQSS-22A	BSBE22A	How much do you agree that you enjoy learning earth science?	BS4EAENJ	
--	--	SQSS-22B	BSBE22B	How much do you agree that you wish you did not have to study earth science?		
--	--	SQSS-22C	BSBE22C	How much do you agree that you read about earth science in your spare time?		
--	--	SQSS-22D	BSBE22D	How much do you agree that earth science is boring?	BS4EABOR	
--	--	SQSS-22E	BSBE22E	How much do you agree that you learn many interesting things in earth science?		
--	--	SQSS-22F	BSBE22F	How much do you agree that you like earth science?	BS4EALIK	

**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/ Integrated Question Number	TIMSS 2011 General/ Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
--	--	SQSS-22G	BSBE22G	How much do you agree that it is important to do well in earth science?		
--	--	SQSS-23A	BSBE23A	How much do you agree that you know what your teacher expects you to do in your earth science lessons?		
--	--	SQSS-23B	BSBE23B	How much do you agree that you think of things not related to the lesson in your earth science lessons?		
--	--	SQSS-23C	BSBE23C	How much do you agree that your teacher is easy to understand in your earth science lessons?		
--	--	SQSS-23D	BSBE23D	How much do you agree that you are interested in what your teacher is saying in your earth science lessons?		
--	--	SQSS-23E	BSBE23E	How much do you agree that your teacher gives you interesting things to do in your earth science lessons?		
--	--	SQSS-24A	BSBE24A	How much do you agree that you usually do well in earth science?	BS4EAWEL	
--	--	SQSS-24B	BSBE24B	How much do you agree that earth science is more difficult for you than for many of your classmates?	BS4EACLM	
--	--	SQSS-24C	BSBE24C	How much do you agree that earth science is not one of your strengths?	BS4EASTR	
--	--	SQSS-24D	BSBE24D	How much do you agree that you learn things quickly in earth science?	BS4EAQKY	
--	--	SQSS-24E	BSBE24E	How much do you agree that earth science makes you confused and nervous?		
--	--	SQSS-24F	BSBE24F	How much do you agree that you are good at working out difficult earth science problems?		
--	--	SQSS-24G	BSBE24G	How much do you agree that your teacher thinks you can do well in earth science <programs/classes/lessons> with difficult materials?		
--	--	SQSS-24H	BSBE24H	How much do you agree that your teacher tells you that you are good at earth science?		
--	--	SQSS-24I	BSBE24I	How much do you agree that earth science is harder for you than any other subject?		
--	--	SQSS-24J	BSBE24J	How much do you agree that learning earth science will help you in your daily life?	BS4EAHDL	
--	--	SQSS-24K	BSBE24K	How much do you agree that you need earth science to learn other school subjects?	BS4EAOSS	
--	--	SQSS-24L	BSBE24L	How much do you agree that you need to do well in earth science to get into the <university> of your choice?	BS4EAUNI	
--	--	SQSS-24M	BSBE24M	How much do you agree that you need to do well in earth science to get the job you want?	BS4EAGET	
--	--	SQSS-24N	BSBE24N	How much do you agree that you would like a job that involves using earth science?		
--	--	SQSS-25	BSBC25	Are you studying chemistry in school this year?	BS4CCHEM	
--	--	SQSS-26A	BSBC26A	How much do you agree that you enjoy learning chemistry?	BS4CAENJ	
--	--	SQSS-26B	BSBC26B	How much do you agree that you wish you did not have to study chemistry?		

**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/Integrated Question Number	TIMSS 2011 General/Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
--	--	SQSS-26C	BSBC26C	How much do you agree that you read about chemistry in your spare time?		
--	--	SQSS-26D	BSBC26D	How much do you agree that chemistry is boring?	BS4CABOR	
--	--	SQSS-26E	BSBC26E	How much do you agree that you learn many interesting things in chemistry?		
--	--	SQSS-26F	BSBC26F	How much do you agree that you like chemistry?	BS4CALIK	
--	--	SQSS-26G	BSBC26G	How much do you agree that it is important to do well in chemistry?		
--	--	SQSS-27A	BSBC27A	How much do you agree that you know what your teacher expects you to do in your chemistry lessons?		
--	--	SQSS-27B	BSBC27B	How much do you agree that you think of things not related to the lesson in your chemistry lessons?		
--	--	SQSS-27C	BSBC27C	How much do you agree that your teacher is easy to understand in your chemistry lessons?		
--	--	SQSS-27D	BSBC27D	How much do you agree that you are interested in what your teacher is saying in your chemistry lessons?		
--	--	SQSS-27E	BSBC27E	How much do you agree that your teacher gives you interesting things to do in your chemistry lessons?		
--	--	SQSS-28A	BSBC28A	How much do you agree that you usually do well in chemistry?	BS4CAWEL	
--	--	SQSS-28B	BSBC28B	How much do you agree that chemistry is more difficult for you than for many of your classmates?	BS4CACLM	
--	--	SQSS-28C	BSBC28C	How much do you agree that chemistry is not one of your strengths?	BS4CASTR	
--	--	SQSS-28D	BSBC28D	How much do you agree that you learn things quickly in chemistry?	BS4CAQKY	
--	--	SQSS-28E	BSBC28E	How much do you agree that chemistry makes you confused and nervous?		
--	--	SQSS-28F	BSBC28F	How much do you agree that you are good at working out difficult chemistry problems?		
--	--	SQSS-28G	BSBC28G	How much do you agree that your teacher thinks you can do well in chemistry <programs/classes/lessons> with difficult materials?		
--	--	SQSS-28H	BSBC28H	How much do you agree that your teacher tells you that you are good at chemistry?		
--	--	SQSS-28I	BSBC28I	How much do you agree that chemistry is harder for you than any other subject?		
--	--	SQSS-28J	BSBC28J	How much do you agree that learning chemistry will help you in your daily life?	BS4CAHDL	
--	--	SQSS-28K	BSBC28K	How much do you agree that you need chemistry to learn other school subjects?	BS4CAOSS	
--	--	SQSS-28L	BSBC28L	How much do you agree that you need to do well in chemistry to get into the <university> of your choice?	BS4CAUNI	
--	--	SQSS-28M	BSBC28M	How much do you agree that you need to do well in chemistry to get the job you want?	BS4CAGET	
--	--	SQSS-28N	BSBC28N	How much do you agree that you would like a job that involves using chemistry?		
--	--	SQSS-29	BSBP29	Are you studying physics in school this year?	BS4PPHY	

**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/ Integrated Question Number	TIMSS 2011 General/ Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
--	--	SQSS-30A	BSBP30A	How much do you agree that you enjoy learning physics?	BS4PAENJ	
--	--	SQSS-30B	BSBP30B	How much do you agree that you wish you did not have to study physics?		
--	--	SQSS-30C	BSBP30C	How much do you agree that you read about physics in your spare time?		
--	--	SQSS-30D	BSBP30D	How much do you agree that physics is boring?	BS4PABOR	
--	--	SQSS-30E	BSBP30E	How much do you agree that you learn many interesting things in physics?		
--	--	SQSS-30F	BSBP30F	How much do you agree that you like physics?	BS4PALIK	
--	--	SQSS-30G	BSBP30G	How much do you agree that it is important to do well in physics?		
--	--	SQSS-31A	BSBP31A	How much do you agree that you know what your teacher expects you to do in your physics lessons?		
--	--	SQSS-31B	BSBP31B	How much do you agree that you think of things not related to the lesson in your physics lessons?		
--	--	SQSS-31C	BSBP31C	How much do you agree that your teacher is easy to understand in your physics lessons?		
--	--	SQSS-31D	BSBP31D	How much do you agree that you are interested in what your teacher is saying in your physics lessons?		
--	--	SQSS-31E	BSBP31E	How much do you agree that your teacher gives you interesting things to do in your physics lessons?		
--	--	SQSS-32A	BSBP32A	How much do you agree that you usually do well in physics?	BS4PAWEL	
--	--	SQSS-32B	BSBP32B	How much do you agree that physics is more difficult for you than for many of your classmates?	BS4PACLM	
--	--	SQSS-32C	BSBP32C	How much do you agree that physics is not one of your strengths?	BS4PASTR	
--	--	SQSS-32D	BSBP32D	How much do you agree that you learn things quickly in physics?	BS4PAQKY	
--	--	SQSS-32E	BSBP32E	How much do you agree that physics makes you confused and nervous?		
--	--	SQSS-32F	BSBP32F	How much do you agree that you are good at working out difficult physics problems?		
--	--	SQSS-32G	BSBP32G	How much do you agree that your teacher thinks you can do well in physics <programs/classes/lessons> with difficult materials?		
--	--	SQSS-32H	BSBP32H	How much do you agree that your teacher tells you that you are good at physics?		
--	--	SQSS-32I	BSBP32I	How much do you agree that physics is harder for you than any other subject?		
--	--	SQSS-32J	BSBP32J	How much do you agree that learning physics will help you in your daily life?	BS4PAHDL	
--	--	SQSS-32K	BSBP32K	How much do you agree that you need physics to learn other school subjects?	BS4PAOSS	
--	--	SQSS-32L	BSBP32L	How much do you agree that you need to do well in physics to get into the <university> of your choice?	BS4PAUNI	

**Exhibit S1.6: Index of International Background Variables for the TIMSS 2011 Student Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 General/Integrated Question Number	TIMSS 2011 General/Integrated Variable Name	TIMSS 2011 Separate Sciences Question Number	TIMSS 2011 Separate Sciences Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
--	--	SQSS-32M	BSBP32M	How much do you agree that you need to do well in physics to get the job you want?	BS4PAGET	
--	--	SQSS-32N	BSBP32N	How much do you agree that you would like a job that involves using physics?		
--	--	SQSS-33AA	BSBM33AA	How often does your teacher give you homework in mathematics?	BS4MOHWG	
--	--	SQSS-33AB	BSBB33AB	How often does your teacher give you homework in biology?	BS4BOHWG	
--	--	SQSS-33AC	BSBE33AC	How often does your teacher give you homework in earth science?	BS4EOHWG	
--	--	SQSS-33AD	BSBC33AD	How often does your teacher give you homework in chemistry?	BS4COHWG	
--	--	SQSS-33AE	BSBP33AE	How often does your teacher give you homework in physics?	BS4POHWG	
--	--	SQSS-33BA	BSBM33BA	When your teacher gives you mathematics homework, about how many minutes do you usually spend on your homework?	BS4MSHWM	
--	--	SQSS-33BB	BSBB33BB	When your teacher gives you biology homework, about how many minutes do you usually spend on your homework?	BS4BSHWM	
--	--	SQSS-33BC	BSBE33BC	When your teacher gives you earth science homework, about how many minutes do you usually spend on your homework?	BS4ESHWM	
--	--	SQSS-33BD	BSBC33BD	When your teacher gives you chemistry homework, about how many minutes do you usually spend on your homework?	BS4CSHWM	
--	--	SQSS-33BE	BSBP33BE	When your teacher gives you physics homework, about how many minutes do you usually spend on your homework?	BS4PSHWM	



Identification Label

**TIMSS 2011**

**Student  
Questionnaire**

**<Grade 8>**

<TIMSS National Research Center Name>  
<Address>



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College

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## 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 .....	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I play sports .....	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I ride a skateboard .....	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### 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 .....	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I like eating ice cream .....	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I do not like waking up early .....	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
d) I enjoy doing chores .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

- 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 \_\_\_\_\_

BSBG01

Are you a girl or a boy?

Fill **one** circle only.

Girl --

Boy --

2 \_\_\_\_\_

When were you born?

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

BSBG02A

**a) Month**

**b) Year**

BSBG02B

January --

1993 --

February --

1994 --

March --

1995 --

April --

1996 --

May --

1997 --

June --

1998 --

July --

1999 --

August --

2000 --

September --

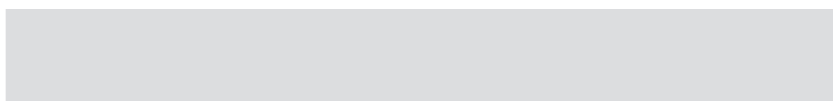
2001 --

October --

Other --

November --

December --

**3**

BSBG03

**How often do you speak <language of test> at home?***Fill one circle only.*Always -- Almost always -- Sometimes -- Never -- **4**

BSBG04

**About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)***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) Computer .....  | <input type="radio"/> | <input type="radio"/> |
| BSBG05B | b) Study desk/table for your use .....                           | <input type="radio"/> | <input type="radio"/> |
| BSBG05C | c) Books of your very own (do not count your school books) ..... | <input type="radio"/> | <input type="radio"/> |
| BSBG05D | d) Your own room .....   | <input type="radio"/> | <input type="radio"/> |
| BSBG05E | e) Internet connection .....                                     | <input type="radio"/> | <input type="radio"/> |
| BSBG05F | f) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05G | g) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05H | h) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05I | i) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05J | j) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05K | k) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |

**6**

BSBG06A

**A. What is the highest level of education completed by your mother <or stepmother or female guardian>?**

*Fill one circle only.*

- Some <ISCED Level 1 or 2 > or  
did not go to school .....
- <ISCED Level 2> .....
- <ISCED Level 3> .....
- <ISCED Level 4> .....
- <ISCED Level 5B> .....
- <ISCED Level 5A, first degree> .....
- Beyond <ISCED Level 5A, first degree> .....
- I don't know .....

BSBG06B

**B. What is the highest level of education completed by your father <or stepfather or male guardian>?**

*Fill one circle only.*

- Some <ISCED Level 1 or 2 > or  
did not go to school .....
- <ISCED Level 2> .....
- <ISCED Level 3> .....
- <ISCED Level 4> .....
- <ISCED Level 5B> .....
- <ISCED Level 5A, first degree> .....
- Beyond <ISCED Level 5A, first degree> .....
- I don't know .....

<Grade 8> Student Questionnaire

6

**7**

BSBG07

**How far in your education do you expect to go?***Fill one circle only.*

- Finish <ISCED Level 2> .....
- Finish <ISCED Level 3> .....
- Finish <ISCED Level 4> .....
- Finish <ISCED Level 5B> .....
- Finish <ISCED Level 5A, first degree> .....
- Beyond <ISCED Level 5A, first degree> .....
- I don't know .....

**8**

BSBG08A

**A. Was your mother <or stepmother or female guardian> born in <country>?***Fill one circle only.*

- Yes --
- No --

BSBG08B

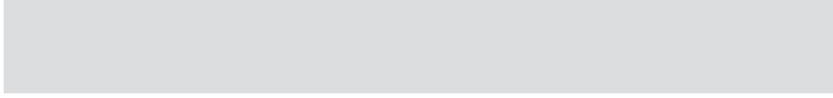
**B. Was your father <or stepfather or male guardian> born in <country>?***Fill one circle only.*

- Yes --
- No --

7

&lt;Grade 8&gt; Student Questionnaire



**9**

BSBG09A

**A. Were you born in <country>?***Fill one circle only.*Yes -- 

(If Yes, go to question 10)

No -- 

BSBG09B

**B. If you were not born in <country>, how old were you when you came to <country>?***Fill one circle only.*Older than 10 years old -- 5 to 10 years old -- Younger than 5 years old --

**10****How often do you use a computer in each of these places?***Fill one circle for each line.*

- |         |                           | Every day<br>or almost<br>every day | Once or<br>twice a<br>week | Once or<br>twice a<br>month | Never or<br>almost<br>never |
|---------|---------------------------|-------------------------------------|----------------------------|-----------------------------|-----------------------------|
| BSBG10A | a) At home .....          | <input type="radio"/>               | <input type="radio"/>      | <input type="radio"/>       | <input type="radio"/>       |
| BSBG10B | b) At school .....        | <input type="radio"/>               | <input type="radio"/>      | <input type="radio"/>       | <input type="radio"/>       |
| BSBG10C | c) Some other place ..... | <input type="radio"/>               | <input type="radio"/>      | <input type="radio"/>       | <input type="radio"/>       |

**11****How often do the following things happen at home?***Fill one circle for each line.*

- |         |  | Every day<br>or almost<br>every day | Once or<br>twice a<br>week | Once or<br>twice a<br>month | Never or<br>almost<br>never |
|---------|--|-------------------------------------|----------------------------|-----------------------------|-----------------------------|
| BSBG11A | a) My parents ask me what I am<br>learning in school .....             | <input type="radio"/>               | <input type="radio"/>      | <input type="radio"/>       | <input type="radio"/>       |
| BSBG11B | b) I talk about my schoolwork with<br>my parents .....                 | <input type="radio"/>               | <input type="radio"/>      | <input type="radio"/>       | <input type="radio"/>       |
| BSBG11C | c) My parents make sure that I set<br>aside time for my homework ..... | <input type="radio"/>               | <input type="radio"/>      | <input type="radio"/>       | <input type="radio"/>       |
| BSBG11D | d) My parents check if I do my<br>homework .....                       | <input type="radio"/>               | <input type="radio"/>      | <input type="radio"/>       | <input type="radio"/>       |

## Your School

### 12

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
BSBG12A	a) I like being in school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG12B	b) I feel safe when I am at school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG12C	c) I feel like I belong at this school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 13

During this year, how often have any of the following things happened to you at school?

Fill **one** circle for each line.

		At least once a week	Once or twice a month	A few times a year	Never
BSBG13A	a) I was made fun of or called names -	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13B	b) I was left out of games or activities by other students .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13C	c) Someone spread lies about me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13D	d) Something was stolen from me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13E	e) I was hit or hurt by other student(s) (e.g., shoving, hitting, kicking) .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13F	f) I was made to do things I didn't want to do by other students .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Mathematics in School

### 14

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
BSBM14A	a) I enjoy learning mathematics .....	○	○	○	○
BSBM14B	b) I wish I did not have to study mathematics .....	○	○	○	○
BSBM14C	c) Mathematics is boring .....	○	○	○	○
BSBM14D	d) I learn many interesting things in mathematics .....	○	○	○	○
BSBM14E	e) I like mathematics .....	○	○	○	○
BSBM14F	f) It is important to do well in mathematics .....	○	○	○	○

**15**

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
BSBM15A	a) I know what my teacher expects me to do .....	○	○	○	○
BSBM15B	b) I think of things not related to the lesson .....	○	○	○	○
BSBM15C	c) My teacher is easy to understand ..	○	○	○	○
BSBM15D	d) I am interested in what my teacher says .....	○	○	○	○
BSBM15E	e) My teacher gives me interesting things to do .....	○	○	○	○

## 16

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
BSBM16A	a) I usually do well in mathematics ---	○	○	○	○
BSBM16B	b) Mathematics is more difficult for me than for many of my classmates -----	○	○	○	○
BSBM16C	c) Mathematics is not one of my strengths -----	○	○	○	○
BSBM16D	d) I learn things quickly in mathematics -----	○	○	○	○
BSBM16E	e) Mathematics makes me confused and nervous -----	○	○	○	○
BSBM16F	f) I am good at working out difficult mathematics problems ----	○	○	○	○
BSBM16G	g) My teacher thinks I can do well in mathematics <programs/classes/lessons> with difficult materials ---	○	○	○	○
BSBM16H	h) My teacher tells me I am good at mathematics -----	○	○	○	○
BSBM16I	i) Mathematics is harder for me than any other subject -----	○	○	○	○

**16** (continued)

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
BSBM16J	j) I think learning mathematics will help me in my daily life .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16K	k) I need mathematics to learn other school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16L	l) I need to do well in mathematics to get into the <university> of my choice .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16M	m) I need to do well in mathematics to get the job I want .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16N	n) I would like a job that involves using mathematics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Science in School

### 17

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
BSBS17A	a) I enjoy learning science .....	○	○	○	○
BSBS17B	b) I wish I did not have to study science .....	○	○	○	○
BSBS17C	c) I read about science in my spare time .....	○	○	○	○
BSBS17D	d) Science is boring .....	○	○	○	○
BSBS17E	e) I learn many interesting things in science .....	○	○	○	○
BSBS17F	f) I like science .....	○	○	○	○
BSBS17G	g) It is important to do well in science .....	○	○	○	○



18

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
BSBS18A	a) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS18B	b) I think of things not related to the lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS18C	c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS18D	d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS18E	e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 19

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
BSBS19A	a) I usually do well in science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19B	b) Science is more difficult for me than for many of my classmates ----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19C	c) Science is not one of my strengths .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19D	d) I learn things quickly in science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19E	e) Science makes me confused and nervous .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19F	f) I am good at working out difficult science problems .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19G	g) My teacher thinks I can do well in science <programs/classes/ lessons> with difficult materials ---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19H	h) My teacher tells me I am good at science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19I	i) Science is harder for me than any other subject .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**19** (continued)

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
BSBS19J	j) I think learning science will help me in my daily life .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19K	k) I need science to learn other school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19L	l) I need to do well in science to get into the <university> of my choice -	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19M	m) I need to do well in science to get the job I want .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBS19N	n) I would like a job that involves using science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Homework

20

BSBM20A

A. How often does your teacher give you homework in mathematics?

*Fill one circle only.*

- Every day --
- 3 or 4 times a week --
- 1 or 2 times a week --
- Less than once a week --
- Never --

BSBM20B

B. When your teacher gives you mathematics homework, about how many minutes do you usually spend on your homework?

*Fill one circle only.*

- My teacher never gives me homework in mathematics --
- 1–15 minutes --
- 16–30 minutes --
- 31–60 minutes --
- 61–90 minutes --
- More than 90 minutes --

21

BSBS21A

**A. How often does your teacher give you homework in science?**

*Fill one circle only.*

Every day --○

3 or 4 times a week --○

1 or 2 times a week --○

Less than once a week --○

Never --○

BSBS21B

**B. When your teacher gives you science homework, about how many minutes do you usually spend on your homework?**

*Fill one circle only.*

My teacher never gives me homework in science --○

1–15 minutes --○

16–30 minutes --○

31–60 minutes --○

61–90 minutes --○

More than 90 minutes --○





BOSTON  
COLLEGE  
timssandpirls.bc.edu

# TIMSS 2011

## Student Questionnaire

<Grade 8>



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International Association  
for the Evaluation of  
Educational Achievement





Identification Label

**TIMSS 2011**

**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 .....	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I play sports .....	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I ride a skateboard .....	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### 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 .....	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I like eating ice cream .....	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I do not like waking up early .....	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
d) I enjoy doing chores .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

- 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 \_\_\_\_\_

BSBG01

Are you a girl or a boy?

*Fill one circle only.*

Girl --

Boy --

2 \_\_\_\_\_

When were you born?

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

BSBG02A

**a) Month**

**b) Year**

BSBG02B

January --

1993 --

February --

1994 --

March --

1995 --

April --

1996 --

May --

1997 --

June --

1998 --

July --

1999 --

August --

2000 --

September --

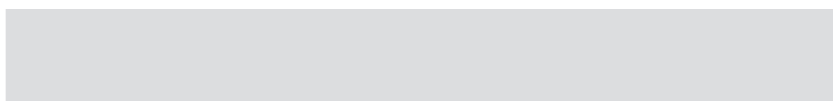
2001 --

October --

Other --

November --

December --

**3**

BSBG03

**How often do you speak <language of test> at home?***Fill one circle only.*Always -- Almost always -- Sometimes -- Never -- **4**

BSBG04

**About how many books are there in your home? (Do not count magazines, newspapers, or your school books.)***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) Computer .....  | <input type="radio"/> | <input type="radio"/> |
| BSBG05B | b) Study desk/table for your use .....                           | <input type="radio"/> | <input type="radio"/> |
| BSBG05C | c) Books of your very own (do not count your school books) ..... | <input type="radio"/> | <input type="radio"/> |
| BSBG05D | d) Your own room .....   | <input type="radio"/> | <input type="radio"/> |
| BSBG05E | e) Internet connection .....                                     | <input type="radio"/> | <input type="radio"/> |
| BSBG05F | f) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05G | g) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05H | h) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05I | i) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05J | j) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |
| BSBG05K | k) <country-specific indicator of wealth> .....                  | <input type="radio"/> | <input type="radio"/> |

**6**

BSBG06A

**A. What is the highest level of education completed by your mother <or stepmother or female guardian>?**

*Fill one circle only.*

- Some <ISCED Level 1 or 2> or did not go to school .....
- <ISCED Level 2> .....
- <ISCED Level 3> .....
- <ISCED Level 4> .....
- <ISCED Level 5B> .....
- <ISCED Level 5A, first degree> .....
- Beyond <ISCED Level 5A, first degree> .....
- I don't know .....

BSBG06B

**B. What is the highest level of education completed by your father <or stepfather or male guardian>?**

*Fill one circle only.*

- Some <ISCED Level Level 1 or 2> or did not go to school .....
- <ISCED Level 2> .....
- <ISCED Level 3> .....
- <ISCED Level 4> .....
- <ISCED Level 5B> .....
- <ISCED Level 5A, first degree> .....
- Beyond <ISCED Level 5A, first degree> .....
- I don't know .....

<Grade 8> Student Questionnaire

6

**7**

BSBG07

**How far in your education do you expect to go?***Fill one circle only.*Finish <ISCED Level 2> ..... Finish <ISCED Level 3> ..... Finish <ISCED Level 4> ..... Finish <ISCED Level 5B> ..... Finish <ISCED Level 5A, first degree> ..... Beyond <ISCED Level 5A, first degree> ..... I don't know ..... **8**

BSBG08A

**A. Was your mother <or stepmother or female guardian> born in <country>?***Fill one circle only.*Yes -- No -- 

BSBG08B

**B. Was your father <or stepfather or male guardian> born in <country>?***Fill one circle only.*Yes -- No -- 

7

&lt;Grade 8&gt; Student Questionnaire



**9**

BSBG09A

**A. Were you born in <country>?***Fill one circle only.*Yes -- 

(If Yes, go to question 10)

No -- 

BSBG09B

**B. If you were not born in <country>, how old were you when you came to <country>?***Fill one circle only.*Older than 10 years old -- 5 to 10 years old -- Younger than 5 years old --

**10****How often do you use a computer in each of these places?***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
BSBG10A	a) At home .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG10B	b) At school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG10C	c) Some other place .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**11****How often do the following things happen at home?***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
BSBG11A	a) My parents ask me what I am learning in school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG11B	b) I talk about my schoolwork with my parents .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG11C	c) My parents make sure that I set aside time for my homework .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG11D	d) My parents check if I do my homework .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Your School

### 12

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
BSBG12A	a) I like being in school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG12B	b) I feel safe when I am at school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG12C	c) I feel like I belong at this school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 13

During this year, how often have any of the following things happened to you at school?

Fill **one** circle for each line.

		At least once a week	Once or twice a month	A few times a year	Never
BSBG13A	a) I was made fun of or called names -	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13B	b) I was left out of games or activities by other students .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13C	c) Someone spread lies about me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13D	d) Something was stolen from me .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13E	e) I was hit or hurt by other student(s) (e.g., shoving, hitting, kicking) .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG13F	f) I was made to do things I didn't want to do by other students .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Mathematics in School

### 14

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
		↓	↓	↓	↓
BSBM14A	a) I enjoy learning mathematics .....	○	○	○	○
BSBM14B	b) I wish I did not have to study mathematics .....	○	○	○	○
BSBM14C	c) Mathematics is boring .....	○	○	○	○
BSBM14D	d) I learn many interesting things in mathematics .....	○	○	○	○
BSBM14E	e) I like mathematics .....	○	○	○	○
BSBM14F	f) It is important to do well in mathematics .....	○	○	○	○

**15**

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
BSBM15A	a) I know what my teacher expects me to do .....	○	○	○	○
BSBM15B	b) I think of things not related to the lesson .....	○	○	○	○
BSBM15C	c) My teacher is easy to understand ..	○	○	○	○
BSBM15D	d) I am interested in what my teacher says .....	○	○	○	○
BSBM15E	e) My teacher gives me interesting things to do .....	○	○	○	○

## 16

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
		↓	↓	↓	↓
BSBM16A	a) I usually do well in mathematics ----	○	○	○	○
BSBM16B	b) Mathematics is more difficult for me than for many of my classmates .....	○	○	○	○
BSBM16C	c) Mathematics is not one of my strengths .....	○	○	○	○
BSBM16D	d) I learn things quickly in mathematics .....	○	○	○	○
BSBM16E	e) Mathematics makes me confused and nervous .....	○	○	○	○
BSBM16F	f) I am good at working out difficult mathematics problems ----	○	○	○	○
BSBM16G	g) My teacher thinks I can do well in mathematics <programs/classes/lessons> with difficult materials ----	○	○	○	○
BSBM16H	h) My teacher tells me I am good at mathematics .....	○	○	○	○
BSBM16I	i) Mathematics is harder for me than any other subject .....	○	○	○	○

**16** (continued)

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
BSBM16J	j) I think learning mathematics will help me in my daily life .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16K	k) I need mathematics to learn other school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16L	l) I need to do well in mathematics to get into the <university> of my choice .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16M	m) I need to do well in mathematics to get the job I want .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBM16N	n) I would like a job that involves using mathematics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Biology in School

**17** \_\_\_\_\_

BSBB17

Are you studying biology in school this year?

Fill **one** circle only.

Yes --

No --  

(If No, go to question 21)

**18** \_\_\_\_\_

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

Fill **one** circle for each line.

- |         |  | Agree<br>a lot        | Agree<br>a little     | Disagree<br>a little  | Disagree<br>a lot     |
|---------|--|-----------------------|-----------------------|-----------------------|-----------------------|
| BSBB18A | a) I enjoy learning biology .....                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBB18B | b) I wish I did not have to study<br>biology .....     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBB18C | c) I read about biology in my<br>spare time .....      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBB18D | d) Biology is boring .....                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBB18E | e) I learn many interesting<br>things in biology ..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBB18F | f) I like biology .....                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBB18G | g) It is important to do well<br>in biology .....      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



## 19

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
BSBB19A	a) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB19B	b) I think of things not related to the lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB19C	c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB19D	d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB19E	e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 20

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
		↓	↓	↓	↓
BSBB20A	a) I usually do well in biology .....	○	○	○	○
BSBB20B	b) Biology is more difficult for me than for many of my classmates ----	○	○	○	○
BSBB20C	c) Biology is not one of my strengths .....	○	○	○	○
BSBB20D	d) I learn things quickly in biology .....	○	○	○	○
BSBB20E	e) Biology makes me confused and nervous .....	○	○	○	○
BSBB20F	f) I am good at working out difficult biology problems .....	○	○	○	○
BSBB20G	g) My teacher thinks I can do well in biology <programs/classes/lessons> with difficult materials ---	○	○	○	○
BSBB20H	h) My teacher tells me I am good at biology .....	○	○	○	○
BSBB20I	i) Biology is harder for me than any other subject .....	○	○	○	○

**20** (continued)

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
BSBB20J	j) I think learning biology will help me in my daily life .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB20K	k) I need biology to learn other school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB20L	l) I need to do well in biology to get into the <university> of my choice .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB20M	m) I need to do well in biology to get the job I want .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB20N	n) I would like a job that involves using biology .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Earth Science in School

### 21

BSBE21

Are you studying earth science in school this year?

Fill *one* circle only.

Yes --

No --  

(If No, go to question 25)

### 22

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

Fill *one* circle for each line.

- |         | Agree<br>a lot             | Agree<br>a little     | Disagree<br>a little  | Disagree<br>a lot     |
|---------|----------------------------|-----------------------|-----------------------|-----------------------|
| BSBE22A | ↓<br><input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBE22B | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBE22C | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBE22D | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBE22E | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBE22F | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBE22G | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**23**

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
BSBE23A	a) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE23B	b) I think of things not related to the lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE23C	c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE23D	d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE23E	e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 24

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
		↓	↓	↓	↓
BSBE24A	a) I usually do well in earth science	○	○	○	○
BSBE24B	b) Earth science is more difficult for me than for many of my classmates	○	○	○	○
BSBE24C	c) Earth science is not one of my strengths	○	○	○	○
BSBE24D	d) I learn things quickly in earth science	○	○	○	○
BSBE24E	e) Earth science makes me confused and nervous	○	○	○	○
BSBE24F	f) I am good at working out difficult earth science problems	○	○	○	○
BSBE24G	g) My teacher thinks I can do well in earth science <programs/classes/lessons> with difficult materials	○	○	○	○
BSBE24H	h) My teacher tells me I am good at earth science	○	○	○	○
BSBE24I	i) Earth science is harder for me than any other subject	○	○	○	○

**24** (continued)

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
BSBE24J	j) I think learning earth science will help me in my daily life .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE24K	k) I need earth science to learn other school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE24L	l) I need to do well in earth science to get into the <university> of my choice .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE24M	m) I need to do well in earth science to get the job I want .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE24N	n) I would like a job that involves using earth science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Chemistry in School

**25**

BSBC25

Are you studying chemistry in school this year?

Fill *one* circle only.

Yes --

No --  

(If No, go to question 29)

**26**

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

Fill *one* circle for each line.

- |         |   | Agree<br>a lot        | Agree<br>a little     | Disagree<br>a little  | Disagree<br>a lot     |
|---------|---|-----------------------|-----------------------|-----------------------|-----------------------|
| BSBC26A | a) I enjoy learning chemistry .....                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBC26B | b) I wish I did not have to study chemistry .....     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBC26C | c) I read about chemistry in my spare time .....      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBC26D | d) Chemistry is boring .....                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBC26E | e) I learn many interesting things in chemistry ..... | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBC26F | f) I like chemistry .....                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BSBC26G | g) It is important to do well in chemistry .....      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



**27**

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
BSBC27A	a) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC27B	b) I think of things not related to the lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC27C	c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC27D	d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC27E	e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28

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
		↓	↓	↓	↓
BSBC28A	a) I usually do well in chemistry -----	○	○	○	○
BSBC28B	b) Chemistry is more difficult for me than for many of my classmates ----	○	○	○	○
BSBC28C	c) Chemistry is not one of my strengths -----	○	○	○	○
BSBC28D	d) I learn things quickly in chemistry -----	○	○	○	○
BSBC28E	e) Chemistry makes me confused and nervous -----	○	○	○	○
BSBC28F	f) I am good at working out difficult chemistry problems -----	○	○	○	○
BSBC28G	g) My teacher thinks I can do well in chemistry <programs/classes/ lessons> with difficult materials ---	○	○	○	○
BSBC28H	h) My teacher tells me I am good at chemistry -----	○	○	○	○
BSBC28I	i) Chemistry is harder for me than any other subject -----	○	○	○	○

**28** (continued)

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
BSBC28J	j) I think learning chemistry will help me in my daily life .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC28K	k) I need chemistry to learn other school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC28L	l) I need to do well in chemistry to get into the <university> of my choice .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC28M	m) I need to do well in chemistry to get the job I want .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC28N	n) I would like a job that involves using chemistry .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Physics in School

### 29

BSBP29

Are you studying physics in school this year?

Fill **one** circle only.

Yes --

No --  

(If No, go to question 33)

### 30

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

Fill **one** circle for each line.

- |         | Agree<br>a lot             | Agree<br>a little          | Disagree<br>a little       | Disagree<br>a lot          |
|---------|----------------------------|----------------------------|----------------------------|----------------------------|
| BSBP30A | ↓<br><input type="radio"/> | ↓<br><input type="radio"/> | ↓<br><input type="radio"/> | ↓<br><input type="radio"/> |
| BSBP30B | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      |
| BSBP30C | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      |
| BSBP30D | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      |
| BSBP30E | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      |
| BSBP30F | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      |
| BSBP30G | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>      |

**31**

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
BSBP31A	a) I know what my teacher expects me to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP31B	b) I think of things not related to the lesson .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP31C	c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP31D	d) I am interested in what my teacher says .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP31E	e) My teacher gives me interesting things to do .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**32**

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
		↓	↓	↓	↓
BSBP32A	a) I usually do well in physics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32B	b) Physics is more difficult for me than for many of my classmates ----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32C	c) Physics is not one of my strengths .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32D	d) I learn things quickly in physics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32E	e) Physics makes me confused and nervous .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32F	f) I am good at working out difficult physics problems .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32G	g) My teacher thinks I can do well in physics <programs/classes/ lessons> with difficult materials ---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32H	h) My teacher tells me I am good at physics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32I	i) Physics is harder for me than any other subject .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**32** (continued)

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
BSBP32J	j) I think learning physics will help me in my daily life .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32K	k) I need physics to learn other school subjects .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32L	l) I need to do well in physics to get into the <university> of my choice -	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32M	m) I need to do well in physics to get the job I want .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP32N	n) I would like a job that involves using physics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Homework

### 33

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
BSBM33AA	a) Mathematics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB33AB	b) Biology .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE33AC	c) Earth science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC33AD	d) Chemistry .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP33AE	e) Physics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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
BSBM33BA	a) Mathematics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBB33BB	b) Biology .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBE33BC	c) Earth science .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBC33BD	d) Chemistry .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBP33BE	e) Physics .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>







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# TIMSS 2011

## Student Questionnaire Separate Science Subjects

<Grade 8>



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# Section 7

## Eighth Grade – Mathematics Teacher Questionnaire



**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-01	BTBG01	By the end of this school year, how many years will you have been teaching altogether?	BT4GTAUT	
TQG-02	BTBG02	Are you female or male?	BT4GSEX	
TQG-03	BTBG03	How old are you?	BT4GAGE	
TQG-04	BTBG04	What is the highest level of formal education you have completed?	BT4GFEDC	
TQG-05A	BTBG05A	During your <post-secondary> education, was mathematics your major or main area of study?	BT4MPSMA	
TQG-05B	BTBG05B	During your <post-secondary> education, was biology your major or main area of study?	BT4SPSBI	
TQG-05C	BTBG05C	During your <post-secondary> education, was physics your major or main area of study?	BT4SPSPH	
TQG-05D	BTBG05D	During your <post-secondary> education, was chemistry your major or main area of study?	BT4SPSCH	
TQG-05E	BTBG05E	During your <post-secondary> education, was <earth science> your major or main area of study?	BT4SPSES	
TQG-05F	BTBG05F	During your <post-secondary> education, was education--mathematics your major or main area of study?	BT4MPSEM	
TQG-05G	BTBG05G	During your <post-secondary> education, was education--science your major or main area of study?	BT4SPSED	
TQG-05H	BTBG05H	During your <post-secondary> education, was education--general your major or main area of study?	BT4GPSEG	
TQG-05I	BTBG05I	During your <post-secondary> education, was other your major or main area of study?	BT4GPSOT	
TQG-06A	BTBG06A	How would you characterize teachers' job satisfaction within your school?	BT4GCHTS	
TQG-06B	BTBG06B	How would you characterize teachers' understanding of the school's curricular goals within your school?	BT4GCHTU	
TQG-06C	BTBG06C	How would you characterize teachers' degree of success in implementing the school's curriculum within your school?	BT4GCHTC	
TQG-06D	BTBG06D	How would you characterize teachers' expectations for student achievement within your school?	BT4GCHES	
TQG-06E	BTBG06E	How would you characterize parental support for student achievement within your school?	BT4GCHPS	
TQG-06F	BTBG06F	How would you characterize parental involvement in school activities within your school?	BT4GCHPI	
TQG-06G	BTBG06G	How would you characterize students' regard for school property within your school?	BT4GCHSR	
TQG-06H	BTBG06H	How would you characterize students' desire to do well in school within your school?	BT4GCHSD	
TQG-07A	BTBG07A	Thinking about your current school, indicate the extent to which you agree or disagree that this school is located in a safe neighborhood.	BT4GCUSN	
TQG-07B	BTBG07B	Thinking about your current school, indicate the extent to which you agree or disagree that you feel safe at this school.	BT4GCUSA	
TQG-07C	BTBG07C	Thinking about your current school, indicate the extent to which you agree or disagree that this school's security policies and practices are sufficient.	BT4GCUAS	
TQG-07D	BTBG07D	Thinking about your current school, indicate the extent to which you agree or disagree that the students behave in an orderly manner.		
TQG-07E	BTBG07E	Thinking about your current school, indicate the extent to which you agree or disagree that the students are respectful of the teachers.		
TQG-08A	BTBG08A	In your current school, how severe is the problem that the school building needs significant repair?	BT4GSPBR	Modified response options in 2011

**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-08B	BTBG08B	In your current school, how severe is the problem that classrooms are overcrowded?	BT4GSPCO	Modified response options in 2011
TQG-08C	BTBG08C	In your current school, how severe is the problem that teachers have too many teaching hours?		Modified response options in 2011
TQG-08D	BTBG08D	In your current school, how severe is the problem that teachers do not have adequate workspace for preparation, collaboration, or meeting with students?	BT4GSPWO	Modified wording and response options in 2011
TQG-08E	BTBG08E	In your current school, how severe is the problem that teachers do not have adequate instructional materials and supplies?		
TQG-09AA	BTBG09AA	Do you use computers in your teaching for preparation?		
TQG-09AB	BTBG09AB	Do you use computers in your teaching for administration?		
TQG-09AC	BTBG09AC	Do you use computers in your teaching for classroom instruction?		
TQG-09BA	BTBG09BA	How much do you agree that you feel comfortable using computers in your teaching?		
TQG-09BB	BTBG09BB	How much do you agree that when you have technical problems, you have ready access to computer support staff in your school?		
TQG-09BC	BTBG09BC	How much do you agree that you receive adequate support for integrating computers in your teaching activities?		
TQG-10A	BTBG10A	How often do you discuss how to teach a particular topic with other teachers?	BT4GOTDC	Modified wording in 2011
TQG-10B	BTBG10B	How often do you collaborate in planning and preparing instructional materials with other teachers?	BT4GOTPM	Modified wording in 2011
TQG-10C	BTBG10C	How often do you share what you have learned about your teaching experiences with other teachers?		
TQG-10D	BTBG10D	How often do you visit another classroom to learn more about teaching?	BT4GOTVT	Modified wording in 2011
TQG-10E	BTBG10E	How often do you work together with other teachers to try out new ideas?		
TQG-11A	BTBG11A	How much do you agree that you are content with your profession as a teacher?		
TQG-11B	BTBG11B	How much do you agree that you are satisfied with being a teacher at this school?		
TQG-11C	BTBG11C	How much do you agree that you had more enthusiasm when you began teaching than you have now?		
TQG-11D	BTBG11D	How much do you agree that you do important work as a teacher?		
TQG-11E	BTBG11E	How much do you agree that you plan to continue as a teacher for as long as you can?		
TQG-11F	BTBG11F	How much do you agree that you are frustrated as a teacher?		
TQG-12	BTBG12	How many students are in this class?	BT4MSTUD BT4SSTUD	
TQG-13	BTBG13	How many <eighth-grade> students experience difficulties understanding spoken <language of test>?		
TQG-14A	BTBG14A	How often do you summarize what students should have learned from the lesson?		
TQG-14B	BTBG14B	How often do you relate the lesson to students' daily lives?	BT4MASDL BT4SCSDL	
TQG-14C	BTBG14C	How often do you use questioning to elicit reasons and explanations?		
TQG-14D	BTBG14D	How often do you encourage all students to improve their performance?		
TQG-14E	BTBG14E	How often do you praise students for good effort?		
TQG-14F	BTBG14F	How often do you bring interesting materials to class?		

**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-15A	BTBG15A	In your view, to what extent does students lacking prerequisite knowledge or skills limit how you teach this class?		
TQG-15B	BTBG15B	In your view, to what extent does students suffering from lack of basic nutrition limit how you teach this class?		
TQG-15C	BTBG15C	In your view, to what extent does students suffering from not enough sleep limit how you teach this class?		
TQG-15D	BTBG15D	In your view, to what extent does students with special needs (e.g., physical disabilities, mental or emotional/psychological impairment) limit how you teach this class?	BT4MLI03 BT4SLI03	
TQG-15E	BTBG15E	In your view, to what extent do disruptive students limit how you teach this class?	BT4MLI05 BT4SLI05	
TQG-15F	BTBG15F	In your view, to what extent does uninterested students limit how you teach this class?	BT4MLI04 BT4SLI04	
TQG-16A	BTBG16A	For the typical student in this class, how often do you meet or talk individually with the student's parents to discuss his/her learning progress?		
TQG-16B	BTBG16B	For the typical student in this class, how often do you send home a progress report on the student's learning?		
TQM-17A	BTBM17A	In a typical week, how much time (hours) do you spend teaching mathematics to the students in this class?		Hours and minutes not separate variables in 2007
TQM-17B	BTBM17B	In a typical week, how much time (minutes) do you spend teaching mathematics to the students in this class?	BT4MTIMT	Hours and minutes not separate variables in 2007
TQM-18A	BTBM18A	In teaching mathematics to this class, how confident do you feel answering students' questions about mathematics?		
TQM-18B	BTBM18B	In teaching mathematics to this class, how confident do you feel showing students a variety of problem solving strategies?		
TQM-18C	BTBM18C	In teaching mathematics to this class, how confident do you feel providing challenging tasks for capable students?		
TQM-18D	BTBM18D	In teaching mathematics to this class, how confident do you feel adapting your teaching to engage students' interest?		
TQM-18E	BTBM18E	In teaching mathematics to this class, how confident do you feel helping students appreciate the value of learning mathematics?		
TQM-19A	BTBM19A	In teaching mathematics to this class, how often do you usually ask students to listen to you explain how to solve problems?		
TQM-19B	BTBM19B	In teaching mathematics to this class, how often do you usually ask students to memorize rules, procedures, and facts?	BT4MASMF	Modified wording in 2011
TQM-19C	BTBM19C	In teaching mathematics to this class, how often do you usually ask students to work problems with your guidance?		
TQM-19D	BTBM19D	In teaching mathematics to this class, how often do you usually ask students to work problems together in the whole class with your direct guidance?		
TQM-19E	BTBM19E	In teaching mathematics to this class, how often do you usually ask students to work problems while you are occupied by other tasks?		
TQM-19F	BTBM19F	In teaching mathematics to this class, how often do you usually ask students to apply facts, concepts, and procedures to solve routine problems?	BT4MASAC	
TQM-19G	BTBM19G	In teaching mathematics to this class, how often do you usually ask students to explain their answers?	BT4MASEA	
TQM-19H	BTBM19H	In teaching mathematics to this class, how often do you usually ask students to relate what they are learning in mathematics to their daily lives?	BT4MASDL	

**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-19I	BTBM19I	In teaching mathematics to this class, how often do you usually ask students to decide on their own procedures for solving complex problems?	BT4MASCP	
TQM-19J	BTBM19J	In teaching mathematics to this class, how often do you usually ask students to work on problems for which there is no immediately obvious method of solution?	BT4MASWS	
TQM-19K	BTBM19K	In teaching mathematics to this class, how often do you usually ask students to take a written test or quiz?		
TQM-20A	BTBM20A	When you teach mathematics to this class, how do you use textbooks?	BT4MTBTC BT4MTXBU	Was two variables in 2007
TQM-20B	BTBM20B	When you teach mathematics to this class, how do you use workbooks or worksheets?		
TQM-20C	BTBM20C	When you teach mathematics to this class, how do you use concrete objects or materials that help students understand quantities or procedures?		
TQM-20D	BTBM20D	When you teach mathematics to this class, how do you use computer software for mathematics instruction?		
TQM-21A	BTBM21A	Are the students in this class permitted to use calculators during mathematics lessons?	BT4MCAML	
TQM-21BA	BTBM21BA	How often do students in this class use calculators in their mathematics lessons for checking answers?	BT4MCALA	
TQM-21BB	BTBM21BB	How often do students in this class use calculators in their mathematics lessons for doing routine computations?	BT4MCALR	
TQM-21BC	BTBM21BC	How often do students in this class use calculators in their mathematics lessons for solving complex problems?	BT4MCALS	
TQM-21BD	BTBM21BD	How often do students in this class use calculators in their mathematics lessons for exploring number concepts?	BT4MCALE	
TQM-22A	BTBM22A	Do the students in this class have computer(s) available to use during their mathematics lessons?	BT4MCOMA	
TQM-22B	BTBM22B	Do any of the computer(s) have access to the Internet?	BT4MINTA	
TQM-22CA	BTBM22CA	How often do you have the students explore mathematics principles and concepts on the computer?		
TQM-22CB	BTBM22CB	How often do you have the students practice skills and procedures on the computer?		
TQM-22CC	BTBM22CC	How often do you have the students look up ideas and information on the computer?		
TQM-22CD	BTBM22CD	How often do you have the students process and analyze data on the computer?		
TQM-23AA	BTBM23AA	When have the students in the TIMSS class been taught the topic of computing, estimating, or approximating with whole numbers?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23AB	BTBM23AB	When have the students in the TIMSS class been taught the topic of concepts of fractions and computing with fractions?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23AC	BTBM23AC	When have the students in the TIMSS class been taught the topic of concepts of decimals and computing with decimals?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23AD	BTBM23AD	When have the students in the TIMSS class been taught the topic of representing, comparing, ordering, and computing with integers?	See Question TQM2-20 in 2007 for sub-topics	

**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-23AE	BTBM23AE	When have the students in the TIMSS class been taught the topic of problem solving involving percents and proportions?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23BA	BTBM23BA	When have the students in the TIMSS class been taught the topic of numeric, algebraic, and geometric patterns or sequences?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23BB	BTBM23BB	When have the students in the TIMSS class been taught the topic of simplifying and evaluating algebraic expressions?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23BC	BTBM23BC	When have the students in the TIMSS class been taught the topic of simple linear equations and inequalities?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23BD	BTBM23BD	When have the students in the TIMSS class been taught the topic of simultaneous (two variables) equations?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23BE	BTBM23BE	When have the students in the TIMSS class been taught the topic of representation of functions as ordered pairs, tables, graphs, words, or equations?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23CA	BTBM23CA	When have the students in the TIMSS class been taught the topic of geometric properties of angles and geometric shapes?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23CB	BTBM23CB	When have the students in the TIMSS class been taught the topic of congruent figures and similar triangles?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23CC	BTBM23CC	When have the students in the TIMSS class been taught the topic of relationship between three-dimensional shapes and their two-dimensional representations?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23CD	BTBM23CD	When have the students in the TIMSS class been taught the topic of using appropriate measurement formulas for perimeters, circumferences, areas, surface areas, and volumes?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23CE	BTBM23CE	When have the students in the TIMSS class been taught the topic of points on the Cartesian plane?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23CF	BTBM23CF	When have the students in the TIMSS class been taught the topic of translation, reflection, and rotation?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23DA	BTBM23DA	When have the students in the TIMSS class been taught the topic of reading and displaying data using tables, pictographs, bar graphs, pie charts, and line graphs?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23DB	BTBM23DB	When have the students in the TIMSS class been taught the topic of interpreting data sets?	See Question TQM2-20 in 2007 for sub-topics	
TQM-23DC	BTBM23DC	When have the students in the TIMSS class been taught the topic of judging, predicting, and determining the chances of possible outcomes?	See Question TQM2-20 in 2007 for sub-topics	
TQM-24A	BTBM24A	By the end of this school year, approximately what percentage of teaching time will you have spent on number content for the students in this class?	BT4MCNUM	
TQM-24B	BTBM24B	By the end of this school year, approximately what percentage of teaching time will you have spent on algebra content for the students in this class?	BT4MICALG	



**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-24C	BTBM24C	By the end of this school year, approximately what percentage of teaching time will you have spent on geometry content for the students in this class?	BT4MCGEO	
TQM-24D	BTBM24D	By the end of this school year, approximately what percentage of teaching time will you have spent on data and chance content for the students in this class?	BT4MCDAT	
TQM-24E	BTBM24E	By the end of this school year, approximately what percentage of teaching time will you have spent on other content areas for the students in this class?	BT4MCOTH	
TQM-25A	BTBM25A	How often do you usually assign mathematics homework to the students in this class?		
TQM-25B	BTBM25B	When you assign mathematics homework to the students in this class, about how many minutes do you usually assign?	BT4MHWKM	Modified response option in 2011
TQM-25CA	BTBM25CA	How often do you correct assignments and give feedback to students with the mathematics homework assignments for this class?	BT4MHDAF	
TQM-25CB	BTBM25CB	How often do you have students correct their own homework with the mathematics homework assignments for this class?	BT4MHDAC	
TQM-25CC	BTBM25CC	How often do you discuss the homework in class with the mathematics homework assignments for this class?	BT4MHDAD	
TQM-25CD	BTBM25CD	How often do you monitor whether or not the homework was completed for this class?	BT4MHDAM	
TQM-25CE	BTBM25CE	How often do you use the homework to contribute towards students' grades or marks for this class?	BT4MHDAG	
TQM-26A	BTBM26A	How much emphasis do you place on the evaluation of students' ongoing work to monitor students' progress in mathematics?		
TQM-26B	BTBM26B	How much emphasis do you place on classroom tests to monitor students' progress in mathematics?	BT4MEPCT	Modified response options in 2011
TQM-26C	BTBM26C	How much emphasis do you place on national or regional achievement tests to monitor students' progress in mathematics?	BT4MEPNA	Modified response options in 2011
TQM-27	BTBM27	How often do you give a mathematics test or examination to this class?	BT4MTEEX	
TQM-28A	BTBM28A	How often do you include questions based on recall of facts and procedures in your mathematics tests or examinations?	BT4MTEQP	
TQM-28B	BTBM28B	How often do you include questions involving application of mathematical procedures in your mathematics tests or examinations?	BT4MTEAP	
TQM-28C	BTBM28C	How often do you include questions involving searching for patterns and relationships in your mathematics tests or examinations?	BT4MTESP	
TQM-28D	BTBM28D	How often do you include questions requiring explanations or justifications in your mathematics tests or examinations?	BT4MTEJU	
TQM-29A	BTBM29A	In the past two years, have you participated in professional development in mathematics content?	BT4MPDMT	
TQM-29B	BTBM29B	In the past two years, have you participated in professional development in mathematics pedagogy/instruction?	BT4MPDMP	
TQM-29C	BTBM29C	In the past two years, have you participated in professional development in mathematics curriculum?	BT4MPDMC	
TQM-29D	BTBM29D	In the past two years, have you participated in professional development in integrating information technology into mathematics?	BT4MPDIT	
TQM-29E	BTBM29E	In the past two years, have you participated in professional development in improving students' critical thinking or problem solving skills?	BT4GPDCT	
TQM-29F	BTBM29F	In the past two years, have you participated in professional development in mathematics assessment?	BT4MPDMA	
TQM-29G	BTBM29G	In the past two years, have you participated in professional development in addressing individual students' needs?		

**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQM-30AA	BTBM30AA	How well prepared do you feel you are to teach computing, estimating, or approximating with whole numbers?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30AB	BTBM30AB	How well prepared do you feel you are to teach concepts of fractions and computing with fractions?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30AC	BTBM30AC	How well prepared do you feel you are to teach concepts of decimals and computing with decimals?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30AD	BTBM30AD	How well prepared do you feel you are to teach representing, comparing, ordering, and computing with integers?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30AE	BTBM30AE	How well prepared do you feel you are to teach problem solving involving percents and proportions?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30BA	BTBM30BA	How well prepared do you feel you are to teach numeric, algebraic, and geometric patterns or sequences?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30BB	BTBM30BB	How well prepared do you feel you are to teach simplifying and evaluating algebraic expressions?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30BC	BTBM30BC	How well prepared do you feel you are to teach simple linear equations and inequalities?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30BD	BTBM30BD	How well prepared do you feel you are to teach simultaneous (two variables) equations?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30BE	BTBM30BE	How well prepared do you feel you are to teach representation of functions as ordered pairs, tables, graphs, words, or equations?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30CA	BTBM30CA	How well prepared do you feel you are to teach geometric properties of angles and geometric shapes?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30CB	BTBM30CB	How well prepared do you feel you are to teach congruent figures and similar triangles?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30CC	BTBM30CC	How well prepared do you feel you are to teach relationship between three-dimensional shapes and their two-dimensional representations?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30CD	BTBM30CD	How well prepared do you feel you are to teach using appropriate measurement formulas for perimeters, circumferences, areas, surface areas, and volumes?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30CE	BTBM30CE	How well prepared do you feel you are to teach points on the Cartesian plane?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30CF	BTBM30CF	How well prepared do you feel you are to teach translation, reflection, and rotation?	See Question TQM2-07 in 2007 for sub-topics	

**Exhibit S1.7: Index of International Background Variables for the TIMSS 2011 Mathematics Teacher Questionnaire - Eighth Grade (Continued)**

<b>TIMSS 2011 Question Number</b>	<b>TIMSS 2011 Variable Name</b>	<b>TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)</b>	<b>TIMSS 2007 Variable Name</b>	<b>Notes</b>
TQM-30DA	BTBM30DA	How well prepared do you feel you are to teach reading and displaying data using tables, pictographs, bar graphs, pie charts, and line graphs?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30DB	BTBM30DB	How well prepared do you feel you are to teach interpreting data sets?	See Question TQM2-07 in 2007 for sub-topics	
TQM-30DC	BTBM30DC	How well prepared do you feel you are to teach judging, predicting, and determining the chances of possible outcomes?	See Question TQM2-07 in 2007 for sub-topics	



Identification Label

**TIMSS 2011**

**Teacher  
Questionnaire  
Mathematics**

**<Grade 8>**

<TIMSS National Research Center Name>  
<Address>



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College

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## Teacher Questionnaire

Your school has agreed to participate in TIMSS 2011 (Trends in International Mathematics and Science Study), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS measures trends in student achievement in mathematics and science and studies differences in national education systems in more than 60 countries in order to help improve teaching and learning worldwide.

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

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

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

It is estimated that you will need approximately 45 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 2011

**About You**

**About You**

**1** \_\_\_\_\_  
**BTBG01** **By the end of this school year, how many years will you have been teaching altogether?**

\_\_\_\_\_ years  
 Please **round** to the nearest whole number.

**2** \_\_\_\_\_  
**BTBG02** **Are you female or male?**

Check **one** circle only.  
 Female ---   
 Male ---

**3** \_\_\_\_\_  
**BTBG03** **How old are you?**

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

**4** \_\_\_\_\_  
**BTBG04** **What is the highest level of formal education you have completed?**

Check **one** circle only.  
 Did not complete <ISCED Level 3> ---   
 Finished <ISCED Level 3> ---   
 Finished <ISCED Level 4> ---   
 Finished <ISCED Level 5B> ---   
 Finished <ISCED Level 5A, first degree> ---   
 Finished <ISCED Level 5A, second degree> or higher ---

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

Check **one** circle for each line.

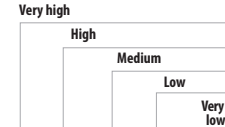
	Yes	No	
a) Mathematics -----	<input type="radio"/>	<input type="radio"/>	BTBG05A
b) Biology -----	<input type="radio"/>	<input type="radio"/>	BTBG05B
c) Physics -----	<input type="radio"/>	<input type="radio"/>	BTBG05C
d) Chemistry -----	<input type="radio"/>	<input type="radio"/>	BTBG05D
e) <Earth Science> -----	<input type="radio"/>	<input type="radio"/>	BTBG05E
f) Education–Mathematics -----	<input type="radio"/>	<input type="radio"/>	BTBG05F
g) Education–Science -----	<input type="radio"/>	<input type="radio"/>	BTBG05G
h) Education–General -----	<input type="radio"/>	<input type="radio"/>	BTBG05H
i) Other -----	<input type="radio"/>	<input type="radio"/>	BTBG05I

**About Your School**

**6**

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

Check **one** circle for each line.

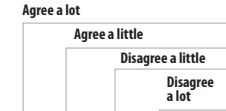


- BTBG06A a) Teachers' job satisfaction ----- ○ — ○ — ○ — ○ — ○
- BTBG06B b) Teachers' understanding of the school's curricular goals ----- ○ — ○ — ○ — ○ — ○
- BTBG06C c) Teachers' degree of success in implementing the school's curriculum ----- ○ — ○ — ○ — ○ — ○
- BTBG06D d) Teachers' expectations for student achievement ----- ○ — ○ — ○ — ○ — ○
- BTBG06E e) Parental support for student achievement ----- ○ — ○ — ○ — ○ — ○
- BTBG06F f) Parental involvement in school activities ----- ○ — ○ — ○ — ○ — ○
- BTBG06G g) Students' regard for school property ----- ○ — ○ — ○ — ○ — ○
- BTBG06H h) Students' desire to do well in school ----- ○ — ○ — ○ — ○ — ○

**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.

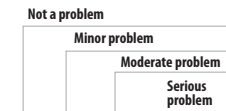


- a) This school is located in a safe neighborhood ----- ○ — ○ — ○ — ○ — ○ BTBG07A
- b) I feel safe at this school ----- ○ — ○ — ○ — ○ — ○ BTBG07B
- c) This school's security policies and practices are sufficient ----- ○ — ○ — ○ — ○ — ○ BTBG07C
- d) The students behave in an orderly manner ----- ○ — ○ — ○ — ○ — ○ BTBG07D
- e) The students are respectful of the teachers ----- ○ — ○ — ○ — ○ — ○ BTBG07E

**8**

In your current school, how severe is each problem?

Check **one** circle for each line.



- a) The school building needs significant repair ----- ○ — ○ — ○ — ○ — ○ BTBG08A
- b) Classrooms are overcrowded ----- ○ — ○ — ○ — ○ — ○ BTBG08B
- c) Teachers have too many teaching hours ----- ○ — ○ — ○ — ○ — ○ BTBG08C
- d) Teachers do not have adequate workspace for preparation, collaboration, or meeting with students ----- ○ — ○ — ○ — ○ — ○ BTBG08D
- e) Teachers do not have adequate instructional materials and supplies ----- ○ — ○ — ○ — ○ — ○ BTBG08E



About Being a Teacher

9

A. Do you use computers in your teaching in any of the following ways?

Check **one** circle for each line.

BTBG09AA  
BTBG09AB  
BTBG09AC

		Yes	No
a) For preparation .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) For administration .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) In your classroom instruction .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**If Yes to "classroom instruction"**

B. How much do you agree with the following statements about using computers in your classroom instruction?

Check **one** circle for each line.

BTBG09BA  
BTBG09BB  
BTBG09BC

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I feel comfortable using computers in my teaching .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) When I have technical problems, I have ready access to computer support staff in my school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I receive adequate support for integrating computers in my teaching activities .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10

How often do you have the following types of interactions with other teachers?

Check **one** circle for each line.

		Never or almost never	2 or 3 times per month	1-3 times per week	Daily or almost daily
a) Discuss how to teach a particular topic .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Collaborate in planning and preparing instructional materials .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Share what I have learned about my teaching experiences .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Visit another classroom to learn more about teaching .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Work together to try out new ideas .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

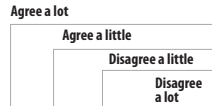
BTBG10A  
BTBG10B  
BTBG10C  
BTBG10D  
BTBG10E

**About Teaching the TIMSS Class**

**11** \_\_\_\_\_

**How much do you agree with the following statements?**

Check **one** circle for each line.



BTBG11A

a) I am content with my profession as a teacher ----- ○ — ○ — ○ — ○

BTBG11B

b) I am satisfied with being a teacher at this school ----- ○ — ○ — ○ — ○

BTBG11C

c) I had more enthusiasm when I began teaching than I have now ----- ○ — ○ — ○ — ○

BTBG11D

d) I do important work as a teacher ----- ○ — ○ — ○ — ○

BTBG11E

e) I plan to continue as a teacher for as long as I can ---- ○ — ○ — ○ — ○

BTBG11F

f) I am frustrated as a teacher --- ○ — ○ — ○ — ○

**12** \_\_\_\_\_

**How many students are in this class?**

BTBG12

\_\_\_\_\_ students  
Write in a number.

**13** \_\_\_\_\_

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

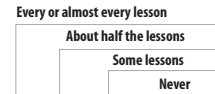
BTBG13

\_\_\_\_\_ students in this class  
Write in a number.

**14** \_\_\_\_\_

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

Check **one** circle for each line.



a) Summarize what students should have learned from the lesson ----- ○ — ○ — ○ — ○

BTBG14A

b) Relate the lesson to students' daily lives ----- ○ — ○ — ○ — ○

BTBG14B

c) Use questioning to elicit reasons and explanations ---- ○ — ○ — ○ — ○

BTBG14C

d) Encourage all students to improve their performance --- ○ — ○ — ○ — ○

BTBG14D

e) Praise students for good effort ----- ○ — ○ — ○ — ○

BTBG14E

f) Bring interesting materials to class ----- ○ — ○ — ○ — ○

BTBG14F



**15**

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

Check **one** circle for each line.

Not applicable  
Not at all  
Some  
A lot

- BTBG15A a) Students lacking prerequisite knowledge or skills ----- ○ — ○ — ○ — ○
- BTBG15B b) Students suffering from lack of basic nutrition ----- ○ — ○ — ○ — ○
- BTBG15C c) Students suffering from not enough sleep ----- ○ — ○ — ○ — ○
- BTBG15D d) Students with special needs (e.g., physical disabilities, mental or emotional/psychological impairment) ----- ○ — ○ — ○ — ○
- BTBG15E e) Disruptive students ----- ○ — ○ — ○ — ○
- BTBG15F f) Uninterested students ----- ○ — ○ — ○ — ○

**16**

For the typical student in this class, how often do you do these things?

Check **one** circle for each line.

At least once a week  
Once or twice a month  
4-6 times a year  
1-3 times a year  
Never

- a) Meet or talk individually with the student's parents to discuss his/her learning progress ----- ○ — ○ — ○ — ○ — ○ BTBG16A
- b) Send home a progress report on the student's learning ----- ○ — ○ — ○ — ○ — ○ BTBG16B

**Teaching Mathematics to the TIMSS Class**

Questions 17-19 ask about mathematics instruction for the <eighth-grade> students in the TIMSS class.

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

\_\_\_\_\_ hours and \_\_\_\_\_ minutes per week  
Write in the hours and minutes.

BTBM17A BTBM17B

**18** In teaching mathematics to this class, how confident do you feel to do the following?

Check **one** circle for each line.

Very confident  
Somewhat confident  
Not confident

- a) Answer students' questions about mathematics ----- ○ — ○ — ○
- b) Show students a variety of problem solving strategies ----- ○ — ○ — ○
- c) Provide challenging tasks for capable students ----- ○ — ○ — ○
- d) Adapt my teaching to engage students' interest ----- ○ — ○ — ○
- e) Help students appreciate the value of learning mathematics ----- ○ — ○ — ○

BTBM18A  
BTBM18B  
BTBM18C  
BTBM18D  
BTBM18E

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

Check **one** circle for each line.

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

- a) Listen to me explain how to solve problems ----- ○ — ○ — ○ — ○
- b) Memorize rules, procedures, and facts ----- ○ — ○ — ○ — ○
- c) Work problems (individually or with peers) with my guidance ----- ○ — ○ — ○ — ○
- d) Work problems together in the whole class with direct guidance from me ----- ○ — ○ — ○ — ○
- e) Work problems (individually or with peers) while I am occupied by other tasks ----- ○ — ○ — ○ — ○
- f) Apply facts, concepts, and procedures to solve routine problems ----- ○ — ○ — ○ — ○
- g) Explain their answers ----- ○ — ○ — ○ — ○
- h) Relate what they are learning in mathematics to their daily lives ----- ○ — ○ — ○ — ○
- i) Decide on their own procedures for solving complex problems ----- ○ — ○ — ○ — ○
- j) Work on problems for which there is no immediately obvious method of solution ----- ○ — ○ — ○ — ○
- k) Take a written test or quiz ----- ○ — ○ — ○ — ○

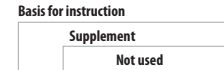
BTBM19A  
BTBM19B  
BTBM19C  
BTBM19D  
BTBM19E  
BTBM19F  
BTBM19G  
BTBM19H  
BTBM19I  
BTBM19J  
BTBM19K

**Resources for Teaching Mathematics**

Questions 20–22 ask about resources for teaching mathematics to the <eighth-grade> students in the TIMSS class.

**20** **When you teach mathematics to this class, how do you use the following resources?**

Check **one** circle for each line.



- BTBM20A a) Textbooks ----- ○ — ○ — ○
- BTBM20B b) Workbooks or worksheets ----- ○ — ○ — ○
- BTBM20C c) Concrete objects or materials that help students understand quantities or procedures ----- ○ — ○ — ○
- BTBM20D d) Computer software for mathematics instruction ----- ○ — ○ — ○

**21** \_\_\_\_\_

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

BTBM21A

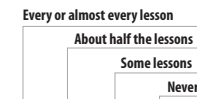
Check **one** circle only.

- Yes, with unrestricted use --- ○
  - Yes, with restricted use --- ○
  - No, calculators are not permitted - ○ →
- (If No, go to #22)

**If Yes,**

**B. How often do students in this class use calculators in their mathematics lessons for the following activities?**

Check **one** circle for each line.



- a) Check answers ----- ○ — ○ — ○ — ○
- b) Do routine computations ----- ○ — ○ — ○ — ○
- c) Solve complex problems ----- ○ — ○ — ○ — ○
- d) Explore number concepts ----- ○ — ○ — ○ — ○

BTBM21BA  
BTBM21BB  
BTBM21BC  
BTBM21BD



**22** \_\_\_\_\_

BTBM22A

**A. Do the students in this class have computer(s) available to use during their mathematics lessons?**

Check **one** circle only.

Yes---

No---

(If No, go to #23)

BTBM22B

**B. Do any of the computer(s) have access to the Internet?**

Check **one** circle only.

Yes---

No---

**C. How often do you have the students do the following computer activities during mathematics lessons?**

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

BTBM22CA

a) Explore mathematics principles and concepts -----

BTBM22CB

b) Practice skills and procedures -----

BTBM22CC

c) Look up ideas and information -----

BTBM22CD

d) Process and analyze data -----

### Mathematics Topics Taught

Questions 23–24 ask about the topics taught and the content covered in teaching mathematics to the <eighth-grade> students in the TIMSS class.

**23**

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	
<b>A. Number</b>				
a) Computing, estimating, or approximating with whole numbers .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23AA
b) Concepts of fractions and computing with fractions .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23AB
c) Concepts of decimals and computing with decimals .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23AC
d) Representing, comparing, ordering, and computing with integers .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23AD
e) Problem solving involving percents and proportions .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23AE
<b>B. Algebra</b>				
a) Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns) .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23BA
b) Simplifying and evaluating algebraic expressions .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23BB
c) Simple linear equations and inequalities .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23BC
d) Simultaneous (two variables) equations .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23BD
e) Representation of functions as ordered pairs, tables, graphs, words, or equations .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23BE
<b>C. Geometry</b>				
a) Geometric properties of angles and geometric shapes (triangles, quadrilaterals, and other common polygons) .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23CA
b) Congruent figures and similar triangles .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23CB
c) Relationship between three-dimensional shapes and their two-dimensional representations .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23CC
d) Using appropriate measurement formulas for perimeters, circumferences, areas, surface areas, and volumes .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23CD
e) Points on the Cartesian plane .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23CE
f) Translation, reflection, and rotation .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23CF
<b>D. Data and Chance</b>				
a) Reading and displaying data using tables, pictographs, bar graphs, pie charts, and line graphs .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23DA
b) Interpreting data sets (e.g., draw conclusions, make predictions, and estimate values between and beyond given data points) .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23DB
c) Judging, predicting, and determining the chances of possible outcomes .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	BTBM23DC

## Mathematics Content Coverage

### 24

**By the end of this school year, approximately what percentage of teaching time for mathematics will you have spent during this school year on each of the following mathematics content areas for the students in this class?**

*Write in the percentage for each.*

- |         |   |
|---------|---|
| BTBM24A | a) Number (e.g., whole numbers, fractions, decimals, ratio, proportion and percent)----- %  |
| BTBM24B | b) Algebra (e.g., patterns, equations, formulas and relationships)----- %   |
| BTBM24C | c) Geometry (e.g., lines and angles, shapes, congruence and similarity, spatial relationships, symmetry and transformations)----- % |
| BTBM24D | d) Data and chance (e.g., reading, organizing and representing data, data interpretation and chance)----- %                         |
| BTBM24E | e) Other ----- %  |

**Total = 100%**



**Mathematics Homework**



Question 25 asks about mathematics homework for the <eighth-grade> students in the TIMSS class.

BTBM25A

**25**

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

Check **one** circle only.

- I do not assign mathematics homework ---
- Less than once a week ---
- 1 or 2 times a week ---
- 3 or 4 times a week ---
- Every day ---

BTBM25B

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

Check **one** circle only.

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

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

Check **one** circle for each line.



- a) Correct assignments and give feedback to students -----  —  —  BTBM25CA
- b) Have students correct their own homework -----  —  —  BTBM25CB
- c) Discuss the homework in class -----  —  —  BTBM25CC
- d) Monitor whether or not the homework was completed ----  —  —  BTBM25CD
- e) Use the homework to contribute towards students' grades or marks -----  —  —  BTBM25CE

**Mathematics Assessment**



Questions 26–28 ask about mathematics assessment for the <eighth-grade> students in the TIMSS class.

**28**

How often do you include the following types of questions in your mathematics tests or examinations?

**26**

How much emphasis do you place on the following sources to monitor students' progress in mathematics?

Check **one** circle for each line.



BTBM26A  
BTBM26B  
BTBM26C

- a) Evaluation of students' ongoing work ----- ○ — ○ — ○
- b) Classroom tests (for example, teacher-made or textbook tests) ----- ○ — ○ — ○
- c) National or regional achievement tests ----- ○ — ○ — ○

Check **one** circle for each line.



- a) Questions based on recall of facts and procedures ----- ○ — ○ — ○
- b) Questions involving application of mathematical procedures ----- ○ — ○ — ○
- c) Questions involving searching for patterns and relationships ----- ○ — ○ — ○
- d) Questions requiring explanations or justifications ----- ○ — ○ — ○

BTBM28A  
BTBM28B  
BTBM28C  
BTBM28D

**27**

How often do you give a mathematics test or examination to this class?

Check **one** circle only.

- About once a week --- ○
- About every two weeks --- ○
- About once a month --- ○
- A few times a year --- ○
- Never --- ○

BTBM27

### Preparation to Teach Mathematics

29

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

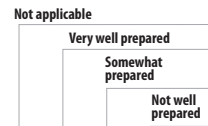
Check **one** circle for each line.

- |         |  | Yes                   | No                    |
|---------|--|-----------------------|-----------------------|
| BTBM29A | a) Mathematics content .....   | <input type="radio"/> | <input type="radio"/> |
| BTBM29B | b) Mathematics pedagogy/instruction .....                                | <input type="radio"/> | <input type="radio"/> |
| BTBM29C | c) Mathematics curriculum .....  | <input type="radio"/> | <input type="radio"/> |
| BTBM29D | d) Integrating information technology into mathematics .....             | <input type="radio"/> | <input type="radio"/> |
| BTBM29E | e) Improving students' critical thinking or problem solving skills ..... | <input type="radio"/> | <input type="radio"/> |
| BTBM29F | f) Mathematics assessment .....  | <input type="radio"/> | <input type="radio"/> |
| BTBM29G | g) Addressing individual students' needs .....                           | <input type="radio"/> | <input type="radio"/> |

30

**How well prepared do you feel you are to teach the following mathematics topics?**  
 If a topic is not in the <eighth-grade> curriculum or you are not responsible for teaching this topic, Please choose "Not applicable."

Check **one** circle for each line.



**A. Number**

- BTBM30AA a) Computing, estimating, or approximating with whole numbers ----- ○ — ○ — ○ — ○
- BTBM30AB b) Concepts of fractions and computing with fractions ----- ○ — ○ — ○ — ○
- BTBM30AC c) Concepts of decimals and computing with decimals ----- ○ — ○ — ○ — ○
- BTBM30AD d) Representing, comparing, ordering, and computing with integers ----- ○ — ○ — ○ — ○
- BTBM30AE e) Problem solving involving percents and proportions ----- ○ — ○ — ○ — ○

**B. Algebra**

- BTBM30BA a) Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns) ----- ○ — ○ — ○ — ○
- BTBM30BB b) Simplifying and evaluating algebraic expressions ----- ○ — ○ — ○ — ○
- BTBM30BC c) Simple linear equations and inequalities ----- ○ — ○ — ○ — ○
- BTBM30BD d) Simultaneous (two variables) equations ----- ○ — ○ — ○ — ○
- BTBM30BE e) Representation of functions as ordered pairs, tables, graphs, words, or equations ----- ○ — ○ — ○ — ○

**C. Geometry**

- BTBM30CA a) Geometric properties of angles and geometric shapes (triangles, quadrilaterals, and other common polygons) ----- ○ — ○ — ○ — ○
- BTBM30CB b) Congruent figures and similar triangles ----- ○ — ○ — ○ — ○
- BTBM30CC c) Relationship between three-dimensional shapes and their two-dimensional representations ----- ○ — ○ — ○ — ○
- BTBM30CD d) Using appropriate measurement formulas for perimeters, circumferences, areas, surface areas, and volumes ----- ○ — ○ — ○ — ○
- BTBM30CE e) Points on the Cartesian plane ----- ○ — ○ — ○ — ○
- BTBM30CF f) Translation, reflection, and rotation ----- ○ — ○ — ○ — ○

**D. Data and Chance**

- BTBM30DA a) Reading and displaying data using tables, pictographs, bar graphs, pie charts, and line graphs ----- ○ — ○ — ○ — ○
- BTBM30DB b) Interpreting data sets (e.g., draw conclusions, make predictions, and estimate values between and beyond given data points) ----- ○ — ○ — ○ — ○
- BTBM30DC c) Judging, predicting, and determining the chances of possible outcomes ----- ○ — ○ — ○ — ○

# Thank You

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

---



BOSTON  
COLLEGE

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# TIMSS 2011

## Teacher Questionnaire Mathematics

<Grade 8>



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International Association  
for the Evaluation of  
Educational Achievement

# Section 8

## Eighth Grade – Science Teacher Questionnaire



**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-01	BTBG01	By the end of this school year, how many years will you have been teaching altogether?	BT4GTAUT	
TQG-02	BTBG02	Are you female or male?	BT4GSEX	
TQG-03	BTBG03	How old are you?	BT4GAGE	
TQG-04	BTBG04	What is the highest level of formal education you have completed?	BT4GFEDC	
TQG-05A	BTBG05A	During your <post-secondary> education, was mathematics your major or main area of study?	BT4MP SMA	
TQG-05B	BTBG05B	During your <post-secondary> education, was biology your major or main area of study?	BT4SPSBI	
TQG-05C	BTBG05C	During your <post-secondary> education, was physics your major or main area of study?	BT4SPSPH	
TQG-05D	BTBG05D	During your <post-secondary> education, was chemistry your major or main area of study?	BT4SPSCH	
TQG-05E	BTBG05E	During your <post-secondary> education, was <earth science> your major or main area of study?	BT4SPSES	
TQG-05F	BTBG05F	During your <post-secondary> education, was education--mathematics your major or main area of study?	BT4MPSEM	
TQG-05G	BTBG05G	During your <post-secondary> education, was education--science your major or main area of study?	BT4SPSED	
TQG-05H	BTBG05H	During your <post-secondary> education, was education--general your major or main area of study?	BT4GPSEG	
TQG-05I	BTBG05I	During your <post-secondary> education, was other your major or main area of study?	BT4GPSOT	
TQG-06A	BTBG06A	How would you characterize teachers' job satisfaction within your school?	BT4GCHTS	
TQG-06B	BTBG06B	How would you characterize teachers' understanding of the school's curricular goals within your school?	BT4GCHTU	
TQG-06C	BTBG06C	How would you characterize teachers' degree of success in implementing the school's curriculum within your school?	BT4GCHTC	
TQG-06D	BTBG06D	How would you characterize teachers' expectations for student achievement within your school?	BT4GCHES	
TQG-06E	BTBG06E	How would you characterize parental support for student achievement within your school?	BT4GCHPS	
TQG-06F	BTBG06F	How would you characterize parental involvement in school activities within your school?	BT4GCHPI	
TQG-06G	BTBG06G	How would you characterize students' regard for school property within your school?	BT4GCHSR	
TQG-06H	BTBG06H	How would you characterize students' desire to do well in school within your school?	BT4GCHSD	
TQG-07A	BTBG07A	Thinking about your current school, indicate the extent to which you agree or disagree that this school is located in a safe neighborhood.	BT4GCUSN	
TQG-07B	BTBG07B	Thinking about your current school, indicate the extent to which you agree or disagree that you feel safe at this school.	BT4GCUSA	
TQG-07C	BTBG07C	Thinking about your current school, indicate the extent to which you agree or disagree that this school's security policies and practices are sufficient.	BT4GCUAS	
TQG-07D	BTBG07D	Thinking about your current school, indicate the extent to which you agree or disagree that the students behave in an orderly manner.		
TQG-07E	BTBG07E	Thinking about your current school, indicate the extent to which you agree or disagree that the students are respectful of the teachers.		
TQG-08A	BTBG08A	In your current school, how severe is the problem that the school building needs significant repair?	BT4GSPBR	Modified response options in 2011



**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-08B	BTBG08B	In your current school, how severe is the problem that classrooms are overcrowded?	BT4GSPCO	Modified response options in 2011
TQG-08C	BTBG08C	In your current school, how severe is the problem that teachers have too many teaching hours?		Modified response options in 2011
TQG-08D	BTBG08D	In your current school, how severe is the problem that teachers do not have adequate workspace for preparation, collaboration, or meeting with students?	BT4GSPWO	Modified wording and response options in 2011
TQG-08E	BTBG08E	In your current school, how severe is the problem that teachers do not have adequate instructional materials and supplies?		
TQG-09AA	BTBG09AA	Do you use computers in your teaching for preparation?		
TQG-09AB	BTBG09AB	Do you use computers in your teaching for administration?		
TQG-09AC	BTBG09AC	Do you use computers in your teaching for classroom instruction?		
TQG-09BA	BTBG09BA	How much do you agree that you feel comfortable using computers in your teaching?		
TQG-09BB	BTBG09BB	How much do you agree that when you have technical problems, you have ready access to computer support staff in your school?		
TQG-09BC	BTBG09BC	How much do you agree that you receive adequate support for integrating computers in your teaching activities?		
TQG-10A	BTBG10A	How often do you discuss how to teach a particular topic with other teachers?	BT4GOTDC	Modified wording in 2011
TQG-10B	BTBG10B	How often do you collaborate in planning and preparing instructional materials with other teachers?	BT4GOTPM	Modified wording in 2011
TQG-10C	BTBG10C	How often do you share what you have learned about your teaching experiences with other teachers?		
TQG-10D	BTBG10D	How often do you visit another classroom to learn more about teaching?	BT4GOTVT	Modified wording in 2011
TQG-10E	BTBG10E	How often do you work together with other teachers to try out new ideas?		
TQG-11A	BTBG11A	How much do you agree that you are content with your profession as a teacher?		
TQG-11B	BTBG11B	How much do you agree that you are satisfied with being a teacher at this school?		
TQG-11C	BTBG11C	How much do you agree that you had more enthusiasm when you began teaching than you have now?		
TQG-11D	BTBG11D	How much do you agree that you do important work as a teacher?		
TQG-11E	BTBG11E	How much do you agree that you plan to continue as a teacher for as long as you can?		
TQG-11F	BTBG11F	How much do you agree that you are frustrated as a teacher?		
TQG-12	BTBG12	How many students are in this class?	BT4MSTUD BT4SSTUD	
TQG-13	BTBG13	How many <eighth-grade> students experience difficulties understanding spoken <language of test>?		
TQG-14A	BTBG14A	How often do you summarize what students should have learned from the lesson?		
TQG-14B	BTBG14B	How often do you relate the lesson to students' daily lives?	BT4MASDL BT4SCSDL	
TQG-14C	BTBG14C	How often do you use questioning to elicit reasons and explanations?		
TQG-14D	BTBG14D	How often do you encourage all students to improve their performance?		
TQG-14E	BTBG14E	How often do you praise students for good effort?		
TQG-14F	BTBG14F	How often do you bring interesting materials to class?		

**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQG-15A	BTBG15A	In your view, to what extent does students lacking prerequisite knowledge or skills limit how you teach this class?		
TQG-15B	BTBG15B	In your view, to what extent does students suffering from lack of basic nutrition limit how you teach this class?		
TQG-15C	BTBG15C	In your view, to what extent does students suffering from not enough sleep limit how you teach this class?		
TQG-15D	BTBG15D	In your view, to what extent does students with special needs (e.g., physical disabilities, mental or emotional/psychological impairment) limit how you teach this class?	BT4MLI03 BT4SLI03	
TQG-15E	BTBG15E	In your view, to what extent do disruptive students limit how you teach this class?	BT4MLI05 BT4SLI05	
TQG-15F	BTBG15F	In your view, to what extent does uninterested students limit how you teach this class?	BT4MLI04 BT4SLI04	
TQG-16A	BTBG16A	For the typical student in this class, how often do you meet or talk individually with the student's parents to discuss his/her learning progress?		
TQG-16B	BTBG16B	For the typical student in this class, how often do you send home a progress report on the student's learning?		
TQS-17A	BTBS17A	In a typical week, how much time (hours) do you spend teaching science to the students in this class?		Hours and minutes not separate variables in 2007
TQS-17B	BTBS17B	In a typical week, how much time (minutes) do you spend teaching science to the students in this class?	BT4STIMT	Hours and minutes not separate variables in 2007
TQS-18A	BTBS18A	In teaching science to this class, how confident do you feel answering students' questions about science?		
TQS-18B	BTBS18B	In teaching science to this class, how confident do you feel explaining science concepts or principles by doing science experiments?		
TQS-18C	BTBS18C	In teaching science to this class, how confident do you feel providing challenging tasks for capable students?		
TQS-18D	BTBS18D	In teaching science to this class, how confident do you feel adapting your teaching to engage students' interest?		
TQS-18E	BTBS18E	In teaching science to this class, how confident do you feel helping students appreciate the value of learning science?		
TQS-19A	BTBS19A	In teaching science to this class, how often do you usually ask students to observe natural phenomena and describe what they see?	BT4SCSON	
TQS-19B	BTBS19B	In teaching science to this class, how often do you usually ask students to watch you demonstrate an experiment or investigation?	BT4SCSWD	
TQS-19C	BTBS19C	In teaching science to this class, how often do you usually ask students to design or plan experiments or investigations?	BT4SCSDP	
TQS-19D	BTBS19D	In teaching science to this class, how often do you usually ask students to conduct experiments or investigations?	BT4SCSEI	
TQS-19E	BTBS19E	In teaching science to this class, how often do you usually ask students to read their textbooks or other resource materials?	BT4SCSRM	
TQS-19F	BTBS19F	In teaching science to this class, how often do you usually ask students to memorize facts and principles?	BT4SCSHP	
TQS-19G	BTBS19G	In teaching science to this class, how often do you usually ask students to use scientific formulas and laws to solve routine problems?	BT4SCSUP	
TQS-19H	BTBS19H	In teaching science to this class, how often do you usually ask students to give explanations about something they are studying?	BT4SCSGS	

**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-19I	BTBS19I	In teaching science to this class, how often do you usually ask students to relate what they are learning in science to their daily lives?	BT4SCSDL	
TQS-19J	BTBS19J	In teaching science to this class, how often do you usually ask students to do field work outside of class?		
TQS-19K	BTBS19K	In teaching science to this class, how often do you usually ask students to take a written test or quiz?		
TQS-20A	BTBS20A	When you teach science to this class, how do you use textbooks?	BT4STBTC BT4STXBU	Was two variables in 2007
TQS-20B	BTBS20B	When you teach science to this class, how do you use workbooks or worksheets?		
TQS-20C	BTBS20C	When you teach science to this class, how do you use science equipment and materials?		
TQS-20D	BTBS20D	When you teach science to this class, how do you use computer software for science instruction?		
TQS-20E	BTBS20E	When you teach science to this class, how do you use reference materials?		
TQS-21A	BTBS21A	Do the students in this class have computer(s) available to use during their science lessons?	BT4SCOMA	
TQS-21B	BTBS21B	Do any of the computer(s) have access to the Internet?	BT4SINTA	
TQS-21CA	BTBS21CA	How often do you have the students practice skills and procedures on the computer?		
TQS-21CB	BTBS21CB	How often do you have the students look up ideas and information on the computer?		
TQS-21CC	BTBS21CC	How often do you have the students do scientific procedures or experiments on the computer?		
TQS-21CD	BTBS21CD	How often do you have the students study natural phenomena through simulations on the computer?		
TQS-21CE	BTBS21CE	How often do you have the students process and analyze data on the computer?		
TQS-22AA	BTBS22AA	When have the students in the TIMSS class been taught the topic of major organs and organ systems in humans and other organisms?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22AB	BTBS22AB	When have the students in the TIMSS class been taught the topic of cells and their functions, including respiration and photosynthesis as cellular processes?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22AC	BTBS22AC	When have the students in the TIMSS class been taught the topic of reproduction (sexual and asexual) and heredity?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22AD	BTBS22AD	When have the students in the TIMSS class been taught the topic of role of variation and adaptation in survival/extinction of species in a changing environment?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22AE	BTBS22AE	When have the students in the TIMSS class been taught the topic of interdependence of populations of organisms in an ecosystem and the impact of changes in the physical environment on populations?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22AF	BTBS22AF	When have the students in the TIMSS class been taught the topic of reasons for increase in world's human population, and the effects of population growth on the environment?	See Question TQS2-20 in 2007 for sub-topics.	
TQS-22AG	BTBS22AG	When have the students in the TIMSS class been taught the topic of human health and the importance of diet and exercise in maintaining health?	See Question TQS2-20 in 2007 for sub-topics.	

**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-22BA	BTBS22BA	When have the students in the TIMSS class been taught the topic of classification, composition, and particulate structure of matter?	See Question TQS2-20 in 2007 for sub-topics.	
TQS-22BB	BTBS22BB	When have the students in the TIMSS class been taught the topic of solutions?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22BC	BTBS22BC	When have the students in the TIMSS class been taught the topic of properties and uses of common acids and bases?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22BD	BTBS22BD	When have the students in the TIMSS class been taught the topic of chemical change?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22CA	BTBS22CA	When have the students in the TIMSS class been taught the topic of physical states and changes in matter?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22CB	BTBS22CB	When have the students in the TIMSS class been taught the topic of energy forms, transformations, heat, and temperature?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22CC	BTBS22CC	When have the students in the TIMSS class been taught the topic of basic properties/behaviors of light and sound?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22CD	BTBS22CD	When have the students in the TIMSS class been taught the topic of electric circuits and properties and uses of permanent magnets and electromagnets?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22CE	BTBS22CE	When have the students in the TIMSS class been taught the topic of forces and motion?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22DA	BTBS22DA	When have the students in the TIMSS class been taught the topic of Earth's structure and physical features?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22DB	BTBS22DB	When have the students in the TIMSS class been taught the topic of Earth's processes, cycles and history?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22DC	BTBS22DC	When have the students in the TIMSS class been taught the topic of Earth's resources, their use and conservation?	See Question TQS2-20 in 2007 for sub-topics	
TQS-22DD	BTBS22DD	When have the students in the TIMSS class been taught the topic of Earth in the solar system and the universe?	See Question TQS2-20 in 2007 for sub-topics	
TQS-23A	BTBS23A	By the end of this school year, approximately what percentage of teaching time will you have spent on biology content for the students in this class?	BT4SCLSC	
TQS-23B	BTBS23B	By the end of this school year, approximately what percentage of teaching time will you have spent on chemistry content for the students in this class?	BT4SCCHE	
TQS-23C	BTBS23C	By the end of this school year, approximately what percentage of teaching time will you have spent on physics content for the students in this class?	BT4SCPHY	
TQS-23D	BTBS23D	By the end of this school year, approximately what percentage of teaching time will you have spent on Earth science content for the students in this class?	BT4SCESC	
TQS-23E	BTBS23E	By the end of this school year, approximately what percentage of teaching time will you have spent on other content areas for the students in this class?	BT4SCOTH	

**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-24A	BTBS24A	How often do you usually assign science homework to the students in this class?		
TQS-24B	BTBS24B	When you assign science homework to the students in this class, about how many minutes do you usually assign?	BT4SHWKM	Modified reponse option in 2011
TQS-24CA	BTBS24CA	How often do you correct assignments and give feedback to students with the science homework assignments for this class?	BT4SHDAF	
TQS-24CB	BTBS24CB	How often do you have students correct their own homework with the science homework assignments for this class?	BT4SHDAC	
TQS-24CC	BTBS24CC	How often do you discuss the homework in class with the science homework assignments for this class?	BT4SHDAD	
TQS-24CD	BTBS24CD	How often do you monitor whether or not the homework was completed for this class?	BT4SHDAM	
TQS-24CE	BTBS24CE	How often do you use the homework to contribute towards students' grades or marks for this class?	BT4SHDAG	
TQS-25A	BTBS25A	How much emphasis do you place on the evaluation of students' ongoing work to monitor students' progress in science?		
TQS-25B	BTBS25B	How much emphasis do you place on classroom tests to monitor students' progress in science?	BT4SEPCT	Modified reponse options in 2011
TQS-25C	BTBS25C	How much emphasis do you place on national or regional achievement tests to monitor students' progress in science?	BT4SEPNA	Modified reponse options in 2011
TQS-26	BTBS26	How often do you give a science test or examination to this class?	BT4STEEX	
TQS-27A	BTBS27A	How often do you include questions based on knowing facts and concepts in your science tests or examinations?	BT4STERU	
TQS-27B	BTBS27B	How often do you include questions based on the application of knowledge and understanding in your science tests or examinations?	BT4STEIH	
TQS-27C	BTBS27C	How often do you include questions involving developing hypotheses and designing scientific investigations in your science tests or examinations?	BT4STEBR	
TQS-27D	BTBS27D	How often do you include questions requiring explanations or justifications in your science tests or examinations?	BT4STEJU	
TQS-28A	BTBS28A	In the past two years, have you participated in professional development in science content?	BT4SPDST	
TQS-28B	BTBS28B	In the past two years, have you participated in professional development in science pedagogy/instruction?	BT4SPDSP	
TQS-28C	BTBS28C	In the past two years, have you participated in professional development in science curriculum?	BT4SPDSC	
TQS-28D	BTBS28D	In the past two years, have you participated in professional development in integrating information technology into science?	BT4SPDIT	
TQS-28E	BTBS28E	In the past two years, have you participated in professional development in improving students' critical thinking or inquiry skills?	BT4GPDIN	
TQS-28F	BTBS28F	In the past two years, have you participated in professional development in science assessment?	BT4SPDSA	
TQS-28G	BTBS28G	In the past two years, have you participated in professional development in addressing individual students' needs?		
TQS-29AA	BTBS29AA	How well prepared do you feel you are to teach major organs and organ systems in humans and other organisms?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29AB	BTBS29AB	How well prepared do you feel you are to teach cells and their functions, including respiration and photosynthesis as cellular processes?	See Question TQS2-07 in 2007 for sub-topics	

**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-29AC	BTBS29AC	How well prepared do you feel you are to teach reproduction (sexual and asexual) and heredity?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29AD	BTBS29AD	How well prepared do you feel you are to teach role of variation and adaptation in survival/extinction of species in a changing environment?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29AE	BTBS29AE	How well prepared do you feel you are to teach interdependence of populations of organisms in an ecosystem and the impact of changes in the physical environment on populations?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29AF	BTBS29AF	How well prepared do you feel you are to teach reasons for increase in world's human population, and the effects of population growth on the environment?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29AG	BTBS29AG	How well prepared do you feel you are to teach human health and the importance of diet and exercise in maintaining health?	See Question TQS2-07 in 2007 for sub-topics.	
TQS-29BA	BTBS29BA	How well prepared do you feel you are to teach classification, composition, and particulate structure of matter?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29BB	BTBS29BB	How well prepared do you feel you are to teach solutions?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29BC	BTBS29BC	How well prepared do you feel you are to teach properties and uses of common acids and bases?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29BD	BTBS29BD	How well prepared do you feel you are to teach chemical change?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29CA	BTBS29CA	How well prepared do you feel you are to teach physical states and changes in matter?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29CB	BTBS29CB	How well prepared do you feel you are to teach energy forms, transformations, heat, and temperature?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29CC	BTBS29CC	How well prepared do you feel you are to teach basic properties/behaviors of light and sound?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29CD	BTBS29CD	How well prepared do you feel you are to teach electric circuits and properties and uses of permanent magnets and electromagnets?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29CE	BTBS29CE	How well prepared do you feel you are to teach forces and motion?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29DA	BTBS29DA	How well prepared do you feel you are to teach Earth's structure and physical features?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29DB	BTBS29DB	How well prepared do you feel you are to teach Earth's processes, cycles and history?	See Question TQS2-07 in 2007 for sub-topics	

**Exhibit S1.8: Index of International Background Variables for the TIMSS 2011 Science Teacher Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
TQS-29DC	BTBS29DC	How well prepared do you feel you are to teach Earth's resources, their use and conservation?	See Question TQS2-07 in 2007 for sub-topics	
TQS-29DD	BTBS29DD	How well prepared do you feel you are to teach Earth in the solar system and the universe?	See Question TQS2-07 in 2007 for sub-topics	





Identification Label

**TIMSS 2011**

**Teacher  
Questionnaire  
Science**

**<Grade 8>**

<TIMSS National Research Center Name>  
<Address>



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College

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## Teacher Questionnaire

Your school has agreed to participate in TIMSS 2011 (Trends in International Mathematics and Science Study), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS measures trends in student achievement in mathematics and science and studies differences in national education systems in more than 60 countries in order to help improve teaching and learning worldwide.

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

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

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

It is estimated that you will need approximately 45 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 2011

**About You**



BTBG01

**1** \_\_\_\_\_

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

\_\_\_\_\_ years  
Please **round** to the nearest whole number.

BTBG02

**2** \_\_\_\_\_

**Are you female or male?**

Check **one** circle only.

Female ---   
Male ---

BTBG03

**3** \_\_\_\_\_

**How old are you?**

Check **one** circle only.

Under 25 ---   
25–29 ---   
30–39 ---   
40–49 ---   
50–59 ---   
60 or more ---

BTBG04

**4** \_\_\_\_\_

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

Check **one** circle only.

Did not complete <ISCED Level 3> ---   
Finished <ISCED Level 3> ---   
Finished <ISCED Level 4> ---   
Finished <ISCED Level 5B> ---   
Finished <ISCED Level 5A, first degree> ---   
Finished <ISCED Level 5A, second degree> or higher ---

**5** \_\_\_\_\_

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

Check **one** circle for each line.

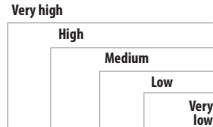
- |                          | Yes                   | No                    |         |
|--------------------------|-----------------------|-----------------------|---------|
| a) Mathematics           | <input type="radio"/> | <input type="radio"/> | BTBG05A |
| b) Biology               | <input type="radio"/>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

**About Your School**

**6**

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

Check **one** circle for each line.

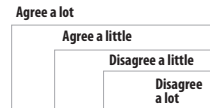


- BTBG06A a) Teachers' job satisfaction ----- ○ — ○ — ○ — ○ — ○
- BTBG06B b) Teachers' understanding of the school's curricular goals ----- ○ — ○ — ○ — ○ — ○
- BTBG06C c) Teachers' degree of success in implementing the school's curriculum ----- ○ — ○ — ○ — ○ — ○
- BTBG06D d) Teachers' expectations for student achievement ----- ○ — ○ — ○ — ○ — ○
- BTBG06E e) Parental support for student achievement ----- ○ — ○ — ○ — ○ — ○
- BTBG06F f) Parental involvement in school activities ----- ○ — ○ — ○ — ○ — ○
- BTBG06G g) Students' regard for school property ----- ○ — ○ — ○ — ○ — ○
- BTBG06H h) Students' desire to do well in school ----- ○ — ○ — ○ — ○ — ○

**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.

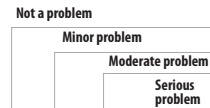


- a) This school is located in a safe neighborhood ----- ○ — ○ — ○ — ○ — ○ BTBG07A
- b) I feel safe at this school ----- ○ — ○ — ○ — ○ — ○ BTBG07B
- c) This school's security policies and practices are sufficient ----- ○ — ○ — ○ — ○ — ○ BTBG07C
- d) The students behave in an orderly manner ----- ○ — ○ — ○ — ○ — ○ BTBG07D
- e) The students are respectful of the teachers ----- ○ — ○ — ○ — ○ — ○ BTBG07E

**8**

In your current school, how severe is each problem?

Check **one** circle for each line.



- a) The school building needs significant repair ----- ○ — ○ — ○ — ○ — ○ BTBG08A
- b) Classrooms are overcrowded ----- ○ — ○ — ○ — ○ — ○ BTBG08B
- c) Teachers have too many teaching hours ----- ○ — ○ — ○ — ○ — ○ BTBG08C
- d) Teachers do not have adequate workspace for preparation, collaboration, or meeting with students ----- ○ — ○ — ○ — ○ — ○ BTBG08D
- e) Teachers do not have adequate instructional materials and supplies ----- ○ — ○ — ○ — ○ — ○ BTBG08E



**9**

**A. Do you use computers in your teaching in any of the following ways?**

Check **one** circle for each line.

BTBG09AA  
BTBG09AB  
BTBG09AC

		Yes	No
a) For preparation .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) For administration .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) In your classroom instruction .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**If Yes to "classroom instruction"**

**B. How much do you agree with the following statements about using computers in your classroom instruction?**

Check **one** circle for each line.

BTBG09BA  
BTBG09BB  
BTBG09BC

		Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I feel comfortable using computers in my teaching .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) When I have technical problems, I have ready access to computer support staff in my school .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I receive adequate support for integrating computers in my teaching activities .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10**

**How often do you have the following types of interactions with other teachers?**

Check **one** circle for each line.

		Never or almost never	2 or 3 times per month	1-3 times per week	Daily or almost daily
a) Discuss how to teach a particular topic .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Collaborate in planning and preparing instructional materials .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Share what I have learned about my teaching experiences .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Visit another classroom to learn more about teaching .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Work together to try out new ideas .....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

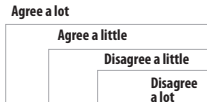
BTBG10A  
BTBG10B  
BTBG10C  
BTBG10D  
BTBG10E

**About Teaching the <TIMSS Class/  
Class with the TIMSS Students>**

**11** \_\_\_\_\_

**How much do you agree with the following statements?**

Check **one** circle for each line.



BTBG11A

a) I am content with my profession as a teacher ----- ○ — ○ — ○ — ○

BTBG11B

b) I am satisfied with being a teacher at this school ----- ○ — ○ — ○ — ○

BTBG11C

c) I had more enthusiasm when I began teaching than I have now ----- ○ — ○ — ○ — ○

BTBG11D

d) I do important work as a teacher ----- ○ — ○ — ○ — ○

BTBG11E

e) I plan to continue as a teacher for as long as I can ---- ○ — ○ — ○ — ○

BTBG11F

f) I am frustrated as a teacher --- ○ — ○ — ○ — ○

**12** \_\_\_\_\_

**How many students are in this class?**

BTBG12

\_\_\_\_\_ students  
Write in a number.

**13** \_\_\_\_\_

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

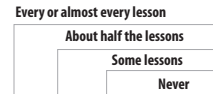
BTBG13

\_\_\_\_\_ students in this class  
Write in a number.

**14** \_\_\_\_\_

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

Check **one** circle for each line.



a) Summarize what students should have learned from the lesson ----- ○ — ○ — ○ — ○

BTBG14A

b) Relate the lesson to students' daily lives ----- ○ — ○ — ○ — ○

BTBG14B

c) Use questioning to elicit reasons and explanations ----- ○ — ○ — ○ — ○

BTBG14C

d) Encourage all students to improve their performance --- ○ — ○ — ○ — ○

BTBG14D

e) Praise students for good effort ----- ○ — ○ — ○ — ○

BTBG14E

f) Bring interesting materials to class ----- ○ — ○ — ○ — ○

BTBG14F



**15**

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

Check **one** circle for each line.

Not applicable  
Not at all  
Some  
A lot

- BTBG15A a) Students lacking prerequisite knowledge or skills ----- ○ — ○ — ○ — ○
- BTBG15B b) Students suffering from lack of basic nutrition ----- ○ — ○ — ○ — ○
- BTBG15C c) Students suffering from not enough sleep ----- ○ — ○ — ○ — ○
- BTBG15D d) Students with special needs (e.g., physical disabilities, mental or emotional/psychological impairment) --- ○ — ○ — ○ — ○
- BTBG15E e) Disruptive students ----- ○ — ○ — ○ — ○
- BTBG15F f) Uninterested students ----- ○ — ○ — ○ — ○

**16**

For the typical student in this class, how often do you do these things?

Check **one** circle for each line.

At least once a week  
Once or twice a month  
4–6 times a year  
1–3 times a year  
Never

- a) Meet or talk individually with the student's parents to discuss his/her learning progress ----- ○ — ○ — ○ — ○ — ○ BTBG16A
- b) Send home a progress report on the student's learning ----- ○ — ○ — ○ — ○ — ○ BTBG16B

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

Questions 17–19 ask about science instruction for the <eighth-grade> students in the <TIMSS class/class with the TIMSS students>.

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

BTBS17A  
BTBS17B

\_\_\_\_\_ hours and \_\_\_\_\_ minutes per week  
*Write in the hours and minutes.*

**18** **In teaching science to this class, how confident do you feel to do the following?**

BTBS18A  
BTBS18B  
BTBS18C  
BTBS18D  
BTBS18E

*Check one circle for each line.*

Very confident  
Somewhat confident  
Not confident

a) Answer students' questions about science ----- ○ — ○ — ○

b) Explain science concepts or principles by doing science experiments ----- ○ — ○ — ○

c) Provide challenging tasks for capable students ----- ○ — ○ — ○

d) Adapt my teaching to engage students' interest ----- ○ — ○ — ○

e) Help students appreciate the value of learning science ----- ○ — ○ — ○

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

*Check one circle for each line.*



a) Observe natural phenomena and describe what they see --- ○ — ○ — ○ — ○ BTBS19A

b) Watch me demonstrate an experiment or investigation ----- ○ — ○ — ○ — ○ BTBS19B

c) Design or plan experiments or investigations ----- ○ — ○ — ○ — ○ BTBS19C

d) Conduct experiments or investigations ----- ○ — ○ — ○ — ○ BTBS19D

e) Read their textbooks or other resource materials ----- ○ — ○ — ○ — ○ BTBS19E

f) Have students memorize facts and principles ----- ○ — ○ — ○ — ○ BTBS19F

g) Use scientific formulas and laws to solve routine problems ----- ○ — ○ — ○ — ○ BTBS19G

h) Give explanations about something they are studying ----- ○ — ○ — ○ — ○ BTBS19H

i) Relate what they are learning in science to their daily lives ----- ○ — ○ — ○ — ○ BTBS19I

j) Do field work outside of class ----- ○ — ○ — ○ — ○ BTBS19J

k) Take a written test or quiz ----- ○ — ○ — ○ — ○ BTBS19K



**Resources for Teaching Science**

Questions 20–21 ask about resources for teaching science to the <eighth-grade> students in the <TIMSS class/class with the TIMSS students>.

**20** When you teach science to this class, how do you use the following resources?

Check **one** circle for each line.

		Basis for instruction	Supplement	Not used
BTBS20A	a) Textbooks -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS20B	b) Workbooks or worksheets -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS20C	c) Science equipment and materials -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS20D	d) Computer software for science instruction -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS20E	e) Reference materials (e.g., encyclopedia, dictionary) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**21**

**A. Do the students in this class have computer(s) available to use during their science lessons?**

BTBS21A

Check **one** circle only.

Yes ---

No ---

(If No, go to #22)

**If Yes,**

**B. Do any of the computer(s) have access to the Internet?**

BTBS21B

Check **one** circle only.

Yes ---

No ---

**C. How often do you have the students do the following computer activities during science lessons?**

Check **one** circle for each line.

		Every or almost every day	Once or twice a week	Once or twice a month	Never or almost never
	a) Practice skills and procedures -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	b) Look up ideas and information -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	c) Do scientific procedures or experiments -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	d) Study natural phenomena through simulations -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	e) Process and analyze data -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

BTBS21CA

BTBS21CB

BTBS21CC

BTBS21CD

BTBS21CE

### Science Topics Taught

Questions 22–23 ask about the topics taught and the content covered in teaching science to the <eighth-grade> students in the <TIMSS class/class with the TIMSS students>.

## 22

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**
- BTBS22AA a) Major organs and organ systems in humans and other organisms (structure/function, life processes that maintain stable bodily conditions) -----  —  —
- BTBS22AB b) Cells and their functions, including respiration and photosynthesis as cellular processes -----  —  —
- BTBS22AC c) Reproduction (sexual and asexual) and heredity (passing on of traits, inherited versus acquired/learned characteristics) -----  —  —
- BTBS22AD d) Role of variation and adaptation in survival/extinction of species in a changing environment -----  —  —
- BTBS22AE e) Interdependence of populations of organisms in an ecosystem (e.g., energy flow, food webs, competition, predation) and the impact of changes in the physical environment on populations (e.g., climate, water supply) -----  —  —
- BTBS22AF f) Reasons for increase in world’s human population (e.g., advances in medicine, sanitation), and the effects of population growth on the environment -----  —  —
- BTBS22AG g) Human health (causes of infectious diseases, methods of infection, prevention, immunity) and the importance of diet and exercise in maintaining health -----  —  —
- B. Chemistry**
- BTBS22BA a) Classification, composition, and particulate structure of matter (elements, compounds, mixtures, molecules, atoms, protons, neutrons, electrons) -----  —  —
- BTBS22BB b) Solutions (solvent, solute, concentration/dilution, effect of temperature on solubility) -----  —  —
- BTBS22BC c) Properties and uses of common acids and bases -----  —  —
- BTBS22BD d) Chemical change (transformation of reactants, evidence of chemical change, conservation of matter, common oxidation reactions – combustion, rusting, tarnishing) -----  —  —

22

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
<b>C. Physics</b>				
BTBS22CA	a) Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, thermal expansion, and changes in volume and/or pressure) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS22CB	b) Energy forms, transformations, heat, and temperature -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS22CC	c) Basic properties/behaviors of light (reflection, refraction, light and color, simple ray diagrams) and sound (transmission through media, loudness, pitch, amplitude, frequency, relative speed of light and sound) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS22CD	d) Electric circuits (flow of current; types of circuits - parallel/series; current/voltage relationship) and properties and uses of permanent magnets and electromagnets -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS22CE	e) Forces and motion (types of forces, basic description of motion, effects of density and pressure) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>D. Earth Science</b>				
BTBS22DA	a) Earth's structure and physical features (Earth's crust, mantle and core; composition and relative distribution of water, and composition of air) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS22DB	b) Earth's processes, cycles and history (rock cycle; water cycle; weather patterns; major geological events; formation of fossils and fossil fuels) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS22DC	c) Earth's resources, their use and conservation (e.g., renewable/nonrenewable resources, human use of land/soil, water resources) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BTBS22DD	d) Earth in the solar system and the universe (phenomena on Earth - day/night, tides, phases of moon, eclipses, seasons; physical features of Earth compared to other bodies; the Sun as a star) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Science Content Coverage

**23**

**By the end of this school year, approximately what percentage of teaching time will you have spent during this school year on each of the following science content areas for the students in this class?**

*Write in the percentage for each.*

- BTBS23A a) Biology (e.g., structure/function; life processes, reproduction/heredity, natural selection; ecosystems, human health) ----- %
- BTBS23B b) Chemistry (e.g., classification, composition and properties of matter; chemical change) ----- %
- BTBS23C c) Physics (e.g., physical states/ changes in matter; energy; light; sound; electricity and magnetism; forces and motion) ----- %
- BTBS23D d) Earth science (e.g., Earth's structure, processes, and resources; the solar system and universe) ----- %
- BTBS23E e) Other ----- %

**Total = 100%**

**Science Homework**

Question 24 asks about science homework for the <eighth-grade> students in the <TIMSS class/class with the TIMSS students>.

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

BTBS24A

Check **one** circle only.

- I do not assign science homework ---  (Go to #25)
- Less than once a week ---
- 1 or 2 times a week ---
- 3 or 4 times a week ---
- Every day ---

BTBS24B

**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.)**

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 \_\_\_\_\_

- a) Correct assignments and give feedback to students -----  -  -  BTBS24CA
- b) Have students correct their own homework -----  -  -  BTBS24CB
- c) Discuss the homework in class -----  -  -  BTBS24CC
- d) Monitor whether or not the homework was completed -----  -  -  BTBS24CD
- e) Use the homework to contribute towards students' grades or marks -----  -  -  BTBS24CE

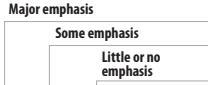
**Science Assessment**

Questions 25–27 ask about science assessment for the <eighth-grade> students in the <TIMSS class/class with the TIMSS students>.

**25**

**How much emphasis do you place on the following sources to monitor students' progress in science?**

Check **one** circle for each line.



BTBS25A  
BTBS25B  
BTBS25C

- a) Evaluation of students' ongoing work ----- ○ — ○ — ○
- b) Classroom tests (for example, teacher-made or textbook tests) ----- ○ — ○ — ○
- c) National or regional achievement tests ----- ○ — ○ — ○

**26**

**How often do you give a science test or examination to this class?**

Check **one** circle only.

- About once a week --- ○
- About every two weeks --- ○
- About once a month --- ○
- A few times a year --- ○
- Never --- ○

BTBS26

**27**

**How often do you include the following types of questions in your science tests or examinations?**

Check **one** circle for each line.



- a) Questions based on knowing facts and concepts --- ○ — ○ — ○
- b) Questions based on the application of knowledge and understanding ----- ○ — ○ — ○
- c) Questions involving developing hypotheses and designing scientific investigations ----- ○ — ○ — ○
- d) Questions requiring explanations or justifications ----- ○ — ○ — ○

BTBS27A  
BTBS27B  
BTBS27C  
BTBS27D

## Preparation to Teach Science

28

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

Check **one** circle for each line.

- |         |   | Yes                   | No                    |
|---------|---|-----------------------|-----------------------|
| BTBS28A | a) Science content .....  | <input type="radio"/> | <input type="radio"/> |
| BTBS28B | b) Science pedagogy/instruction .....                               | <input type="radio"/> | <input type="radio"/> |
| BTBS28C | c) Science curriculum .....   | <input type="radio"/> | <input type="radio"/> |
| BTBS28D | d) Integrating information technology<br>into science .....         | <input type="radio"/> | <input type="radio"/> |
| BTBS28E | e) Improving students' critical thinking or<br>inquiry skills ..... | <input type="radio"/> | <input type="radio"/> |
| BTBS28F | f) Science assessment .....   | <input type="radio"/> | <input type="radio"/> |
| BTBS28G | g) Addressing individual students' needs .....                      | <input type="radio"/> | <input type="radio"/> |

29

**How well prepared do you feel you are to teach the following science topics?**

If a topic is not in the <eighth-grade> curriculum or you are not responsible for teaching this topic, please choose "Not applicable."

Check **one** circle for each line.

Not applicable  
Very well prepared  
Somewhat prepared  
Not well prepared

**A. Biology**

- |          |  |                       |                       |                       |                       |
|----------|--|-----------------------|-----------------------|-----------------------|-----------------------|
| BTBS29AA | a) Major organs and organ systems in humans and other organisms (structure/function, life processes that maintain stable bodily conditions) -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29AB | b) Cells and their functions, including respiration and photosynthesis as cellular processes -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29AC | c) Reproduction (sexual and asexual) and heredity (passing on of traits, inherited versus acquired/learned characteristics) -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29AD | d) Role of variation and adaptation in survival/extinction of species in a changing environment -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29AE | e) Interdependence of populations of organisms in an ecosystem (e.g., energy flow, food webs, competition, predation) and the impact of changes in the physical environment on populations (e.g., climate, water supply) ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29AF | f) Reasons for increase in world's human population (e.g., advances in medicine, sanitation), and the effects of population growth on the environment -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29AG | g) Human health (causes of infectious diseases, methods of infection, prevention, immunity) and the importance of diet and exercise in maintaining health -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**B. Chemistry**

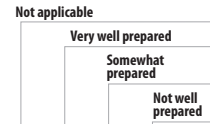
- |          |   |                       |                       |                       |                       |
|----------|---|-----------------------|-----------------------|-----------------------|-----------------------|
| BTBS29BA | a) Classification, composition, and particulate structure of matter (elements, compounds, mixtures, molecules, atoms, protons, neutrons, electrons) -----                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29BB | b) Solutions (solvent, solute, concentration/dilution, effect of temperature on solubility) -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29BC | c) Properties and uses of common acids and bases -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| BTBS29BD | d) Chemical change (transformation of reactants, evidence of chemical change, conservation of matter, common oxidation reactions – combustion, rusting, tarnishing) ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



29

**How well prepared do you feel you are to teach the following science topics?**  
 If a topic is not in the <eighth-grade> curriculum or you are not responsible for teaching this topic, please choose "Not applicable."

Check **one** circle for each line.



**C. Physics**

- BTBS29CA a) Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, thermal expansion, and changes in volume and/or pressure) ----- ○ — ○ — ○ — ○
- BTBS29CB b) Energy forms, transformations, heat, and temperature ----- ○ — ○ — ○ — ○
- BTBS29CC c) Basic properties/behaviors of light (reflection, refraction, light and color, simple ray diagrams) and sound (transmission through media, loudness, pitch, amplitude, frequency, relative speed of light and sound) ----- ○ — ○ — ○ — ○
- BTBS29CD d) Electric circuits (flow of current; types of circuits - parallel/series; current/voltage relationship) and properties and uses of permanent magnets and electromagnets ----- ○ — ○ — ○ — ○
- BTBS29CE e) Forces and motion (types of forces, basic description of motion, effects of density and pressure) ----- ○ — ○ — ○ — ○

**D. Earth Science**

- BTBS29DA a) Earth's structure and physical features (Earth's crust, mantle and core; composition and relative distribution of water, and composition of air) ----- ○ — ○ — ○ — ○
- BTBS29DB b) Earth's processes, cycles and history (rock cycle; water cycle; weather patterns; major geological events; formation of fossils and fossil fuels) ----- ○ — ○ — ○ — ○
- BTBS29DC c) Earth's resources, their use and conservation (e.g., renewable/nonrenewable resources, human use of land/soil, water resources) ----- ○ — ○ — ○ — ○
- BTBS29DD d) Earth in the solar system and the universe (phenomena on Earth - day/night, tides, phases of moon, eclipses, seasons; physical features of Earth compared to other bodies; the Sun as a star) ----- ○ — ○ — ○ — ○

# Thank You

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

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BOSTON  
COLLEGE  
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# TIMSS 2011

## Teacher Questionnaire Science

<Grade 8>



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# Section 9

## Eighth Grade – School Questionnaire



**Exhibit S1.9: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Eighth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 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, 2010/2011>?	BC4GTENR	
SCQ-02	BCBG02	What is the total enrollment of <eighth-grade> students in your school as of <first day of month TIMSS testing begins, 2010/2011>?	BC4GEENR	
SCQ-03A	BCBG03A	Approximately what percentage of students in your school come from economically disadvantaged homes?	BC4GSBED	
SCQ-03B	BCBG03B	Approximately what percentage of students in your school come from economically affluent homes?	BC4GSBEA	
SCQ-04	BCBG04	Approximately what percentage of students in your school have <language of test> as their native language?	BC4GNALA	
SCQ-05A	BCBG05A	How many people live in the city, town, or area where your school is located?	BC4GCOMU	
SCQ-05B	BCBG05B	Which best describes the immediate area in which your school is located?		
SCQ-05C	BCBG05C	Which best characterizes the average income level of the school's immediate area?		
SCQ-06A	BCBG06A	How many days per year is your school open for instruction?	BC4GDYSO	
SCQ-06BA	BCBG06BA	What is the total instructional time (hours), excluding breaks, in a typical day?	BC4GHTIT	
SCQ-06BB	BCBG06BB	What is the total instructional time (minutes), excluding breaks, in a typical day?	BC4GMTIT	
SCQ-06C	BCBG06C	In one calendar week, how many days is the school open for instruction?	BC4GDSOI	
SCQ-07	BCBG07	What is the total number of computers that can be used for instructional purposes by <eighth-grade> students?	BC4GCMP5	Modified wording in 2011
SCQ-08A	BCBG08A	Does your school have a science laboratory that can be used by <eighth-grade> students?	BC4SSLAB	Modified wording in 2011
SCQ-08B	BCBG08B	Do teachers usually have assistance available when students are conducting science experiments?	BC4STASE	
SCQ-09AA	BCBG09AA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of instructional materials?	BC4GST01	
SCQ-09AB	BCBG09AB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of supplies?	BC4GST02	Modified wording in 2011
SCQ-09AC	BCBG09AC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of school buildings and grounds?	BC4GST03	
SCQ-09AD	BCBG09AD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of heating/cooling and lighting systems?	BC4GST04	
SCQ-09AE	BCBG09AE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of instructional space?	BC4GST05	
SCQ-09AF	BCBG09AF	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of technologically competent staff?		
SCQ-09BA	BCBG09BA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of teachers with a specialization in mathematics?		
SCQ-09BB	BCBG09BB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computers for mathematics instruction?	BC4MST07	
SCQ-09BC	BCBG09BC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computer software for mathematics instruction?	BC4MST08	
SCQ-09BD	BCBG09BD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of library materials relevant to mathematics instruction?	BC4MST10	
SCQ-09BE	BCBG09BE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of audio-visual resources for mathematics instruction?	BC4MST11	

**Exhibit S1.9: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-09BF	BCBG09BF	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of calculators for mathematics instruction?	BC4MST09	
SCQ-09CA	BCBG09CA	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of teachers with a specialization in science?		
SCQ-09CB	BCBG09CB	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computers for science instruction?	BC4SST13	
SCQ-09CC	BCBG09CC	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of computer software for science instruction?	BC4SST14	
SCQ-09CD	BCBG09CD	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of library materials relevant to science instruction?	BC4SST16	
SCQ-09CE	BCBG09CE	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of audio-visual resources for science instruction?	BC4SST17	
SCQ-09CF	BCBG09CF	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of calculators for science instruction?	BC4SST15	
SCQ-09CG	BCBG09CG	How much is your school's capacity to provide instruction affected by a shortage or inadequacy of science equipment and materials?	BC4SST12	
SCQ-10AA	BCBG10AA	How often does your school inform parents about their child's learning progress?		
SCQ-10AB	BCBG10AB	How often does your school inform parents about the behavior and well-being of their child at school?		
SCQ-10AC	BCBG10AC	How often does your school discuss parents' concerns or wishes about their child's learning?		
SCQ-10AD	BCBG10AD	How often does your school support individual parents in helping their child with schoolwork?		
SCQ-10BA	BCBG10BA	How often does your school ask parents to volunteer for school projects, programs, and trips?	BC4GAPVO	Modified wording and response options in 2011
SCQ-10BB	BCBG10BB	How often does your school ask parents to serve on school committees?	BC4GAPSC	Modified wording and response options in 2011
SCQ-10CA	BCBG10CA	How often does your school inform parents about the overall academic achievement of the school?		
SCQ-10CB	BCBG10CB	How often does your school inform parents about school accomplishments?		
SCQ-10CC	BCBG10CC	How often does your school inform parents about the educational goals and pedagogic principles of the school?		
SCQ-10CD	BCBG10CD	How often does your school inform parents about the rules of the school?		
SCQ-10CE	BCBG10CE	How often does your school discuss parents' concerns or wishes about the school's organization?		
SCQ-10CF	BCBG10CF	How often does your school provide parents with additional learning materials for their child to use at home?		
SCQ-10CG	BCBG10CG	How often does your school organize workshops or seminars for parents on learning or pedagogical issues?		
SCQ-11A	BCBG11A	How would you characterize teachers' job satisfaction within your school?	BC4GCHTS	
SCQ-11B	BCBG11B	How would you characterize teachers' understanding of the school's curricular goals within your school?	BC4GCHTU	
SCQ-11C	BCBG11C	How would you characterize teachers' degree of success in implementing the school's curriculum within your school?	BC4GCHTC	
SCQ-11D	BCBG11D	How would you characterize teachers' expectations for student achievement within your school?	BC4GCHES	

**Exhibit S1.9: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-11E	BCBG11E	How would you characterize parental support for student achievement within your school?	BC4GCHPS	
SCQ-11F	BCBG11F	How would you characterize parental involvement in school activities within your school?	BC4GCHPI	
SCQ-11G	BCBG11G	How would you characterize students' regard for school property within your school?	BC4GCHSR	
SCQ-11H	BCBG11H	How would you characterize students' desire to do well in school within your school?	BC4GCHSD	
SCQ-12AA	BCBG12AA	To what degree is arriving late at school a problem among <eighth-grade> students in your school?	BC4GSP01	Modified response options in 2011
SCQ-12AB	BCBG12AB	To what degree is absenteeism a problem among <eighth-grade> students in your school?	BC4GSP02	Modified response options in 2011
SCQ-12AC	BCBG12AC	To what degree is classroom disturbance a problem among <eighth-grade> students in your school?	BC4GSP05	Modified response options in 2011
SCQ-12AD	BCBG12AD	To what degree is cheating a problem among <eighth-grade> students in your school?	BC4GSP06	Modified response options in 2011
SCQ-12AE	BCBG12AE	To what degree is profanity a problem among <eighth-grade> students in your school?	BC4GSP07	Modified response options in 2011
SCQ-12AF	BCBG12AF	To what degree is vandalism a problem among <eighth-grade> students in your school?	BC4GSP08	Modified response options in 2011
SCQ-12AG	BCBG12AG	To what degree is theft a problem among <eighth-grade> students in your school?	BC4GSP09	Modified response options in 2011
SCQ-12AH	BCBG12AH	To what degree is intimidation or verbal abuse among students a problem among <eighth-grade> students in your school?	BC4GSP10	Modified response options in 2011
SCQ-12AI	BCBG12AI	To what degree is physical injury to other students a problem among <eighth-grade> students in your school?	BC4GSP11	Modified response options in 2011
SCQ-12AJ	BCBG12AJ	To what degree is intimidation or verbal abuse of teachers or staff a problem among <eighth-grade> students in your school?	BC4GSP12	Modified response options in 2011
SCQ-12AK	BCBG12AK	To what degree is physical injury to teachers or staff a problem among <eighth-grade> students in your school?	BC4GSP13	Modified response options in 2011
SCQ-12BA	BCBG12BA	To what degree is arriving late or leaving early a problem among teachers in your school?		
SCQ-12BB	BCBG12BB	To what degree is absenteeism a problem among teachers in your school?		
SCQ-13A	BCBG13A	In your school, are observations by the principal or senior staff used to evaluate the practice of <eighth-grade> mathematics teachers?	BC4MEPOS	
SCQ-13B	BCBG13B	In your school, are observations by inspectors or other persons external to the school used to evaluate the practice of <eighth-grade> mathematics teachers?	BC4MEPOE	
SCQ-13C	BCBG13C	In your school, is student achievement used to evaluate the practice of <eighth-grade> mathematics teachers?	BC4MEPSA	
SCQ-13D	BCBG13D	In your school, is teacher peer review used to evaluate the practice of <eighth-grade> mathematics teachers?	BC4MEPTR	
SCQ-14A	BCBG14A	In your school, are observations by the principal or senior staff used to evaluate the practice of <eighth-grade> science teachers?	BC4SEPOS	
SCQ-14B	BCBG14B	In your school, are observations by inspectors or other persons external to the school used to evaluate the practice of <eighth-grade> science teachers?	BC4SEPOE	
SCQ-14C	BCBG14C	In your school, is student achievement used to evaluate the practice of <eighth-grade> science teachers?	BC4SEPSA	
SCQ-14D	BCBG14D	In your school, is teacher peer review used to evaluate the practice of <eighth-grade> science teachers?	BC4SEPTR	



**Exhibit S1.9: Index of International Background Variables for the TIMSS 2011 School Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)	TIMSS 2007 Variable Name	Notes
SCQ-15A	BCBG15A	How difficult was it to fill <eighth-grade> teaching vacancies for this school year for mathematics?	BC4MFVAY	
SCQ-15B	BCBG15B	How difficult was it to fill <eighth-grade> teaching vacancies for this school year for science?	BC4SFVAY	
SCQ-16A	BCBG16A	Does your school currently use any incentives to recruit or retain <eighth-grade> teachers in mathematics?	BC4MRRTM	
SCQ-16B	BCBG16B	Does your school currently use any incentives to recruit or retain <eighth-grade> teachers in science?	BC4SRRTS	
SCQ-16C	BCBG16C	Does your school currently use any incentives to recruit or retain <eighth-grade> teachers in other fields?	BC4GRRTO	
SCQ-17A	BCBG17A	During the past year, approximately how much time have you spent promoting the school's educational vision or goals in your role as school principal?		
SCQ-17B	BCBG17B	During the past year, approximately how much time have you spent developing the school's curricular and educational goals in your role as school principal?		
SCQ-17C	BCBG17C	During the past year, approximately how much time have you spent monitoring teachers' implementation of the school's educational goals in their teaching in your role as school principal?		
SCQ-17D	BCBG17D	During the past year, approximately how much time have you spent monitoring students' learning progress to ensure that the school's educational goals are reached in your role as school principal?		
SCQ-17E	BCBG17E	During the past year, approximately how much time have you spent keeping an orderly atmosphere in the school in your role as school principal?		
SCQ-17F	BCBG17F	During the past year, approximately how much time have you spent ensuring that there are clear rules for student behavior in your role as school principal?		
SCQ-17G	BCBG17G	During the past year, approximately how much time have you spent addressing disruptive student behavior in your role as school principal?		
SCQ-17H	BCBG17H	During the past year, approximately how much time have you spent creating a climate of trust among teachers in your role as school principal?		
SCQ-17I	BCBG17I	During the past year, approximately how much time have you spent initiating a discussion to help teachers who have problems in the classroom in your role as school principal?		
SCQ-17J	BCBG17J	During the past year, approximately how much time have you spent advising teachers who have questions or problems with their teaching in your role as school principal?		
SCQ-17K	BCBG17K	During the past year, approximately how much time have you spent visiting other schools or attending educational conferences for new ideas in your role as school principal?		
SCQ-17L	BCBG17L	During the past year, approximately how much time have you spent initiating educational projects or improvements in your role as school principal?		
SCQ-17M	BCBG17M	During the past year, approximately how much time have you spent participating in professional development activities specifically for school principals in your role as school principal?		



Identification Label

**TIMSS 2011**

**School  
Questionnaire**

**<Grade 8>**

<TIMSS National Research Center Name>  
<Address>



**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College

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## School Questionnaire

Your school has agreed to participate in TIMSS 2011 (Trends in International Mathematics and Science Study), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS measures trends in student achievement in mathematics and science, and studies differences in national education systems in more than 60 countries in order to help improve teaching and learning worldwide.

This questionnaire is addressed to 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 2011

**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, 2010/2011>?

\_\_\_\_\_ students  
Write in a number.

BCBG02

**2** \_\_\_\_\_

What is the total enrollment of <eighth-grade> students in your school as of <first day of month TIMSS testing begins, 2010/2011>?

\_\_\_\_\_ students  
Write in a number.

BCBG03A

**3** \_\_\_\_\_

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

Check **one** circle for each line.

0 to 10%  
11 to 25%  
26 to 50%  
More than 50%

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

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

BCBG03B

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?

Check **one** circle only.

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

BCBG05A

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

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 -- ○

BCBG05B

C. Which best characterizes the average income level of the school's immediate area?

Check **one** circle only.

- High -- ○
- Medium -- ○
- Low -- ○

BCBG05C

## Instructional Time

**6** \_\_\_\_\_

For the &lt;eighth-grade&gt; students in your school:

BCBG06A

A. How many days per year is your school open for instruction?\_\_\_\_\_ days  
Write in the number.

BCBG06BA

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

BCBG06BB

\_\_\_\_\_ hours and \_\_\_\_\_ minutes  
Write in the number of hours and 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

**7** \_\_\_\_\_

What is the total number of computers that can be used for instructional purposes by &lt;eighth-grade&gt; students?

BCBG07

\_\_\_\_\_ computers  
Write in the number.**8** \_\_\_\_\_

A. Does your school have a science laboratory that can be used by &lt;eighth-grade&gt; students?

BCBG08A

Check **one** circle only.

- Yes---
- No---

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

BCBG08B

Check **one** circle only.

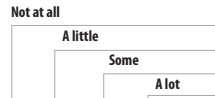
- Yes---
- No---



**9**

**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.



**A. General School Resources**

- BCBG09AA a) Instructional materials (e.g., textbooks) ----- ○ — ○ — ○ — ○
  - BCBG09AB b) Supplies (e.g., papers, pencils) ----- ○ — ○ — ○ — ○
  - BCBG09AC c) School buildings and grounds ----- ○ — ○ — ○ — ○
  - BCBG09AD d) Heating/cooling and lighting systems ----- ○ — ○ — ○ — ○
  - BCBG09AE e) Instructional space (e.g., classrooms) ----- ○ — ○ — ○ — ○
  - BCBG09AF f) Technologically competent staff ----- ○ — ○ — ○ — ○
- B. Resources for Mathematics Instruction**
- BCBG09BA a) Teachers with a specialization in mathematics ----- ○ — ○ — ○ — ○
  - BCBG09BB b) Computers for mathematics instruction ----- ○ — ○ — ○ — ○
  - BCBG09BC c) Computer software for mathematics instruction ----- ○ — ○ — ○ — ○
  - BCBG09BD d) Library materials relevant to mathematics instruction ----- ○ — ○ — ○ — ○
  - BCBG09BE e) Audio-visual resources for mathematics instruction ----- ○ — ○ — ○ — ○
  - BCBG09BF f) Calculators for mathematics instruction ----- ○ — ○ — ○ — ○

Check **one** circle for each line.



**C. Resources for Science Instruction**

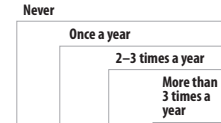
- a) Teachers with a specialization in science ----- ○ — ○ — ○ — ○ BCBG09CA
- b) Computers for science instruction ----- ○ — ○ — ○ — ○ BCBG09CB
- c) Computer software for science instruction ----- ○ — ○ — ○ — ○ BCBG09CC
- d) Library materials relevant to science instruction ----- ○ — ○ — ○ — ○ BCBG09CD
- e) Audio-visual resources for science instruction ----- ○ — ○ — ○ — ○ BCBG09CE
- f) Calculators for science instruction ----- ○ — ○ — ○ — ○ BCBG09CF
- g) Science equipment and materials ----- ○ — ○ — ○ — ○ BCBG09CG

**Involving Parents in Your School**

**10**

**A. How often does your school do the following for parents concerning individual students?**

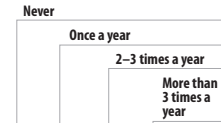
*Check one circle for each line.*



- BCBG10AA a) Inform parents about their child's learning progress -----○--○--○--○
- BCBG10AB b) Inform parents about the behavior and well-being of their child at school -----○--○--○--○
- BCBG10AC c) Discuss parents' concerns or wishes about their child's learning -----○--○--○--○
- BCBG10AD d) Support individual parents in helping their child with schoolwork -----○--○--○--○

**B. How often does your school ask parents to do the following?**

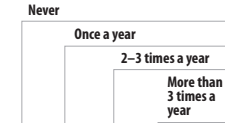
*Check one circle for each line.*



- BCBG10BA a) Volunteer for school projects, programs, and trips -----○--○--○--○
- BCBG10BB b) Serve on school committees -----○--○--○--○

**C. How often does your school do the following for parents in general?**

*Check one circle for each line.*



- a) Inform parents about the overall academic achievement of the school (e.g., results of national tests, results of inspections of learning) -----○--○--○--○ BCBG10CA
- b) Inform parents about school accomplishments (e.g., tournament results, facility improvements) -----○--○--○--○ BCBG10CB
- d) Inform parents about the educational goals and pedagogic principles of the school -----○--○--○--○ BCBG10CC
- d) Inform parents about the rules of the school -----○--○--○--○ BCBG10CD
- e) Discuss parents' concerns or wishes about the school's organization (e.g., rules and regulations, time tables, safety measures) -----○--○--○--○ BCBG10CE
- f) Provide parents with additional learning materials (e.g., books, computer software) for their child to use at home -----○--○--○--○ BCBG10CF
- g) Organize workshops or seminars for parents on learning or pedagogical issues -----○--○--○--○ BCBG10CG



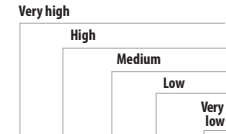
**School Climate**



**11**

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

Check **one** circle for each line.

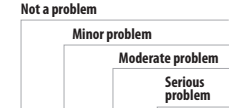


- BCBG11A a) Teachers' job satisfaction ----- ○ — ○ — ○ — ○ — ○
- BCBG11B b) Teachers' understanding of the school's curricular goals ----- ○ — ○ — ○ — ○ — ○
- BCBG11C c) Teachers' degree of success in implementing the school's curriculum ----- ○ — ○ — ○ — ○ — ○
- BCBG11D d) Teachers' expectations for student achievement ----- ○ — ○ — ○ — ○ — ○
- BCBG11E e) Parental support for student achievement ----- ○ — ○ — ○ — ○ — ○
- BCBG11F f) Parental involvement in school activities ----- ○ — ○ — ○ — ○ — ○
- BCBG11G g) Students' regard for school property ----- ○ — ○ — ○ — ○ — ○
- BCBG11H h) Students' desire to do well in school ----- ○ — ○ — ○ — ○ — ○

**12**

A. To what degree is each of the following a problem among <eighth-grade> students in your school?

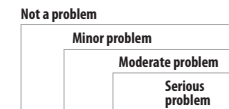
Check **one** circle for each line.



- a) Arriving late at school ----- ○ — ○ — ○ — ○ — ○ BCBG12AA
- b) Absenteeism (i.e., unjustified absences) ----- ○ — ○ — ○ — ○ — ○ BCBG12AB
- c) Classroom disturbance ----- ○ — ○ — ○ — ○ — ○ BCBG12AC
- d) Cheating ----- ○ — ○ — ○ — ○ — ○ BCBG12AD
- e) Profanity ----- ○ — ○ — ○ — ○ — ○ BCBG12AE
- f) Vandalism ----- ○ — ○ — ○ — ○ — ○ BCBG12AF
- g) Theft ----- ○ — ○ — ○ — ○ — ○ BCBG12AG
- h) Intimidation or verbal abuse among students (including texting, emailing, etc.) ----- ○ — ○ — ○ — ○ — ○ BCBG12AH
- i) Physical injury to other students ----- ○ — ○ — ○ — ○ — ○ BCBG12AI
- j) Intimidation or verbal abuse of teachers or staff (including texting, emailing, etc.) ----- ○ — ○ — ○ — ○ — ○ BCBG12AJ
- k) Physical injury to teachers or staff ----- ○ — ○ — ○ — ○ — ○ BCBG12AK

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

Check **one** circle for each line.



- a) Arriving late or leaving early --- ○ — ○ — ○ — ○ — ○ BCBG12BA
- b) Absenteeism ----- ○ — ○ — ○ — ○ — ○ BCBG12BB

**Teachers in Your School**

**13**

In your school, are any of the following used to evaluate the practice of <eighth-grade> mathematics teachers?

Check **one** circle for each line.

BCBG13A

a) Observations by the principal or senior staff -----  Yes  No

BCBG13B

b) Observations by inspectors or other persons external to the school -----  Yes  No

BCBG13C

c) Student achievement -----  Yes  No

BCBG13D

d) Teacher peer review -----  Yes  No

**15**

How difficult was it to fill <eighth-grade> teaching vacancies for this school year for the following subjects?

Check **one** circle for each line.

Were no vacancies in this subject  
Easy to fill vacancies  
Somewhat difficult  
Very difficult

a) Mathematics -----

b) Science -----

BCBG15A

BCBG15B

**14**

In your school, are any of the following used to evaluate the practice of <eighth-grade> science teachers?

Check **one** circle for each line.

BCBG14A

a) Observations by the principal or senior staff -----  Yes  No

BCBG14B

b) Observations by inspectors or other persons external to the school -----  Yes  No

BCBG14C

c) Student achievement -----  Yes  No

BCBG14D

d) Teacher peer review -----  Yes  No

**16**

Does your school currently use any incentives (e.g., pay, housing, signing bonus, smaller classes) to recruit or retain <eighth-grade> teachers in the following fields?

Check **one** circle for each line.

Yes No

a) Mathematics -----

b) Science -----

c) Other -----

BCBG16A

BCBG16B

BCBG16C



# Thank You

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

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BOSTON  
COLLEGE  
timssandpirls.bc.edu

# TIMSS 2011

## School Questionnaire

<Grade 8>



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for the Evaluation of  
Educational Achievement



# Section 10

## Eighth Grade – Curriculum Questionnaire



**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQG-01	GEN01	What is your country's name for the grade(s) tested in TIMSS and/or PIRLS 2011, in English (e.g., grade 4, grade 8)?
CQG-02	GEN02	In your country, what is the stated official policy or regulation on students' age of entry into primary school (ISCED Level 1)?
CQG-02A	GEN02A	What is the practice in your country, if the stated official policy on students' age of entry into primary school allows some parental discretion or choice?
CQG-02B	GEN02B	In your country, has the official stated policy on students' age of entry into primary school changed in the last 10 years?
CQG-02C	GEN02C	If the official state policy on students' age of entry into primary school has changed in the last 10 years, how did the policy change and when was the change made?
CQG-03	GEN03	Is the preprimary education (ISCED Level 0) mandatory for children in your country?
CQG-03A	GEN03A	If preprimary education (ISCED Level 0) is mandatory for children in your country, how many years are students required to attend preprimary education (e.g., 1 year, 2 years, 3 years, more than 3 years)?
CQG-03BA	GEN03BA	If preprimary education (ISCED Level 0) is not mandatory for children in your country, is public preprimary education available?
CQG-03BB	GEN03BB	If preprimary education (ISCED Level 0) is not mandatory for children in your country, are licensed early childhood education providers available?
CQG-03BC	GEN03BC	If preprimary education (ISCED Level 0) is not mandatory for children in your country, are there other types of preprimary education available?
CQG-03BT	GEN03BT	If preprimary education (ISCED Level 0) is not mandatory for children in your country, what is another type of preprimary education that is available?
CQG-03T	GEN03T	Is the preprimary education (ISCED Level 0) mandatory for children in your country? Comments:
CQG-04	GEN04	What are the ages and/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 national curriculum for preprimary education (ISCED Level 0)?
CQG-06A	GEN06A	If your country has a national curriculum for preprimary education (ISCED Level 0), are language, reading, or writing skills part of the preprimary curriculum?
CQG-06AT	GEN06AT	Does your country have a national curriculum for preprimary education (ISCED Level 0)? Please describe:
CQG-06B	GEN06B	Is mathematics (e.g., counting, learning shapes) part of the preprimary curriculum in your country?
CQG-06BT	GEN06BT	Is mathematics (e.g., counting, learning shapes) part of the preprimary curriculum in your country? Please describe:
CQG-06C	GEN06C	Is science (e.g., nature study, weather) part of the preprimary curriculum in your country?
CQG-06CT	GEN06CT	Is science (e.g., nature study, weather) part of the preprimary curriculum in your country? Please describe:



**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQG-07	GEN07	Does your country have a policy on the promotion and retention of students across grades 1-8?
CQG-07T	GEN07T	Does your country have a policy on the promotion and retention of students across grades 1-8? Please describe:
CQG-08	GEN08	Does your country have a nationally mandated number of school days per year?
CQG-08T	GEN08T	Does your country have a nationally mandated number of school days per year? Please describe:
CQG-09	GEN09	What is the main preparation route(s) for teachers of students in the fourth grade?
CQG-09AA	GEN09AA	According to the main preparation route(s) for teachers of students in the fourth grade, is supervised practicum during the teacher education program required?
CQG-09AAT	GEN09AAT	If supervised practicum during the teacher education program is a requirement for being a teacher of students in the fourth grade, how long is this period?
CQG-09AB	GEN09AB	According to the main preparation route(s) for teachers of students in the fourth grade, is passing a qualifying exam (e.g., licensing, certification) required?
CQG-09AC	GEN09AC	According to the main preparation route(s) for teachers of students in the fourth grade, is completion of a probationary teaching period required?
CQG-09ACT	GEN09ACT	If completion of a probationary teaching period is a requirement for being a teacher of students in the fourth grade, how long is this period?
CQG-09AD	GEN09AD	According to the main preparation route(s) for teachers of students in the fourth grade, is completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance) required?
CQG-09AE	GEN09AE	Are there other requirements according to the main preparation route(s) for teachers of students in the fourth grade?
CQG-09AET	GEN09AET	Are there other requirements according to the main preparation route(s) for teachers of students in the fourth grade? Please specify:
CQG-09B	GEN09B	If the main preparation route(s) for teachers of students in the eighth grade differ from those in the fourth grade, what is their main preparation route?
CQG-09CA	GEN09CA	If the requirements are different than the fourth grade, is supervised practicum during the teacher education program a requirement for teachers of students in the eighth grade?
CQG-09CAT	GEN09CAT	If supervised practicum during the teacher education program is a requirement for being a teacher of students in the eighth grade, how long is this period?
CQG-09CB	GEN09CB	If the requirements are different than the fourth grade, is passing a qualifying exam (e.g., licensing, certification) a requirement for teachers of students in the eighth grade?
CQG-09CC	GEN09CC	If the requirements are different than the fourth grade, is completion of a probationary teaching period a requirement for teachers of students in the eighth grade?
CQG-09CCT	GEN09CCT	If completion of a probationary teaching period is a requirement for being a teacher of students in the eighth grade, how long is this period?
CQG-09CD	GEN09CD	If the requirements are different than the fourth grade, is completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance) a requirement for teachers of students in the eighth grade?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQG-09CE	GEN09CE	If the requirements are different than the fourth grade, are there other requirements for teachers of students in the eighth grade?
CQG-09CET	GEN09CET	If the requirements are different than the fourth grade, are there other requirements for teachers of students in the eighth grade? Please specify:
CQG-10AA	GEN10AA	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in Language(s) 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-10AB	GEN10AB	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in Mathematics 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-10AC	GEN10AC	Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in Science 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-10B	GEN10B	What are the grades at which the exams are given by the educational authority in your country (e.g., National Ministry of Education) and the purpose of each exam?
CQG-10C	GEN10C	Does your country have a national or regional policy for make accommodations for students with special needs taking national or regional tests given by the educational authority in your country (e.g., the National Ministry of Education)?
CQG-10CT	GEN10CT	If your country does have a national or regional policy to make accommodations for students with special needs taking national or regional tests, what is the policy?
CQG-10D	GEN10D	If there are not exams administered by an educational authority in your country (e.g., National Ministry of Education), is there a similar process that has consequences for individual students?
CQG-11	GEN11	Is there a national/regional policy to encourage parental involvement in the schools attended by fourth-grade students?
CQG-11TA	GEN11TA	Is there a national/regional policy to encourage parental involvement in the schools attended by fourth-grade students? If yes...What is the policy?
CQG-11TB	GEN11TB	Is there a national/regional policy to encourage parental involvement in the schools attended by fourth-grade students? If no...Comments:
CQG-12	GEN12	Is there a national/regional policy to encourage parental involvement in the schools attended by eighth-grade students (e.g., the same as fourth grade, different than fourth grade, no national/regional policy)?
CQG-12T	GEN12T	If there is a national/regional policy to encourage parental involvement in the schools attended by eighth-grade students that differs from that of fourth-grade students, what is the policy?
<b>Mathematics</b>		
CQM8-01	MA801	Does your country have a national curriculum that covers mathematics instruction at the eighth grade of formal schooling?
CQM8-01TA	MA801TA	Does your country have a national curriculum that covers mathematics at the eighth grade of formal schooling? If yes... Comments:
CQM8-01TB	MA801TB	If your country does not have a national curriculum that covers mathematics at the eighth grade of formal schooling, 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 current mathematics curriculum introduced for the students assessed in TIMSS 2010/2011?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
QCM8-02AT	MA802AT	In what year was the current mathematics curriculum introduced for the students assessed in TIMSS 2010/2011? Comments:
QCM8-02B	MA802B	Is the mathematics curriculum currently being revised for the students assessed in TIMSS 2010/2011?
QCM8-02BTA	MA802BTA	Is the mathematics curriculum currently being revised for the students assessed in TIMSS 2010/2011? If yes...Please explain:
QCM8-02BTB	MA802BTB	Is the mathematics curriculum currently being revised for the students assessed in TIMSS 2010/2011? If no...Comments:
QCM8-03	MA803	For the middle/lower secondary school mathematics curriculum, what is the grade structure?
QCM8-04A	MA804A	Does the mathematics curriculum prescribe goals and objectives?
QCM8-04B	MA804B	Does the mathematics curriculum prescribe instructional practices or methods?
QCM8-04C	MA804C	Does the mathematics curriculum prescribe materials (e.g., textbooks or instructional materials)?
QCM8-04D	MA804D	Does the mathematics curriculum prescribe assessment methods/activities?
QCM8-04E	MA804E	Does the mathematics curriculum prescribe other?
QCM8-04ET	MA804ET	Does the mathematics curriculum prescribe other? Please specify:
QCM8-04T	MA804T	What does the mathematics curriculum prescribe? Comments:
QCM8-05	MA805	Is there a process for approving the textbooks used for mathematics instruction?
QCM8-05T	MA805T	If there is a process for approving the textbooks used for mathematics instruction, what is this process?
QCM8-06A	MA806A	Does the national curriculum contain statements/policies about the use of calculators in grade 8 mathematics?
QCM8-06AT	MA806AT	If the national curriculum does contain statements/policies about the use of calculators in grade 8 mathematics, what are the statements/policies?
QCM8-06B	MA806B	Does the national curriculum contain statements/policies about the use of calculators in grade 8 mathematics tests or examinations?
QCM8-06BTA	MA806BTA	If the national curriculum does contain statements/policies about the use of calculators in grade 8 mathematics tests or examinations, what are the statements/policies?
QCM8-06BTB	MA806BTB	Does the national curriculum contain statements/policies about the use of calculators in grade 8 mathematics? Comments:
QCM8-07A	MA807A	Does the national curriculum contain statements/policies about the use of computers in grade 8 mathematics?
QCM8-07TA	MA807TA	If the national curriculum does contain statements/policies about the use of computers in grade 8 mathematics, what are the statements/policies?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQM8-07TB	MA807TB	Does the national curriculum contain statements/policies about the use of computers in grade 8 mathematics? Comments:
CQM8-08A	MA808A	How much emphasis does the national mathematics curriculum place on mastering basic skills/procedures?
CQM8-08B	MA808B	How much emphasis does the national mathematics curriculum place on applying mathematics in real-life contexts?
CQM8-08C	MA808C	How much emphasis does the national mathematics curriculum place on reasoning mathematically?
CQM8-08T	MA808T	How much emphasis does the national mathematics curriculum place on various mathematical skills? Comments:
CQM8-09AA	MA809AA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught computing, estimating, or approximating with whole numbers by the end of grade 8?
CQM8-09AAA	MA809AAA	Across grades from preprimary through upper secondary education, at what grade(s) are computing, estimating, or approximating with whole numbers intended to be taught?
CQM8-09AB	MA809AB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught concepts of fractions and computing with fractions by the end of grade 8?
CQM8-09AAB	MA809AAB	Across grades from preprimary through upper secondary education, at what grade(s) are concepts of fractions and computing with fractions intended to be taught?
CQM8-09AC	MA809AC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught concepts of decimals and computing with decimals by the end of grade 8?
CQM8-09AAC	MA809AAC	Across grades from preprimary through upper secondary education, at what grade(s) are concepts of decimals and computing with decimals intended to be taught?
CQM8-09AD	MA809AD	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught representing, comparing, ordering, and computing with integers by the end of grade 8?
CQM8-09AAD	MA809AAD	Across grades from preprimary through upper secondary education, at what grade(s) are representing, comparing, ordering, and computing with integers intended to be taught?
CQM8-09AE	MA809AE	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught problem solving involving percents and proportions by the end of grade 8?
CQM8-09AAE	MA809AAE	Across grades from preprimary through upper secondary education, at what grade(s) are problem solving involving percents and proportions intended to be taught?
CQM8-09AT	MA809AT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught number skills by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) are number skills intended to be taught? Comments:
CQM8-09BA	MA809BA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns) by the end of grade 8?
CQM8-09BAA	MA809BAA	Across grades from preprimary through upper secondary education, at what grade(s) are numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns) intended to be taught?
CQM8-09BB	MA809BB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught simplifying and evaluating algebraic expressions by the end of grade 8?
CQM8-09BAB	MA809BAB	Across grades from preprimary through upper secondary education, at what grade(s) are simplifying and evaluating algebraic expressions intended to be taught?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
QCM8-09BC	MA809BC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught simple linear equations and inequalities by the end of grade 8?
QCM8-09BAC	MA809BAC	Across grades from preprimary through upper secondary education, at what grade(s) are simple linear equations and inequalities intended to be taught?
QCM8-09BD	MA809BD	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught simultaneous (2 variables) equations by the end of grade 8?
QCM8-09BAD	MA809BAD	Across grades from preprimary through upper secondary education, at what grade(s) are simultaneous (2 variables) equations intended to be taught?
QCM8-09BE	MA809BE	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught representations of functions as ordered pairs, tables, graphs, words, or equations by the end of grade 8?
QCM8-09BAE	MA809BAE	Across grades from preprimary through upper secondary education, at what grade(s) are representations of functions as ordered pairs, tables, graphs, words, or equations intended to be taught?
QCM8-09BT	MA809BT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught algebra by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) is algebra intended to be taught? Comments:
QCM8-09CA	MA809CA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught geometric properties of angles and geometric shapes (triangles, quadrilaterals, and other common polygons) by the end of grade 8?
QCM8-09CAA	MA809CAA	Across grades from preprimary through upper secondary education, at what grade(s) are geometric properties of angles and geometric shapes (triangles, quadrilaterals, and other common polygons) intended to be taught?
QCM8-09CB	MA809CB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught congruent figures or similar triangles by the end of grade 8?
QCM8-09CAB	MA809CAB	Across grades from preprimary through upper secondary education, at what grade(s) are congruent figures or similar triangles intended to be taught?
QCM8-09CC	MA809CC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught three-dimensional shapes and their two-dimensional representations by the end of grade 8?
QCM8-09CAC	MA809CAC	Across grades from preprimary through upper secondary education, at what grade(s) are three-dimensional shapes and their two-dimensional representations intended to be taught?
QCM8-09CD	MA809CD	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught to use appropriate measurement formulas for perimeters, circumferences, areas, surface areas, and volumes by the end of grade 8?
QCM8-09CAD	MA809CAD	Across grades from preprimary through upper secondary education, at what grade(s) are using appropriate measurement formulas for perimeters, circumferences, areas, surface areas, and volumes intended to be taught?
QCM8-09CE	MA809CE	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught points on the Cartesian plane by the end of grade 8?
QCM8-09CAE	MA809CAE	Across grades from preprimary through upper secondary education, at what grade(s) are points on the Cartesian plane intended to be taught?
QCM8-09CF	MA809CF	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught translation, reflection, and rotation by the end of grade 8?
QCM8-09CAF	MA809CAF	Across grades from preprimary through upper secondary education, at what grade(s) are translation, reflection, and rotation intended to be taught?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQM8-09CT	MA809CT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught geometry by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) are geometry intended to be taught? Comments:
CQM8-09DA	MA809DA	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught reading and displaying data using tables, pictographs, bar graphs, pie charts, and line graphs by the end of grade 8?
CQM8-09DAA	MA809DAA	Across grades from preprimary through upper secondary education, at what grade(s) are reading and displaying data using tables, pictographs, bar graphs, pie charts, and line graphs intended to be taught?
CQM8-09DB	MA809DB	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught how to interpret data sets (e.g., draw conclusions, make predictions, and estimate values between and beyond given data points) by the end of grade 8?
CQM8-09DAB	MA809DAB	Across grades from preprimary through upper secondary education, at what grade(s) are interpreting data sets (e.g., draw conclusions, make predictions, and estimate values between and beyond given data points) intended to be taught?
CQM8-09DC	MA809DC	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught judging, predicting, and determining the chances of possible outcomes by the end of grade 8?
CQM8-09DAC	MA809DAC	Across grades from preprimary through upper secondary education, at what grade(s) are judging, predicting, and determining the chances of possible outcomes intended to be taught?
CQM8-09DT	MA809DT	According to the national mathematics curriculum, what proportion of grade 8 students should have been taught data and chance by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) are data and chance intended to be taught? Comments:
CQM8-10A	MA810A	Is the mathematics curriculum made available in the form of official publication containing the curriculum?
CQM8-10B	MA810B	Is the mathematics curriculum made available in the form of ministry notes and directives?
CQM8-10C	MA810C	Is the mathematics curriculum made available in the form of mandated or recommended textbooks?
CQM8-10D	MA810D	Is the mathematics curriculum made available in the form of instructional or pedagogical guide?
CQM8-10E	MA810E	Is the mathematics curriculum made available in the form of specifically developed or recommended instructional activities?
CQM8-10F	MA810F	Is the mathematics curriculum made available in the form of other?
CQM8-10FT	MA810FT	Is the mathematics curriculum made available in the form of other? Please specify:
CQM8-10T	MA810T	In what form is the mathematics curriculum made available? Comments:
CQM8-11	MA811	Does the curriculum prescribe the percentage of total instructional time to be devoted to mathematics instruction at the eighth grade of formal schooling?
CQM8-11T	MA811T	If the curriculum does prescribe the percentage of total instructional time to be devoted to mathematics instruction at the eighth grade of formal schooling, what is the percentage?
CQM8-11AT	MA811AT	Does the curriculum prescribe the percentage of total instructional time to be devoted to mathematics instruction at the eighth grade of formal schooling? Comments:

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
QCM8-12A	MA812A	Is the mathematics curriculum implementation evaluated by visits by inspectors?
QCM8-12B	MA812B	Is the mathematics curriculum implementation evaluated by research programs?
QCM8-12C	MA812C	Is the mathematics curriculum implementation evaluated by school self-evaluation?
QCM8-12D	MA812D	Is the mathematics curriculum implementation evaluated by national or regional assessments?
QCM8-12E	MA812E	Is the mathematics curriculum implementation evaluated by other?
QCM8-12ET	MA812ET	Is the mathematics curriculum implementation evaluated by other? Please specify:
QCM8-12T	MA812T	How is the mathematics curriculum implementation evaluated? Comments:
QCM8-13	MA813	For teachers of students in the eighth grade, does your country experience any difficulties recruiting or retaining teachers of mathematics?
QCM8-13T	MA813T	For teachers of students in the eighth grade, does your country experience any difficulties recruiting or retaining teachers of mathematics? If yes...Comments:
<b>Science</b>		
CQS8-01	SC801	Does your country have a national curriculum that covers science instruction at the eighth grade of formal schooling?
CQS8-01TA	SC801TA	Does your country have a national curriculum that covers science instruction at the eighth grade of formal schooling? If yes...Comments:
CQS8-01TB	SC801TB	If your country does not have a national curriculum that covers science instruction at the eighth grade of formal schooling, 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 current science curriculum introduced for the students assessed in TIMSS 2010/2011?
CQS8-02AT	SC802AT	In what year was the current science curriculum introduced for the students assessed in TIMSS 2010/2011? Comments:
CQS8-02B	SC802B	Is the science curriculum currently being revised for the students assessed in TIMSS 2010/2011?
CQS8-02BTA	SC802BTA	Is the science curriculum currently being revised for the students assessed in TIMSS 2010/2011? If yes...Please explain:
CQS8-02BTB	SC802BTB	Is the science curriculum currently being revised for the students assessed in TIMSS 2010/2011? If no...Comments:
CQS8-03	SC803	For the middle/lower secondary school science curriculum, what is the grade structure?
CQS8-04A	SC804A	Does the science curriculum prescribe goals and objectives?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS8-04B	SC804B	Does the science curriculum prescribe instructional processes or methods?
CQS8-04C	SC804C	Does the science curriculum prescribe materials (e.g., textbooks or instructional materials)?
CQS8-04D	SC804D	Does the science curriculum prescribe assessment methods/activities?
CQS8-04E	SC804E	Does the science curriculum prescribe other?
CQS8-04ET	SC804ET	Does the science curriculum prescribe other? Please specify:
CQS8-04T	SC804T	What does the science curriculum prescribe? Comments:
CQS8-05	SC805	Is there a process for approving the textbooks used for science instruction?
CQS8-05T	SC805T	If there is a process for approving the textbooks used for science instruction, what is this process?
CQS8-06	SC806	Does the national curriculum contain statements/policies about the use of computers in grade 8 science?
CQS8-06TA	SC806TA	If the national curriculum does contain statements/policies about the use of computers in grade 8 science, what are the statements/policies?
CQS8-06TB	SC806-TB	Does the national curriculum contain statements/policies about the use of computers in grade 8 science? Comments:
CQS8-07A	SC807A	How much emphasis does the national science curriculum place on knowing basic science facts and principles?
CQS8-07B	SC807B	How much emphasis does the national science curriculum place on applying science in real-life contexts?
CQS8-07C	SC807C	How much emphasis does the national science curriculum place on providing explanations or justifications about what is being studied?
CQS8-07D	SC807D	How much emphasis does the national science curriculum place on designing and planning experiments or investigations?
CQS8-07E	SC807E	How much emphasis does the national science curriculum place on conducting experiments or investigations?
CQS8-07T	SC807T	How much emphasis does the national science curriculum place on science instruction?
CQS8-08AA	SC808AA	According to the national science curriculum, what proportion of grade 8 students should have been taught major organs and organ systems in humans and other organisms (structure/function, life processes that maintain stable bodily conditions) by the end of grade 8?
CQS8-08AAA	SC808AAA	Across grades from preprimary through upper secondary education, at what grade(s) are major organs and organ systems in humans and other organisms (structure/function, life processes that maintain stable bodily conditions) primarily intended to be taught?
CQS8-08AB	SC808AB	According to the national science curriculum, what proportion of grade 8 students should have been taught cells and their functions, including respiration and photosynthesis, by the end of grade 8?



**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS8-08AAB	SC808AAB	Across grades from preprimary through upper secondary education, at what grade(s) are cells and their functions, including respiration and photosynthesis, primarily intended to be taught?
CQS8-08AC	SC808AC	According to the national science curriculum, what proportion of grade 8 students should have been taught reproduction (sexual and asexual) and heredity (passing on of traits, inherited versus acquired/learned characteristics) by the end of grade 8?
CQS8-08AAC	SC808AAC	Across grades from preprimary through upper secondary education, at what grade(s) are reproduction (sexual and asexual) and heredity (passing on of traits, inherited versus acquired/learned characteristics) primarily intended to be taught?
CQS8-08AD	SC808AD	According to the national science curriculum, what proportion of grade 8 students should have been taught the role of variation and adaptation in survival/extinction of species in a changing environment by the end of grade 8?
CQS8-08AAD	SC808AAD	Across grades from preprimary through upper secondary education, at what grade(s) are the role of variation and adaptation in survival/extinction of species in a changing environment primarily intended to be taught?
CQS8-08AE	SC808AE	According to the national science curriculum, what proportion of grade 8 students should have been taught interdependence of populations of organisms in an ecosystem (e.g., energy flow, food webs, competition, predation) and the impact of changes in the physical environment on populations (e.g., climate, water supply) by the end of grade 8?
CQS808AAE	SC808AAE	Across grades from preprimary through upper secondary education, at what grade(s) are interdependence of populations of organisms in an ecosystem (e.g., energy flow, food webs, competition, predation) and the impact of changes in the physical environment on populations (e.g., climate, water supply) primarily intended to be taught?
CQS8-08AF	SC808AF	According to the national science curriculum, what proportion of grade 8 students should have been taught reasons for increases in the world's human population (e.g., advances in medicine, sanitation) and the effects of population growth on the environment by the end of grade 8?
CQS8-08AAF	SC808AAF	Across grades from preprimary through upper secondary education, at what grade(s) are reasons for increases in the world's human population (e.g., advances in medicine, sanitation) and the effects of population growth on the environment are primarily intended to be taught?
CQS8-08AG	SC808AG	According to the national science curriculum, what proportion of grade 8 students should have been taught human health (causes of infectious diseases, methods of infection, prevention, immunity) and the importance of diet and exercise in maintaining health by the end of grade 8?
CQS8-08AAG	SC808AAG	Across grades from preprimary through upper secondary education, at what grade(s) are human health (causes of infectious diseases, methods of infection, prevention, immunity) and the importance of diet and exercise in maintaining health primarily intended to be taught?
CQS8-08AT	SC808AT	According to the national science curriculum, what proportion of grade 8 students should have been taught biology by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) are biology primarily intended to be taught? Comments:
CQS8-08BA	SC808BA	According to the national science curriculum, what proportion of grade 8 students should have been taught classification, composition, and particulate structure of matter (elements, compounds, mixtures, molecules, atoms, protons, neutrons, electrons) by the end of grade 8?
CQS8-08BAA	SC808BAA	Across grades from preprimary through upper secondary education, at what grade(s) are classification, composition, and particulate structure of matter (elements, compounds, mixtures, molecules, atoms, protons, neutrons, electrons) primarily intended to be taught?
CQS8-08BB	SC808BB	According to the national science curriculum, what proportion of grade 8 students should have been taught solutions (solvent, solute, concentration/dilution, effect of temperature on solubility) by the end of grade 8?
CQS8-08BAB	SC808BAB	Across grades from preprimary through upper secondary education, at what grade(s) are solutions (solvent, solute, concentration/dilution, effect of temperature on solubility) primarily intended to be taught?
CQS8-08BC	SC808BC	According to the national science curriculum, what proportion of grade 8 students should have been taught properties and common uses of acids and bases by the end of grade 8?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS8-08BAC	SC808BAC	Across grades from preprimary through upper secondary education, at what grade(s) are properties and common uses of acids and bases primarily intended to be taught?
CQS8-08BD	SC808BD	According to the national science curriculum, what proportion of grade 8 students should have been taught chemical change (transformation of reactants, evidence of chemical change, conservation of matter, common oxidation reactions, combustion, rusting, tarnishing) by the end of grade 8?
CQS8-08BAD	SC808BAD	Across grades from preprimary through upper secondary education, at what grade(s) are chemical change (transformation of reactants, evidence of chemical change, conservation of matter, common oxidation reactions, combustion, rusting, tarnishing) primarily intended to be taught?
CQS8-08BT	SC808BT	According to the national science curriculum, what proportion of grade 8 students should have been taught chemistry by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) are chemistry primarily intended to be taught? Comments:
CQS8-08CA	SC808CA	According to the national science curriculum, what proportion of grade 8 students should have been taught physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, thermal expansion, and changes in volume and/or pressure) by the end of grade 8?
CQS8-08CAA	SC808CAA	Across grades from preprimary through upper secondary education, at what grade(s) are physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, thermal expansion, and changes in volume and/or pressure) primarily intended to be taught?
CQS8-08CB	SC808CB	According to the national science curriculum, what proportion of grade 8 students should have been taught energy forms, transformations, heat, and temperature by the end of grade 8?
CQS8-08CAB	SC808CAB	Across grades from preprimary through upper secondary education, at what grade(s) are energy forms, transformations, heat, and temperature primarily intended to be taught?
CQS8-08CC	SC808CC	According to the national science curriculum, what proportion of grade 8 students should have been taught basic properties/behaviors of light (reflection, refraction, light and color, simple ray diagrams) and sound (transmission through media, loudness, pitch, amplitude, frequency, relative speed of light and sound) by the end of grade 8?
CQS8-08CAC	SC808CAC	Across grades from preprimary through upper secondary education, at what grade(s) are basic properties/behaviors of light (reflection, refraction, light and color, simple ray diagrams) and sound (transmission through media, loudness, pitch, amplitude, frequency, relative speed of light and sound) primarily intended to be taught?
CQS8-08CD	SC808CD	According to the national science curriculum, what proportion of grade 8 students should have been taught electric circuits (flow of current; types of circuits -parallel/series; current/voltage relationship) and properties and uses of permanent magnets and electromagnets by the end of grade 8?
CQS8-08CAD	SC808CAD	Across grades from preprimary through upper secondary education, at what grade(s) are electric circuits (flow of current; types of circuits - parallel/series; current/voltage relationship) and properties and uses of permanent magnets and electromagnets primarily intended to be taught?
CQS8-08CE	SC808CE	According to the national science curriculum, what proportion of grade 8 students should have been taught forces and motion (types of forces, basic description of motion, effects of density and pressure) by the end of grade 8?
CQS8-08CAE	SC808CAE	Across grades from preprimary through upper secondary education, at what grade(s) are forces and motion (types of forces, basic description of motion, effects of density and pressure) primarily intended to be taught?
CQS8-08CT	SC808CT	According to the national science curriculum, what proportion of grade 8 students should have been taught physics by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) are physics primarily intended to be taught? Comments:
CQS8-08DA	SC808DA	According to the national science curriculum, what proportion of grade 8 students should have been taught Earth's structure and physical features (Earth's crust, mantle and core; composition and relative distribution of water, and composition of air) by the end of grade 8?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS8-08DAA	SC808DAA	Across grades from preprimary through upper secondary education, at what grade(s) are Earth's structure and physical features (Earth's crust, mantle and core; composition and relative distribution of water, and composition of air) primarily intended to be taught?
CQS8-08DB	SC808DB	According to the national science curriculum, what proportion of grade 8 students should have been taught Earth's processes, cycles, and history (rock cycle; water cycle; weather patterns; major geological events; formation of fossils and fossil fuels) by the end of grade 8?
CQS8-08DAB	SC808DAB	Across grades from preprimary through upper secondary education, at what grade(s) are Earth's processes, cycles and history (rock cycle; water cycle; weather patterns; major geological events; formation of fossils and fossil fuels) primarily intended to be taught?
CQS8-08DC	SC808DC	According to the national science curriculum, what proportion of grade 8 students should have been taught Earth's resources, and their use and conservation (e.g., renewable/nonrenewable resources, human use of land/soil, water resources), by the end of grade 8?
CQS8-08DAC	SC808DAC	Across grades from preprimary through upper secondary education, at what grade(s) are Earth's resources and their use and conservation (e.g., renewable/nonrenewable resources, human use of land/soil, water resources) primarily intended to be taught?
CQS8-08DD	SC808DD	According to the national science curriculum, what proportion of grade 8 students should have been taught Earth in the solar system and universe and phenomena on Earth (day/night, tides, phases of the moon, eclipses, seasons; physical features of Earth compared to other bodies; the Sun as a star) by the end of grade 8?
CQS8-08DAD	SC808DAD	Across grades from preprimary through upper secondary education, at what grade(s) are Earth in the solar system and universe and phenomena on Earth (day/night, tides, phases of moon, eclipses, seasons; physical features of Earth compared to other bodies; the Sun as a star) primarily intended to be taught?
CQS8-08DT	SC808DT	According to the national science curriculum, what proportion of grade 8 students should have been taught Earth science by the end of grade 8; Across grades from preprimary through upper secondary education, at what grade(s) is Earth science primarily intended to be taught? Comments:
CQS8-09A	SC809A	Is the science curriculum made available in the form of official publication containing the curriculum?
CQS8-09B	SC809B	Is the science curriculum made available in the form of ministry notes and directives?
CQS8-09C	SC809C	Is the science curriculum made available in the form of mandated or recommended textbooks?
CQS8-09D	SC809D	Is the science curriculum made available in the form of instructional or pedagogical guide?
CQS8-09E	SC809E	Is the science curriculum made available in the form of specifically developed or recommended instructional activities?
CQS8-09F	SC809F	Is the science curriculum made available in the form of other?
CQS8-09FT	SC809FT	Is the science curriculum made available in the form of other? Please specify:
CQS8-09T	SC809T	In what form is the science curriculum made available? Comments:
CQS8-10	SC810	Does the curriculum prescribe the percentage of total instructional time to be devoted to science instruction at the eighth grade of formal schooling?
CQS8-10T	SC810T	If the curriculum does prescribe the percentage of total instructional time to be devoted to science instruction at the eighth grade of formal schooling, what is the percentage?

**Exhibit S1.10: Index of International Variables for the TIMSS 2011 Curriculum Questionnaire - Eighth Grade (Continued)**

TIMSS 2011 Question Number	TIMSS 2011 Variable Name	TIMSS 2011 Variable Description (See Questionnaire For Full Item Text)
CQS8-10AT	SC810AT	Does the curriculum prescribe the percentage of total instructional time to be devoted to science instruction at the eighth grade of formal schooling? Comments:
CQS8-11A	SC811A	Is the science curriculum implementation evaluated by visits by inspectors?
CQS8-11B	SC811B	Is the science curriculum implementation evaluated by research programs?
CQS8-11C	SC811C	Is the science curriculum implementation evaluated by school self-evaluation?
CQS8-11D	SC811D	Is the science curriculum implementation evaluated by national or regional assessments?
CQS8-11E	SC811E	Is the science curriculum implementation evaluated by other?
CQS8-11ET	SC811ET	Is the science curriculum implementation evaluated by other? Please specify:
CQS8-11T	SC811T	How is the science curriculum implementation evaluated? Comments:
CQS8-12	SC812	For teachers of students in the eighth grade, does your country experience any difficulties recruiting or retaining teachers of science(s)?
CQS8-12T	SC812T	For teachers of students in the eighth grade, does your country experience any difficulties recruiting or retaining teachers of science(s)? If yes...Comments:

# TIMSS 2011 Curriculum Questionnaire

TIMSS & PIRLS 2011 Curriculum Questionnaire

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## GENERAL MODULE

*To be completed by all countries participating  
in TIMSS and/or PIRLS*

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN01

1. What is your country's name for the grade(s) tested in TIMSS and/or PIRLS 2011, in English (e.g., grade 4, grade 8)?

GEN02

2. 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 6<sup>th</sup> birthday"; "Children must be 6 years old by the end of June to begin school the following September".*

GEN02A

- A. 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".*

GEN02B

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

*Check **one** circle only.*

Yes---

No---

GEN02C

*If Yes....*

C. How did the policy change, and when was the change made?



TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

Questions 3-5 ask about the years of schooling provided in your country, beginning with preprimary education.

3. Is preprimary education (ISCED Level 0) mandatory for children in your country?

Check **one** circle only.

Yes---

No---

If Yes....

GEN03

A. How many years are students required to attend preprimary education?

1 year-----

2 years-----

3 years-----

More than 3 years----

If No....

GEN03A

B. What types of preprimary education are available, but not mandatory?

Check **one** circle for each line.

GEN03BA

GEN03BB

GEN03BC

GEN03BT

a) Public preprimary education -----

b) Licensed early childhood education providers-----

c) Other-----

Please specify:

Yes No

GEN03T

Any other comments about preprimary education:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN04

4. What are the ages and/or grades of compulsory education in your country?

*Example: "Ages 6-16; Grades 1-9".*

GEN05

5. 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

6. Does your country have a national curriculum for preprimary education (ISCED Level 0)?

*Check **one** circle only.*

Yes---

No---

GEN06A

*If Yes....*

- A. Are language, reading, and writing skills part of the preprimary curriculum?

*Check **one** circle only.*

Yes---

No---

GEN06AT

Please describe:

GEN06B

- B. Is mathematics (e.g., counting, learning shapes) part of the preprimary curriculum?

*Check **one** circle only.*

Yes---

No---

GEN06BT

Please describe:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN06C

C. Is science (e.g., nature study, weather) part of the preprimary curriculum?

Check **one** circle only.

Yes---

No---

GEN06CT

Please describe:

GEN07

7. 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---

GEN07T

Please describe:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN08

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

Check **one** circle only.

Yes---

No---

GEN08T

Please describe:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

GEN09

9. 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".*

- A. 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                    |
|----------|--|-----------------------|-----------------------|
| GEN09AA  | a) Supervised practicum during the teacher education program-----<br><i>If Yes...</i><br>How long is this period? _____                          | <input type="radio"/> | <input type="radio"/> |
| GEN09AAT |  |                       |                       |
| GEN09AB  | b) Passing a qualifying examination (e.g., licensing, certification)-----  | <input type="radio"/> | <input type="radio"/> |
| GEN09AC  | c) Completion of a probationary teaching period-----<br><i>If Yes...</i><br>How long is this period? _____                                       | <input type="radio"/> | <input type="radio"/> |
| GEN09ACT |  |                       |                       |
| GEN09AD  | d) Completion of a mentoring or induction program (e.g., experienced teachers work with novice teachers to provide instructional guidance) ----- | <input type="radio"/> | <input type="radio"/> |
| GEN09AE  | e) Other-----<br>Please specify:   | <input type="radio"/> | <input type="radio"/> |
| GEN09AET | _____  |                       |                       |

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

GEN09B

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

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.*

GEN09CA

a) Supervised practicum during the teacher education program-----

Yes No

GEN09CAT

*If Yes...*

How long is this period? \_\_\_\_\_

GEN09CB

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

GEN09CC

c) Completion of a probationary teaching period-----

GEN09CCT

*If Yes...*

How long is this period? \_\_\_\_\_

GEN09CD

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

GEN09CE

e) Other-----  
Please specify:

GEN09CET

\_\_\_\_\_

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

10. A. Does an educational authority in your country (e.g., National Ministry of Education) administer examinations in the following subjects 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 for each line.

- |         |                     | Yes                   | No                    |
|---------|---------------------|-----------------------|-----------------------|
| GEN10AA | a) Language(s)----- | <input type="radio"/> | <input type="radio"/> |
| GEN10AB | b) Mathematics----- | <input type="radio"/> | <input type="radio"/> |
| GEN10AC | c) Science-----     | <input type="radio"/> | <input type="radio"/> |

- GEN10B B. Please describe the grades at which the exams are given 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."*

- GEN10C C. Does your country have a national or regional policy to make accommodations for students with special needs taking national or regional tests?

*Examples: "Providing materials in Braille for visually impaired students";  
"Providing instructions in sign language for hearing impaired students".*

Check **one** circle only.

- Yes---   
No---

- GEN10CT *If Yes...*  
What is the policy?



TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN10D

D. If there are not exams, is there a similar process that has consequences for individual students?

*Example: "Teacher recommendations"*

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN11

11. Is there a national/regional policy to encourage parental involvement in the schools attended by **fourth-grade** students?

*Example: "Parents must be included in school governing bodies".*

Check **one** circle only.

Yes---

No---

GEN11TA

*If Yes...*

What is the policy?

GEN11TB

*If No...*

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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GEN12

12. Is there a national/regional policy to encourage parental involvement in the schools attended by **eighth-grade** students?

*Check one circle only.*

- Yes, same as fourth grade---
- Yes, but different than fourth grade---
- No---

GEN12T

*If different from fourth grade...*  
What is the policy?

TIMSS & PIRLS 2011 Curriculum Questionnaire

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# MATHEMATICS MODULE GRADE 8 (TIMSS Grade 8 Module, Part 1)

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

## TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

MA801

1. 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?

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

Question 2 pertains to the mathematics curriculum that was in effect for the students assessed in TIMSS 2010/2011.

MA802A

2. A. In what year was the current mathematics curriculum introduced?

*Refers to the national 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.*

MA802AT

Comments:

MA802B

B. Is the mathematics curriculum currently being revised?

*Check **one** circle only.*

Yes--- No--- 

MA802BTA

*If Yes...*  
Please explain:

MA802BTB

*If No...*  
Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

MA803

3. For the middle/lower secondary school mathematics curriculum, what is the grade structure?

*Refers to the national 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.*

*Examples: "Grades 1-8"; "Grades 4-8"; "Grades 6-8"; Grades 7-9"*

4. What does the mathematics curriculum prescribe?

*Refers to the national 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.*

*Check one circle for each line.*

MA804A

MA804B

MA804C

MA804D

MA804E

MA804ET

MA804T

	Yes	No
a) Goals and objectives-----	<input type="radio"/>	<input type="radio"/>
b) Instructional processes or methods-----	<input type="radio"/>	<input type="radio"/>
c) Materials (e.g., textbooks, or instructional materials)-----	<input type="radio"/>	<input type="radio"/>
d) Assessment methods/activities-----	<input type="radio"/>	<input type="radio"/>
e) Other-----	<input type="radio"/>	<input type="radio"/>
Please specify: _____		

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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MA805

5. Is there a process for approving the textbooks used for mathematics instruction?

*Check one circle only.*

Yes---

No---

MA805T

*If Yes...*

Please describe the process:



TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

MA806A

6. A. Does the national curriculum contain statements/policies about the use of calculators in grade 8 mathematics?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

*If Yes...*

MA806AT

What are the statements/policies?

MA806B

- B. Does the national curriculum contain statements/policies about the use of calculators in grade 8 mathematics tests or examinations?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

*If Yes...*

MA806BTA

What are the statements/policies?

MA806BTB

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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MA807

7. Does the national curriculum contain statements/policies about the use of computers in grade 8 mathematics?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

MA807TA

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

MA807TB

Comments:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

8. How much emphasis does the national mathematics curriculum place on the following?

*Refers to the national 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.*

Check **one** circle for each line.

	None	Very Little	Some	A lot
MA808A	a) Mastering basic skills and procedures-----			
MA808B	b) Applying mathematics in real-life contexts-----			
MA808C	c) Reasoning mathematically-----			

MA808T

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

9. (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.*




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., estimation in part A topic (a)), please explain in the comment field.*

*Refers to the national 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.*

	Proportion of grade 8 students expected to be taught topic			Grade(s) topic is expected to be taught																																					
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	preprimary (PP) through the end of upper secondary (G12)																																					
<i>Check one circle for each line.</i>																																									
<b>A. Number</b>																																									
MA809AA	a) Computing, estimating, or approximating with whole numbers-----			<table border="1"> <tr> <td>PP</td><td>G1</td><td>G2</td><td>G3</td><td>G4</td><td>G5</td><td>G6</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> <tr> <td>G7</td><td>G8</td><td>G9</td><td>G10</td><td>G11</td><td>G12</td> <td colspan="2"></td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> <td colspan="2"></td> </tr> </table>							PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			MA809AAA
PP	G1	G2	G3	G4	G5	G6																																			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																			
G7	G8	G9	G10	G11	G12																																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																				
MA809AB	b) Concepts of fractions and computing with fractions-----			<table border="1"> <tr> <td>PP</td><td>G1</td><td>G2</td><td>G3</td><td>G4</td><td>G5</td><td>G6</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> <tr> <td>G7</td><td>G8</td><td>G9</td><td>G10</td><td>G11</td><td>G12</td> <td colspan="2"></td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> <td colspan="2"></td> </tr> </table>							PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			MA809AAB
PP	G1	G2	G3	G4	G5	G6																																			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																			
G7	G8	G9	G10	G11	G12																																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																				

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MA809AC	c) Concepts of decimals and computing with decimals----- 	<table border="1"> <tr> <td>PP</td><td>G1</td><td>G2</td><td>G3</td><td>G4</td><td>G5</td><td>G6</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> <tr> <td>G7</td><td>G8</td><td>G9</td><td>G10</td><td>G11</td><td>G12</td><td></td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td> </tr> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA809AAC
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA809AD	d) Representing, comparing, ordering, and computing with integers----- 	<table border="1"> <tr> <td>PP</td><td>G1</td><td>G2</td><td>G3</td><td>G4</td><td>G5</td><td>G6</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> <tr> <td>G7</td><td>G8</td><td>G9</td><td>G10</td><td>G11</td><td>G12</td><td></td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td> </tr> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA809AAD
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
MA809AE	e) Problem solving involving percents and proportions--- 	<table border="1"> <tr> <td>PP</td><td>G1</td><td>G2</td><td>G3</td><td>G4</td><td>G5</td><td>G6</td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td> </tr> <tr> <td>G7</td><td>G8</td><td>G9</td><td>G10</td><td>G11</td><td>G12</td><td></td> </tr> <tr> <td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td></td> </tr> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		MA809AAE
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										

MA809AT

Comments:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

		(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)												
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8										
		Check <i>one</i> circle for each line.												
<b>B. Algebra</b>														
MA809BA	a) Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns)- -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809BAA	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809BB	b) Simplifying and evaluating algebraic expressions-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809BAB	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809BC	c) Simple linear equations and inequalities-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809BAC	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809BD	d) Simultaneous (two variables) equations-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809BAD	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809BE	e) Representation of functions as ordered pairs, tables, graphs, words, or equations-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809BAE	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

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MA809BT

Comments:

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		(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught									
		Check <i>one</i> circle for each line.			preprimary (PP) through the end of upper secondary (G12)									
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8										
<b>C. Geometry</b>														
MA809CA	a) Geometric properties of angles and geometric shapes (triangles, quadrilaterals, and other common polygons)-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809CAA	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809CB	b) Congruent figures and similar triangles-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809CAB	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809CC	c) Relationship between three-dimensional shapes and their two-dimensional representations----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809CAC	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809CD	d) Using appropriate measurement formulas for perimeters, circumferences, areas, surface areas, and volumes-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809CAD	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
MA809CE	e) Points on the Cartesian plane--	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809CAE	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			



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MA809CF

f) Translation,  
reflection, and  
rotation-----

—————  —————

PP	G1	G2	G3	G4	G5	G6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G7	G8	G9	G10	G11	G12	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

MA809CAF

MA809CT

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

		(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught									
		Check <i>one</i> circle for each line.			preprimary (PP) through the end of upper secondary (G12)									
		All or almost all students	Only the more able students	Not included in the curriculum through grade 8										
<b>D. Data and Chance</b>														
MA809DA	a) Reading and displaying data using tables, pictographs, bar graphs, pie charts and line graphs---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809DAA	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
MA809DB	b) Interpreting data sets (e.g., draw conclusions, make predictions, and estimate values between and beyond given data points) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809DAB	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
MA809DC	c) Judging, predicting, and determining the chances of possible outcomes-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6		MA809DAC	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
					G7	G8	G9	G10	G11	G12				
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
MA809DT	Comments:													

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

10. In what form is the mathematics curriculum made available?

*Refers to the national 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.*

Check **one** circle for each line.

		Yes	No
MA810A	a) Official publication containing the curriculum-----	<input type="radio"/>	<input type="radio"/>
MA810B	b) Ministry notes and directives-----	<input type="radio"/>	<input type="radio"/>
MA810C	c) Mandated or recommended textbooks-----	<input type="radio"/>	<input type="radio"/>
MA810D	d) Instructional or pedagogical guide-----	<input type="radio"/>	<input type="radio"/>
MA810E	e) Specifically developed or recommended instructional activities----	<input type="radio"/>	<input type="radio"/>
MA810F	f) Other-----	<input type="radio"/>	<input type="radio"/>
MA10FT	Please specify: _____		
MA810T	Comments:		

TIMSS & PIRLS 2011 Curriculum Questionnaire

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MA811

11. Does the curriculum prescribe the percentage of **total** instructional time to be devoted to **mathematics** instruction at the eighth grade of formal schooling?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

MA811T

*If Yes,...*  
Please specify the percentage:

MA811AT

Comments:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

12. How is the mathematics curriculum implementation evaluated?

*Refers to the national 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.*

Check **one** circle for each line.

	Yes	No
MA812A	a) Visits by inspectors----- <input type="radio"/> <input type="radio"/>	
MA812B	b) Research programs----- <input type="radio"/> <input type="radio"/>	
MA812C	c) School self-evaluation----- <input type="radio"/> <input type="radio"/>	
MA812D	d) National or regional assessments----- <input type="radio"/> <input type="radio"/>	
MA812E	e) Other----- <input type="radio"/> <input type="radio"/>	
MA812ET	Please specify: _____ _____	

MA812T

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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MA813

13. For teachers of students in the **eighth grade**, does your country experience any difficulties recruiting or retaining teachers of mathematics?

*Check one circle only.*

Yes---

No---

MA813T

*If Yes...*  
Comments:

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# SCIENCE MODULE GRADE 8 (TIMSS Grade 8 Module, Part 2)

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

TIMSS & PIRLS 2011 Curriculum Questionnaire

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SC801

1. 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:

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?



TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

Question 2 pertains to the science curriculum that was in effect for the students assessed in TIMSS 2010/2011.

SC802A

2. A. In what year was the current science curriculum introduced?

*Refers to the national 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.*

SC802AT

Comments:

SC802B

B. Is the science curriculum currently being revised?

*Check **one** circle only.*

Yes---

No---

SC802BTA

*If Yes...*  
Please explain:

SC802BTB

*If No...*  
Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

SC803

3. For the middle/lower secondary school science curriculum, what is the grade structure?

*Refers to the national 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.*

*Examples: "Grades 1-8"; "Grades 4-8"; "Grades 6-8"; "Grades 7-9"*

4. What does the science curriculum prescribe?

*Refers to the national 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.*

*Check **one** circle for each line.*

SC804A

SC804B

SC804C

SC804D

SC804E

SC804ET

**Yes No**

a) Goals and objectives-----

b) Instructional processes or methods-----

c) Materials (e.g., textbooks, or instructional materials)-----

d) Assessment methods/activities-----

e) Other-----

Please specify:  
\_\_\_\_\_

SC804T

Comments:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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SC805

5. Is there a process for approving the textbooks used for science instruction?

Check **one** circle only.

Yes---

No---

SC805T

*If Yes ...*

Please describe the process:

TIMSS & PIRLS 2011 Curriculum Questionnaire

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SC806

6. Does the national curriculum contain statements/policies about the use of computers in grade 8 science?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

SC806TA

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

SC806TB

Comments:

TIMSS &amp; PIRLS 2011 Curriculum Questionnaire

7. How much emphasis does the national science curriculum place on the following?

*Refers to the national 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.*

Check **one** circle for each line.

		None	Very Little	Some	A lot
SC807A	a) Knowing basic science facts and principles-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC807B	b) Applying science in real-life contexts-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC807C	c) Providing explanations or justifications about what is being studied-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC807D	d) Designing and planning experiments or investigations-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC807E	e) Conducting experiments or investigations-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SC807T	Comments:				

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8. 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.*

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., heredity in part A topic (c)), please explain in the comment field.*





*Refers to the national 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.*

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught							
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	preprimary (PP) through the end of upper secondary (G12)							
<b>A. Biology</b>											
a) Major organs and organ systems in humans and other organisms (structure/function, life processes that maintain stable bodily conditions)-----				PP	G1	G2	G3	G4	G5	G6	
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				G7	G8	G9	G10	G11	G12		
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SC808AA

SC808AAA

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SC808AB	<p>b) Cells and their functions, including respiration and photosynthesis as cellular processes-</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC808AAB
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
SC808AC	<p>c) Reproduction (sexual and asexual) and heredity (passing on of traits, inherited versus acquired/learned characteristics) ---</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC808AAC
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
SC808AD	<p>d) Role of variation and adaptation in survival/extinction of species in a changing environment----</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC808AAD
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										
SC808AE	<p>e) Interdependence of populations of organisms in an ecosystem (e.g., energy flow, food webs, competition, predation) and the impact of changes in the physical environment on populations (e.g., climate, water supply) -----</p> 	<table border="1"> <tbody> <tr> <td>PP</td> <td>G1</td> <td>G2</td> <td>G3</td> <td>G4</td> <td>G5</td> <td>G6</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>G7</td> <td>G8</td> <td>G9</td> <td>G10</td> <td>G11</td> <td>G12</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>	PP	G1	G2	G3	G4	G5	G6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	G7	G8	G9	G10	G11	G12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		SC808AAE
PP	G1	G2	G3	G4	G5	G6																									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																									
G7	G8	G9	G10	G11	G12																										
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																										

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SC808AF

f) Reasons for increase in world's human population (e.g., advances in medicine, sanitation), and the effects of population growth on the environment-----

\_\_\_\_\_  \_\_\_\_\_

PP	G1	G2	G3	G4	G5	G6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SC808AAF

G7	G8	G9	G10	G11	G12
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SC808AG

g) Human health (causes of infectious diseases, methods of infection, prevention, immunity) and the importance of diet and exercise in maintaining health-----

\_\_\_\_\_  \_\_\_\_\_

PP	G1	G2	G3	G4	G5	G6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SC808AAG

G7	G8	G9	G10	G11	G12
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SC808AT

Comments:



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	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught													
	<i>Check one circle for each line.</i>			preprimary (PP) through the end of upper secondary (G12)													
	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>B. Chemistry</b>																	
SC808BA	a) Classification, composition, and particulate structure of matter (elements, compounds, mixtures, molecules, atoms, protons, neutrons, electrons)-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SC808BAA
SC808BB	b) Solutions (solvent, solute, concentration/dilution, effect of temperature on solubility) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SC808BAB
SC808BC	c) Properties and uses of common acids and bases---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SC808BAC

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SC808BD

d) Chemical change (transformation of reactants, evidence of chemical change, conservation of matter, common oxidation reactions- combustion, rusting, tarnishing) -----				PP	G1	G2	G3	G4	G5	G6
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	G7	G8	G9	G10	G11	G12				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

SC808BAD

SC808BT

Comments:

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	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught										
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	preprimary (PP) through upper secondary										
<i>Check one circle for each line.</i>														
SC808CA	<b>C. Physics</b>													
	a) Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, thermal expansion, and changes in volume and/or pressure)-----						PP	G1	G2	G3	G4	G5	G6	SC808CAA
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
							G7	G8	G9	G10	G11	G12		
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SC808CB	b) Energy forms, transformations, heat, and temperature-----						PP	G1	G2	G3	G4	G5	G6	SC808CAB
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
							G7	G8	G9	G10	G11	G12		
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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SC808CC

c) Basic properties/behaviors of light (reflection, refraction, light and color, simple ray diagrams) and sound (transmission through media, loudness, pitch, amplitude, frequency, relative speed of light and sound)	PP <input type="checkbox"/>	G1 <input type="checkbox"/>	G2 <input type="checkbox"/>	G3 <input type="checkbox"/>	G4 <input type="checkbox"/>	G5 <input type="checkbox"/>	G6 <input type="checkbox"/>
	G7 <input type="checkbox"/>	G8 <input type="checkbox"/>	G9 <input type="checkbox"/>	G10 <input type="checkbox"/>	G11 <input type="checkbox"/>	G12 <input type="checkbox"/>	

SC808CAC

SC808CD

d) Electric circuits (flow of current; types of circuits - parallel/series; current/voltage relationship) and properties and uses of permanent magnets and electromagnets--	PP <input type="checkbox"/>	G1 <input type="checkbox"/>	G2 <input type="checkbox"/>	G3 <input type="checkbox"/>	G4 <input type="checkbox"/>	G5 <input type="checkbox"/>	G6 <input type="checkbox"/>
	G7 <input type="checkbox"/>	G8 <input type="checkbox"/>	G9 <input type="checkbox"/>	G10 <input type="checkbox"/>	G11 <input type="checkbox"/>	G12 <input type="checkbox"/>	

SC808CAD

SC808CE

e) Forces and motion (types of forces, basic description of motion, effects of density and pressure) -----	PP <input type="checkbox"/>	G1 <input type="checkbox"/>	G2 <input type="checkbox"/>	G3 <input type="checkbox"/>	G4 <input type="checkbox"/>	G5 <input type="checkbox"/>	G6 <input type="checkbox"/>
	G7 <input type="checkbox"/>	G8 <input type="checkbox"/>	G9 <input type="checkbox"/>	G10 <input type="checkbox"/>	G11 <input type="checkbox"/>	G12 <input type="checkbox"/>	

SC808CAE

SC808CT

Comments:

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	Proportion of grade 8 students expected to be taught topic			Grade(s) topic is expected to be taught								
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	preprimary (PP) through the end of upper secondary (G12)								
	Check <i>one</i> circle for each line.											
<b>D. Earth Science</b>												
SC808DA	a) Earth's structure and physical features (Earth's crust, mantle and core; composition and relative distribution of water, and composition of air)-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC808DAA
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SC808DB	b) Earth's processes, cycles and history (rock cycle; water cycle; weather patterns; major geological events; formation of fossils and fossil fuels)-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC808DAB
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SC808DC	c) Earth's resources, their use and conservation (e.g., renewable/nonrenewable resources, human use of land/soil, water resources)-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	PP	G1	G2	G3	G4	G5	G6	SC808DAC
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					G7	G8	G9	G10	G11	G12		
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

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SC808DD

d) Earth in the solar system and the universe (phenomena on Earth - day/night, tides, phases of moon, eclipses, seasons; physical features of Earth compared to other bodies; the Sun as a star) -----						
	PP <input type="checkbox"/>	G1 <input type="checkbox"/>	G2 <input type="checkbox"/>	G3 <input type="checkbox"/>	G4 <input type="checkbox"/>	G5 <input type="checkbox"/>
	G7 <input type="checkbox"/>	G8 <input type="checkbox"/>	G9 <input type="checkbox"/>	G10 <input type="checkbox"/>	G11 <input type="checkbox"/>	G12 <input type="checkbox"/>

SC808DAD

SC808DT

Comments:

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9. In what form is the science curriculum made available?

*Refers to the national 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.*

Check **one** circle for each line.

		Yes	No
SC809A	a) Official publication containing the curriculum-----	<input type="radio"/>	<input type="radio"/>
SC809B	b) Ministry notes and directives-----	<input type="radio"/>	<input type="radio"/>
SC809C	c) Mandated or recommended textbooks-----	<input type="radio"/>	<input type="radio"/>
SC809D	d) Instructional or pedagogical guide-----	<input type="radio"/>	<input type="radio"/>
SC809E	e) Specifically developed or recommended instructional activities----	<input type="radio"/>	<input type="radio"/>
SC809F	f) Other-----	<input type="radio"/>	<input type="radio"/>
SC809FT	Please specify: _____		

SC809T

Comments:

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SC810

10. Does the curriculum prescribe the percentage of **total** instructional time to be devoted to **science** instruction at the eighth grade of formal schooling?

*Refers to the national 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.*

Check **one** circle only.

Yes---

No---

SC810T

*If Yes...*  
Please specify the percentage:

SC810AT

Comments:



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## 11. How is the science curriculum implementation evaluated?

*Refers to the national 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.*

Check **one** circle for each line.

	Yes	No
SC811A	a) Visits by inspectors----- <input type="radio"/> <input type="radio"/>	
SC811B	b) Research programs----- <input type="radio"/> <input type="radio"/>	
SC811C	c) School self-evaluation----- <input type="radio"/> <input type="radio"/>	
SC811D	d) National or regional assessments----- <input type="radio"/> <input type="radio"/>	
SC811E	e) Other----- <input type="radio"/> <input type="radio"/>	
SC811ET	Please specify: _____	

SC811T

Comments:

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SC812

12. For teachers of students in the **eighth grade**, does your country experience any difficulties recruiting or retaining teachers of science(s)?

*Check one circle only.*

Yes---

No---

SC812T

*If Yes...*  
Comments:





**TIMSS & PIRLS**  
International Study Center  
Lynch School of Education, Boston College



BOSTON  
COLLEGE

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