

### TIMSS 2023 Curriculum Questionnaire—Eighth Grade

The TIMSS 2023 Curriculum Questionnaire is designed to collect basic information about the structure of the education system as well as the organization, content, and implementation of the mathematics and/or science curricula in each country.

The questionnaire should be completed by National Research Coordinators, drawing on the expertise of curriculum specialists and educators. Please submit this questionnaire by **January 31, 2024.** 

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

If you have any questions about the content of this questionnaire, please contact the TIMSS & PIRLS International Study Center at Boston College: <a href="mailto:timss@bc.edu">timss@bc.edu</a>

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

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### **GENERAL MODULE**

To be completed by all countries participating in TIMSS

	Page 03
Grade Structure and Student Flow	
G1. What is your country's name for the grade(s) tested in TIMSS 2023, in E grade 4, grade 8)?	≣nglish (e.g.,

G2. A. In your country, what is the stated official policy or regulation on students' age of entry to primary school (ISCED Level 1)?
Examples: "Children begin school during the calendar year of their 6th birthday"; "Children must be 6 years of by the end of June to begin school the following September."
B. If the official policy allows some parental discretion or choice, please describe the usual practice.
Example: "Even though the official policy is that students can begin school in the year when they turn 6 years old, children typically begin primary school at age 7 because their parents feel they will benefit from being more mature."
Post (
Page 0
G3. A. Has the stated official policy changed in the last 10 years?  Click one circle only.
○ Yes
○ No
B. If Yes How did the policy change, and what is the status of implementation?
Page C
G4. What are the ages (or grades) of compulsory education in your country?  Example: "Ages 6-16; Grades 1-9."
Example: Ages 6-16, Grades 1-5.
Page C
G5. Beginning with ISCED Level 1, what grades of schooling are provided to students
through ISCED Level 3 (upper secondary)?
Example: "Grades 1-12."

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

Example: "Automatic promotion for grades 1-5, dependent on academic progress for grades 6-8." Click one circle only. Yes No Please describe: Page 09 G7. Does your country have a nationally mandated number of school days per year? Click one circle only. O Yes No Please describe: Page 10 Languages of Instruction G8. A. State the official language(s) and describe the major language subgroups in your country. B. Describe the languages of instruction for mathematics and science in the fourth and eighth grades. For example, is the instruction in these grades for these subjects presented to the students in their native language or in a second language?

### **Early Childhood Education**

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

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

G9. A. Are the following forms of	arly childhood education ava	ailable in your country?
Click one circle for each line		

			Varies by
	Yes	No	State
a) Government-sponsored ECED programs	0	$\circ$	$\circ$
o) Government-sponsored PPE programs	0	$\circ$	0
c) Private ECED programs	0	0	0
d) Private PPE programs	0	0	0
e) Targeted ECED programs for certain subgroups (e.g., low- ncome families)	0	0	0
r) Targeted PPE programs for certain subgroups (e.g., low-ncome families)	0	0	0
			Page 1
Harrison and the state of the s			
. How many years can children attend ECED and PPE plick one circle only.	rograms aito	getner?	
·			
1 year			
2 years			
3 years			
○ 4 or more years			
			Page 1
. If your country has an integrated or unitary system of	early childho	od educat	ion (i.e., is
. If your country has an integrated or unitary system of ot formally divided into ECED and PPE), please describe	early childho e:	ood educat	ion (i.e., is
. If your country has an integrated or unitary system of ot formally divided into ECED and PPE), please describe	early childho	ood educat	ion (i.e., is
. If your country has an integrated or unitary system of ot formally divided into ECED and PPE), please describe	early childho	ood educat	ion (i.e., is
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ot formally divided into ECED and PPE), please describe	early childho	ood educat	ion (i.e., is
ot formally divided into ECED and PPE), please describe	early childho	ood educat	ion (i.e., is
t. If your country has an integrated or unitary system of ot formally divided into ECED and PPE), please described on the control of the cont	early childho	ood educat	ion (i.e., is
ot formally divided into ECED and PPE), please describe	early childho	ood educat	ion (i.e., is
ot formally divided into ECED and PPE), please describe	early childho	ood educat	ion (i.e., is

programs?

Click one circle for each line.

	Yes	No
a) ECED programs for children under age 3	0	$\circ$
b) PPE programs for children age 3 or older	0	0

	-
311. A. Does an educational authority in your	
dminister examinations that have consequen igher school system, entry to a university, an chool?	
Click <b>one</b> circle only.	
○ Yes	
○ No	
B. If Yes Please describe the grades at which ssessed, and the purpose of each exam.	n the exams are given, the subjects that are
example: "There is an exam including language and ma lacement for entry to secondary school."	athematics given at the end of grade 8 to determine
	Page
Torrigo por contact Constain ability	
invironmental Sustainability	
○ Yes ○ No	
Yes Please describe.	
res i lease describe.	
	Page
Social-Emotional Learning	Page
ocial-Emotional Learning	Page
613. Are there any national efforts or initiative	
613. Are there any national efforts or initiative earning in your country?	Page - s related to promoting social-emotional
613. Are there any national efforts or initiative earning in your country?  Click one circle only.	
613. Are there any national efforts or initiative earning in your country?  Click one circle only.  Yes	
613. Are there any national efforts or initiative earning in your country?  Click one circle only.	-
613. Are there any national efforts or initiative earning in your country?  Click one circle only.  Yes	
613. Are there any national efforts or initiative earning in your country?  Click one circle only.  Yes  No	-

		Page 18
Teacher Preparation		
G14. A. What is the main preparation route(s) for teachers of stude eighth grades?	nts in the <u>fou</u>	rth and
lf your country participates in TIMSS at one grade level, answer for that grade le Click <b>all that apply</b> in each column.	evel only.	
	Fourth Grade	Eighth Grade
a) Completion of a university degree in education		
b) Completion of a graduate degree in education		
c) Completion of a teachers college or normal school degree		
d) Completion of a specialized teaching program following a university degree		
Comments:		
B. Does the main preparation route(s) include an extended supervi  Click one circle only.	sed practicun	n?
○ Yes		
○ No		
If Yes How long is this period?		
		Page 2
C. In addition to the <u>main</u> teacher preparation route(s), are there ot	her requireme	ents for
peing a teacher of students in the <u>fourth and eighth grades?</u> If your country participates in TIMSS at one grade level, answer for that grade le	evel onlv	
Click <b>all that apply</b> in each column.	o. o.ny.	
	Fourth Grade	Eighth Grade
a) Passing a qualifying examination (e.g., licensing, certification)		
b) Completion of a probationary teaching period		
If Yes How long is this period for each grade?		

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

d) Other, please specify for each grade:

) Yes		
) No		
Yes How did the policy change, and what is the status of implementation?		
Li di		
		Page
615. Describe any differences between the preparation of fourth g preparation of eighth grade teachers to teach mathematics and sc		
your country only participates in TIMSS at the eighth grade, please skip this c	-	·
<i>t</i>		
616. A. What are the current requirements for being a principal of	a school with <u>f</u>	Page ourth gra
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I		·
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I	level only.	ourth gra
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I		·
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade level, and the gr	level only. Fourth	ourth gra
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I Click all that apply for each column.  a) Teaching experience  b) Completion of a specialized school leadership training program (not an	level only. Fourth	ourth gra Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade In Click all that apply for each column.  a) Teaching experience  b) Completion of a specialized school leadership training program (not an academic degree)	level only. Fourth	ourth gra Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership	level only. Fourth	ourth gra Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership	level only. Fourth	ourth gra Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership	level only. Fourth	ourth gra Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I Click all that apply for each column.  a) Teaching experience  b) Completion of a specialized school leadership training program (not an	level only. Fourth	ourth gra Eighth Grade
academic degree) c) Graduate degree in school leadership	level only. Fourth	ourth gra Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade It Click all that apply for each column.  a) Teaching experience  b) Completion of a specialized school leadership training program (not an academic degree)  c) Graduate degree in school leadership  d) Other, please specify for each grade:	Fourth Grade	Eighth Grade
616. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade in Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership d) Other, please specify for each grade:	Fourth Grade	Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade in Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership d) Other, please specify for each grade:  3. In the last 10 years, has there been a change in the stated officing equirements for being a principal of a school with fourth grade or	Fourth Grade	Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership	Fourth Grade	Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade I Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership d) Other, please specify for each grade:  3. In the last 10 years, has there been a change in the stated officiency in the stat	Fourth Grade	Eighth Grade
G16. A. What are the current requirements for being a principal of or eighth grade students?  If your country participates in TIMSS at one grade level, answer for that grade in Click all that apply for each column.  a) Teaching experience b) Completion of a specialized school leadership training program (not an academic degree) c) Graduate degree in school leadership d) Other, please specify for each grade:  3. In the last 10 years, has there been a change in the stated officing equirements for being a principal of a school with fourth grade or Click one circle only.  Yes	Fourth Grade	Eighth Grade

Mathematics Module

COVID-19 and Policy Changes
G17. Did the COVID-19 pandemic lead to any enduring education policy changes in your country?  Click one circle only.
○ Yes
○ No
If Yes Please describe.
Example: "Remote learning has remained an option for some students with health issues even after schools reopened."
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### **MATHEMATICS MODULE GRADE 8**

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

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

### **About the Eighth Grade Mathematics Curriculum**

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

the eighth grade of Click one circle only.	formal schooling?	
○ Yes		
○ No		
If Yes Comments:		
	<i>"</i> "	
If No What is the high curriculum that covers	hest level of decision-making authority (e.g., state or province) that provides mathematics instruction at the eighth grade of formal schooling?	a
		Page 28
		Page 28
M2. A. In what year	was the 2022-2023 mathematics curriculum introduced?	Page 28
M2. A. In what year	was the 2022-2023 mathematics curriculum introduced?	Page 28
-		
Comments (e.g., status	s of implementation):	Page 28
Comments (e.g., status  B. Is the mathemati		
Comments (e.g., status  B. Is the mathemati  Click one circle only.	s of implementation):	
B. Is the mathemati Click one circle only.  Yes	s of implementation):	
Comments (e.g., status  B. Is the mathemati  Click one circle only.	s of implementation):	
B. Is the mathemati Click one circle only.  Yes  No	s of implementation):  Ics curriculum currently being revised?	
B. Is the mathemati Click one circle only.  Yes  No	s of implementation):  Ics curriculum currently being revised?	
B. Is the mathemati Click one circle only.  Yes  No	s of implementation):  Ics curriculum currently being revised?	
B. Is the mathemati Click one circle only.  Yes  No	s of implementation):  Ics curriculum currently being revised?	
B. Is the mathemati Click one circle only.  Yes	s of implementation):  Ics curriculum currently being revised?	

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### **Curriculum Specifications**

e) Other, please specify:

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

M3. Does the curriculum or any other official document prescribe the percentage of <u>total</u> instructional time to be devoted to <u>mathematics</u> instruction at the eighth grade of formal schooling?			
Click <b>one</b> circle only.			
○ Yes			
○ No			
If Yes Please specify the percentage:			
Comments:			
M4. Does the eighth grade mathematics curriculum include any of the Click one circle for each line.	following?	Page 3′	
	Yes	No	
a) Recommendations for the amount of time to be spent on particular areas or topics	0	0	
b) Recommendations for assessment methods	0	0	
c) Recommendations for instructional activities	0	0	
d) Recommendations for connecting mathematics to other subjects	0	0	

### M5. How is the mathematics curriculum implementation evaluated?

Click one circle for each line.

	Yes	No
a) Visits by inspectors	0	0
b) Research programs (e.g., large scale curriculum evaluations)	0	0
c) School self-evaluation	0	0
d) National or regional examinations	0	0
e) Other, please specify:	0	0
Comments:		
		Page 33
This mathematics module refers to the national curriculum that was in effect for assessed in TIMSS 2023—the curriculum that covers mathematics instruction a schooling for the majority of students. If you do not have a national curriculum, p	t the eighth grade o	of formal
This mathematics module refers to the national curriculum that was in effect for assessed in TIMSS 2023—the curriculum that covers mathematics instruction a schooling for the majority of students. If you do not have a national curriculum, potate or provincial curricula.  M6. A. Does the national curriculum contain statements/policies abdevices (e.g., computers, tablets, calculators) in grade 8 mathemat	t the eighth grade of please summarize to cout the use of d	of formal for your ligital
This mathematics module refers to the national curriculum that was in effect for assessed in TIMSS 2023—the curriculum that covers mathematics instruction a schooling for the majority of students. If you do not have a national curriculum, potate or provincial curricula.  M6. A. Does the national curriculum contain statements/policies abdevices (e.g., computers, tablets, calculators) in grade 8 mathematicalick one circle only.	t the eighth grade of please summarize to cout the use of d	of formal for your ligital
This mathematics module refers to the national curriculum that was in effect for assessed in TIMSS 2023—the curriculum that covers mathematics instruction a schooling for the majority of students. If you do not have a national curriculum, potate or provincial curricula.  M6. A. Does the national curriculum contain statements/policies abdevices (e.g., computers, tablets, calculators) in grade 8 mathemat	t the eighth grade of please summarize to cout the use of d	of formal for your ligital
	t the eighth grade of please summarize to cout the use of d	of formal for your ligital

# B. Does the national curriculum contain statements/policies about student use of digital devices (e.g., computers, tablets, calculators) in grade 8 mathematics tests or examinations?

Click <b>one</b> circle only.	
○ Yes	
○ No	
If Yes What are the statements/policies?	
	4
Comments:	
	4
	Page 38
Specialist Mathematics Teachers	_
M7. At what grade(s) are students first taugh general classroom teachers?	t by mathematics subject specialists rather than

### **Eighth Grade Mathematics Topics Covered**

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

M8. 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?

^	NI:	ım	her

Click one circle for each line.

# Proportion of Grade 8 Students Expected to be Taught Topic or Skill

	All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 8
a) Multiples, factors, and prime numbers	0	0	0
b) Add and subtract with negative numbers	0	0	0
c) Compare and order fractions and decimals	0	0	0
d) Add, subtract, multiply, and divide with fractions and decimals	0	0	0
e) Combine two or more properties of numbers or operations to solve a problem	0	0	0
f) Ratios and proportions	$\circ$	0	0
g) Find percentages; convert between percentages and fractions or decimals	0	0	0
Comments:			

### B. Algebra

Click one circle for each line.

# Proportion of Grade 8 Students Expected to be Taught Topic or Skill

	All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 8
a) Find the value of an expression or formula given values of variables	0	0	0
b) Simplify and compare algebraic expressions	0	0	0
c) Write expressions to represent problems	0	0	0
d) Solve linear equations and inequalities	0	0	0
e) Interpret and generate representations of linear functions in tables, graphs, or words	0	0	0
f) Interpret and generate representations of simple non-linear functions in tables, graphs, or words	0	0	0
Comments:	11		
			Page 38
C. Geometry and Measurement  Click one circle for each line.		Grade 8 Stude Taught Topic o	
			nts Expected
	to be	Taught Topic o  Only the more advanced	nts Expected r Skill Not included in the curriculum through
Click <b>one</b> circle for each line.	All or almost	Taught Topic o  Only the more advanced students	nts Expected r Skill Not included in the curriculum through Grade 8
a) Recognize and draw different types of angles and lines b) Recognize two-dimensional shapes and use their	All or almost	Taught Topic o  Only the more advanced students	nts Expected r Skill Not included in the curriculum through Grade 8
a) Recognize and draw different types of angles and lines b) Recognize two-dimensional shapes and use their properties (e.g., circles, triangles)	All or almost all students	Only the more advanced students	Ints Expected r Skill  Not included in the curriculum through Grade 8
a) Recognize and draw different types of angles and lines b) Recognize two-dimensional shapes and use their properties (e.g., circles, triangles) c) The Pythagorean Theorem	All or almost all students	Only the more advanced students	Ints Expected r Skill  Not included in the curriculum through Grade 8

### D. Data and Probability

Click one circle for each line.

## Proportion of Grade 8 Students Expected to be Taught Topic or Skill

	All or almost all students	Only the more advanced students	in the curriculum through Grade 8
a) Interpret data from one or more sources (e.g., make comparisons, draw conclusions)	0	0	0
b) Organize and represent data in appropriate figures or tables to help answer questions	0	0	0
c) Summarize data using the mean and median, and recognize the effect of spread	0	0	0
d) Determine theoretical and empirical probability for simple events	0	0	0
e) Determine theoretical and empirical probability for compound events	0	0	0
Comments:			

Page 40 Science Module

### **SCIENCE MODULE GRADE 8**

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

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

### **About the Eighth Grade Science Curriculum**

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

eighth grade of formal schooling?  Click one circle only.	
○ Yes	
○ No	
If Yes Comments:	
If No What is the highest level of decision-makin curriculum that covers science instruction at the eight	ng authority (e.g., state or province) that provides a ghth grade of formal schooling?
	Page 4
S2. A. In what year was the 2022-2023 scie	nce curriculum introduced?
OZ. A. III Wilat you was the 2022 2020 0010	
Comments (e.g., status of implementation):	
	Page 4
D le the ecience auguioulum augusath, bair	aw revised?
B. Is the science curriculum currently bein Click one circle only.	ig reviseu?
○ Yes	
○ No	
If Yes Please explain:	
If No Comments:	

### **Curriculum Specifications**

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

S3. Does the curriculum or any other official document prescribe the instructional time to be devoted to <u>science</u> instruction at the eighth g schooling?		
Click one circle only.		
○ Yes		
○ No		
If Yes Please specify the percentage:		
Comments:		
		Page 45
S4. Does the eighth grade science curriculum include any of the follo	wing?	
Click one circle for each line.		
	Yes	No
a) Recommendations for the amount of time to be spent on particular areas or topics	0	0
b) Recommendations for assessment methods	0	0
c) Recommendations for instructional activities	0	0
d) Recommendations for connecting science to other subjects	0	0
e) Other, please specify:	0	0

CE.	How in the	a aaianaa	aurriaulum	implementation	avaluated?

Click one circle for each line.

	Yes	No
a) Visits by inspectors	0	0
b) Research programs (e.g., large scale curriculum evaluations)	0	0
c) School self-evaluation	0	0
d) National or regional examinations	0	0
e) Other, please specify:	0	0
Comments:		
Jse of Digital Devices		Page 47
This science module refers to the national curriculum that was in effect for the eint TIMSS 2023—the curriculum that covers science instruction at the eighth grad majority of students. If you do not have a national curriculum, please summarize curricula.	de of formal school	oling for the
S6. Does the national curriculum contain statements/policies about devices (e.g., computers, tablets, calculators) in grade 8 science in: Click one circle only.		ital
○ Yes		
○ No		
f Yes What are the statements/policies?		
		Page 48
Specialist Science Teachers		
S7. At what grade(s) are students first taught by science subject sp general classroom teachers?	ecialists rather	than

### **Eighth Grade Science Topics Covered**

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

S8. 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?

### A. Biology

Click one circle for each line.

Proportion of Grade 8 Students Expected to be Taught Topic or Skill

	All or almost	Only the more advanced students	Not included in the curriculum through Grade 8
a) Differences among major taxonomic groups of organisms (e.g., plants, fungi, reptiles, insects)	0	0	0
b) Structures and functions of major organ systems in humans; how these compare to other organisms	0	0	0
c) How animals respond to internal and external changes to maintain stable body conditions (e.g., increased heart rate during exercise, sweating in heat)	0	0	0
d) Structures in plants and animal cells and their functions	0		0
e) Photosynthesis and cellular respiration	0	$\circ$	0
f) Life cycles and patterns of development in different types of organisms (e.g., mammals, birds)	0	0	0
g) DNA and inheritance in plants and animals	0	$\circ$	0
h) Variation and natural selection	0	$\circ$	0
i) Fossils as evidence for changes in life on Earth over time	0	$\circ$	0
j) Flow of energy through ecosystems (e.g., producers, consumers, decomposers)	0	0	0
k) Cycling of water, oxygen, and carbon in ecosystems	0	$\circ$	0
I) Relationships among populations of organisms in an ecosystem (e.g., competition, predation, symbiosis)	0	0	0
m) Positive and negative impacts of human behavior on the environment	0	0	0
n) Causes, transmission, prevention of, and resistance to diseases	0	0	0
o) Diet, exercise, and other lifestyle choices for promoting human health	0	0	0
Comments:			

### B. Chemistry

Click one circle for each line.

### Proportion of Grade 8 Students Expected to be Taught Topic or Skill

	All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 8
a) Structure of atoms and molecules (e.g., electrons, protons, neutrons)	0	0	0
b) Elements, compounds, and mixtures	0	$\circ$	0
c) The periodic table of elements as a way of organizing the elements	0	0	0
d) Physical and chemical properties of matter (e.g., boiling point, flammability)	0	0	0
e) Use of physical and chemical properties to classify matter (e.g., metals, nonmetals)	0	0	0
f) Separating mixtures	0	$\circ$	0
g) Concepts related to solutions (e.g., solvent, solute, concentration)	0	0	0
h) Properties of acids and bases	$\circ$	$\circ$	$\circ$
i) Characteristics of chemical changes (e.g., production of a new substance, color change)	0	0	0
j) Conservation of matter and release/absorption of energy in chemical reactions	0	0	0
k) Chemical bonds between atoms	0	0	0
Comments:			

### C. Physics

Click one circle for each line.

### Proportion of Grade 8 Students Expected to be Taught Topic or Skill

	All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 8
a) Motion of particles in solids, liquids, and gases	0	0	0
b) Changes in states of matter (e.g., melting, condensation)	0	0	0
c) Forms of energy and energy transformation (e.g., kinetic, potential, thermal)	0	0	0
d) Thermal energy transfer and thermal conductivity of metals	$\circ$	0	0
e) Properties of light (e.g., speed, transmission through media)	$\circ$	0	$\circ$
f) Properties of sound (e.g., amplitude, frequency)	0	0	0
g) Conductors and movement of electricity through circuits	$\circ$	$\circ$	$\circ$
h) Properties of permanent magnets and electromagnets	0	0	0
i) Concepts related to motion (e.g., speed, acceleration)	$\circ$	0	$\circ$
j) Common forces and their characteristics (e.g., strength, direction)	0	0	0
k) Effects of forces (e.g., floating, sinking, water pressure)	$\circ$	0	$\circ$
I) Functioning of simple machines (e.g., levers, inclined planes)	0	0	0
Comments:			
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### D. Earth Science

Click one circle for each line.

#### Proportion of Grade 8 Students Expected to be Taught Topic or Skill

	All or almost all students	Only the more advanced students	Not included in the curriculum through Grade 8
a) Earth's structure and physical characteristics (e.g., crust, mantle, distribution of water)	0	$\circ$	0
b) Makeup of Earth's atmosphere (i.e., nitrogen, oxygen, water vapor, carbon dioxide)	0	0	0
c) Geological processes that have shaped Earth's surface (the rock cycle, formation of fossil fuels)	$\circ$	0	0
d) Earth's water cycle	0	0	0
e) Differences between weather and climate and evidence for climate change	$\circ$	0	0
f) Management of Earth's resources (e.g., advantages and disadvantages of different energy sources, methods of waste management)	0	0	0
g) Land and water use (e.g., importance of conservation)	0	0	0
h) Observable phenomena on Earth resulting from the movements of Earth and the Moon (e.g., seasons, tides, eclipses)	0	0	0
i) The role of the Sun in the Solar System (i.e., provides light/heat to planets and their moons)	0	0	0
j) Compare characteristics of Earth to other bodies in the Solar System (e.g., presence of water, distance from Sun)	0	0	0
Comments:	4		
			Page 53 Submit Data
This completes the <i>Grade 8 TIMSS 2023 Curriculum Questionnain</i> data entry and submit your responses to IEA.	re. Please click "S	Submit Data"	to complete
			Last Page

Thank you for completing the TIMSS 2023 Curriculum Questionnaire.