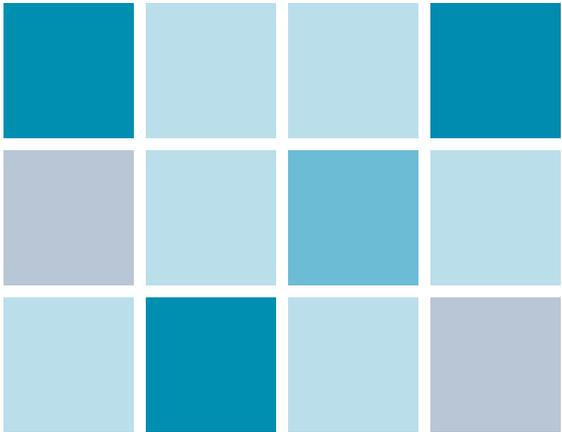




TIMSS 2019 Curriculum Questionnaire Eighth Grade



TIMSS2019DC_OCQ - English
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TIMSS 2019 Curriculum Questionnaire

Please enter your user ID and password (Checksum).

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Password:



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TIMSS - 2019 - English

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade

TIMSS 2019 Curriculum Questionnaire – Eighth Grade

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

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

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

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

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

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

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - GENERAL MODULE

GENERAL MODULE

To be completed by all countries participating in TIMSS

Please note: if you already have completed the General Module of the Grade 4 Curriculum Questionnaire, please skip the General Module using the Table of Contents.

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TIMSS - 2019 - English

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

Grade Structure and Student Flow

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

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TIMSS - 2019 - English

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

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

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

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

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

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

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

Check *one* circle only.

- Yes
- No

If Yes....

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

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

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

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

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

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

Example: "Grades 1-12."

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

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

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

Check **one** circle only.

- Yes
- No

Please describe:

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

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

Check *one* circle only.

- Yes
- No

Please describe:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Languages of Instruction

Languages of Instruction

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

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

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Early Childhood Education

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

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

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

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

Check **one** circle for each line.

- | | Yes | No |
|---|-----------------------|-----------------------|
| a) ECED programs for children under age 3 | <input type="radio"/> | <input type="radio"/> |
| b) PPE programs for children age 3 or older | <input type="radio"/> | <input type="radio"/> |

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

Check **one** circle only.

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

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Early Childhood Education

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

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

Check **one** circle for each line.

- | | Yes | No |
|---|-----------------------|-----------------------|
| a) ECED programs for children under age 3 | <input type="radio"/> | <input type="radio"/> |
| b) PPE programs for children age 3 or older | <input type="radio"/> | <input type="radio"/> |

Please describe:

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Early Childhood Education

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

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

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

Check *one* circle for each line.

- | | Yes | No |
|---|-----------------------|-----------------------|
| a) ECED programs for children under age 3 | <input type="radio"/> | <input type="radio"/> |
| b) PPE programs for children age 3 or older | <input type="radio"/> | <input type="radio"/> |

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Early Childhood Education

If Yes....

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

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

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

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Examinations

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

Check one circle only.

- Yes
- No

If Yes....

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

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

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TIMSS - 2019 - English

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

Teacher Preparation

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

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

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TIMSS - 2019 - English
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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

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

Check one circle for each line.

	Yes	No
a) Supervised practicum during the teacher education program.	<input type="radio"/>	<input type="radio"/>
<i>If Yes...</i> How long is this period?	<input type="text"/>	
b) Passing a qualifying examination (e.g., licensing, certification).	<input type="radio"/>	<input type="radio"/>
c) Completion of a probationary teaching period.	<input type="radio"/>	<input type="radio"/>
<i>If Yes...</i> How long is this period?	<input type="text"/>	
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"/>
e) Other Please specify below:	<input type="radio"/>	<input type="radio"/>

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

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

Check *one* circle only.

- Yes
- No

If Yes...

D. What are they?

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

Check *one* circle only.

- Yes
- No

If Yes....

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

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

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

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

Check *one* circle only.

- Yes
- No

If Yes....

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

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

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

Check one circle for each line.

	Yes	No
a) Supervised practicum during the teacher education program.	<input type="radio"/>	<input type="radio"/>
<i>If Yes...</i> How long is this period?	<input type="text"/>	
b) Passing a qualifying examination (e.g., licensing, certification).	<input type="radio"/>	<input type="radio"/>
c) Completion of a probationary teaching period.	<input type="radio"/>	<input type="radio"/>
<i>If Yes...</i> How long is this period?	<input type="text"/>	
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"/>
e) Other Please specify below:	<input type="radio"/>	<input type="radio"/>

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

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Teacher Preparation

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

Check *one* circle only.

- Yes
- No

If Yes....

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

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

Principal Preparation

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

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

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

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

	Yes	No
a) Teaching experience	<input type="radio"/>	<input type="radio"/>
b) Completion of a specialized school leadership training program (including a school leadership degree program)	<input type="radio"/>	<input type="radio"/>
c) Other Please specify below:	<input type="radio"/>	<input type="radio"/>

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

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

Check *one* circle only.

- Yes
- No

If Yes....

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

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TIMSS - 2019 - English

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

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

Check *one* circle only.

- Yes
 No

If Yes....

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

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

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

Check *one* circle for each line.

	Yes	No
a) Teaching experience	<input type="radio"/>	<input type="radio"/>
b) Completion of a specialized school leadership training program (including a school leadership degree program)	<input type="radio"/>	<input type="radio"/>
c) Other Please specify below:	<input type="radio"/>	<input type="radio"/>

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Principal Preparation

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

Check one circle only.

- Yes
- No

If Yes....

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

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TIMSS - 2019 - English

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - MATHEMATICS MODULE - GRADE 8

MATHEMATICS MODULE - GRADE 8

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

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

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About the Eighth Grade Mathematics Curriculum

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

M1. Does your country have a national curriculum that covers mathematics instruction at the eighth grade of formal schooling?

Check **one** circle only.

- Yes
- No

If Yes...

Comments:

If No...

What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers mathematics instruction at the eighth grade of formal schooling?

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TIMSS - 2019 - English

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

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

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

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

B. Is the mathematics curriculum currently being revised?

Check one circle only.

- Yes
- No

If Yes...
Please explain:

If No...
Comments:

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TIMSS - 2019 - English

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Curriculum Specifications

Curriculum Specifications

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

M3. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to mathematics instruction at the eighth grade of formal schooling?

Check *one* circle only.

- Yes
- No

If Yes...

Please specify the percentage:

Comments:

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M4. How is the mathematics curriculum implementation evaluated?

Check one circle for each line.

	Yes	No
a) Visits by inspectors	<input type="radio"/>	<input type="radio"/>
b) Research programs	<input type="radio"/>	<input type="radio"/>
c) School self-evaluation	<input type="radio"/>	<input type="radio"/>
d) National or regional examinations	<input type="radio"/>	<input type="radio"/>
e) Other	<input type="radio"/>	<input type="radio"/>

Please specify below:

Comments:

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

Use of Digital Devices

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

M5. A. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 8 mathematics instruction?

Check *one* circle only.

- Yes
- No

If Yes...

What are the statements/policies?

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TIMSS - 2019 - English
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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Use of Digital Devices

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

Check *one* circle only.

- Yes
- No

If Yes...

What are the statements/policies?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Specialist Mathematics Teachers

Specialist Mathematics Teachers

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

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Eighth Grade Mathematics Topics Covered

This mathematics module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers mathematics instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

M7. (i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if “Year 9” in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	Check the corresponding grade(s) for each topic.												
A. Number				PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
a) Computing with negative numbers	<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"/>	<input type="checkbox"/>
b) Concepts of fractions and decimals	<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"/>	<input type="checkbox"/>
c) Solving problems involving proportions and percents	<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"/>	<input type="checkbox"/>

Comments:

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

M7. (continued)

(i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
B. Algebra																
a) Simplifying and evaluating algebraic expressions	<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"/>	<input type="checkbox"/>
b) Simple linear equations	<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"/>	<input type="checkbox"/>
c) Simple linear inequalities	<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"/>	<input type="checkbox"/>
d) Simultaneous (two variables) equations	<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"/>	<input type="checkbox"/>
e) Representation of linear and quadratic functions in tables, graphs, words, or equations	<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"/>	<input type="checkbox"/>
f) Properties of functions (slopes, intercepts, etc.)	<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"/>	<input type="checkbox"/>
g) Numeric, algebraic, and geometric patterns or sequences (extension, missing terms, generalization of patterns)	<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"/>	<input type="checkbox"/>

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

M7. (continued)

(i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
C. Geometry																
a) Geometric properties of angles, pairs of lines, and geometric shapes (triangles, quadrilaterals, and other common polygons)	<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"/>	<input type="checkbox"/>
b) Solving problems involving perimeters, circumferences, and areas	<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"/>	<input type="checkbox"/>
c) Solving problems involving the Pythagorean Theorem	<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"/>	<input type="checkbox"/>
d) Translation, reflection, and rotation	<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"/>	<input type="checkbox"/>
e) Congruent figures and similar triangles	<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"/>	<input type="checkbox"/>
f) Solving problems with three-dimensional shapes	<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"/>	<input type="checkbox"/>

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

M7. (continued)

(i) According to the national mathematics curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	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
<i>Check one circle for each line.</i>																
<i>Check the corresponding grade(s) for each topic.</i>																
D. Data and Probability																
a) Reading and interpreting data from one or more sources to solve problems (interpolating, extrapolating, drawing conclusions)	<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"/>	<input type="checkbox"/>
b) Identifying appropriate procedures for collecting data	<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"/>	<input type="checkbox"/>
c) Organizing and representing data to help answer questions	<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"/>	<input type="checkbox"/>
e) Calculating and interpreting statistics summarizing data distributions	<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"/>	<input type="checkbox"/>
e) Theoretical and empirical probability of simple events	<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"/>	<input type="checkbox"/>
f) Theoretical and empirical probability of compound events	<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"/>	<input type="checkbox"/>

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - SCIENCE MODULE - GRADE 8

SCIENCE MODULE - GRADE 8

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

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

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

About the Eighth Grade Science Curriculum

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S1. Does your country have a national curriculum that covers science instruction at the eighth grade of formal schooling?

Check **one** circle only.

- Yes
- No

If Yes...

Comments:

If No...

What is the highest level of decision-making authority (e.g., state or province) that provides a curriculum that covers science instruction at the eighth grade of formal schooling?

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

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

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

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

B. Is the science curriculum currently being revised?

Check *one* circle only.

- Yes
- No

If Yes...

Please explain:

If No...

Comments:

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Curriculum Specifications

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S3. Does the curriculum or any other official document prescribe the percentage of total instructional time to be devoted to science instruction at the eighth grade of formal schooling?

Check **one** circle only.

- Yes
- No

If Yes...

Please specify the percentage:

Comments:

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S4. How is the science curriculum implementation evaluated?

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

	Yes	No
a) Visits by inspectors	<input type="radio"/>	<input type="radio"/>
b) Research programs	<input type="radio"/>	<input type="radio"/>
c) School self-evaluation	<input type="radio"/>	<input type="radio"/>
d) National or regional examinations	<input type="radio"/>	<input type="radio"/>
e) Other Please specify below:	<input type="radio"/>	<input type="radio"/>

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

Use of Digital Devices

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S5. Does the national curriculum contain statements/policies about the use of digital devices (e.g., computers, tablets, calculators) in grade 8 science instruction?

Check **one** circle only.

- Yes
- No

If Yes...

What are the statements/policies?

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TIMSS 2019 Curriculum Questionnaire – Eighth Grade - Specialist Science Teachers

Specialist Science Teachers

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

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Eighth Grade Science Topics Covered

This science module refers to the national curriculum that was in effect for the eighth grade students assessed in TIMSS 2019—the curriculum that covers science instruction at the eighth grade of formal schooling for the majority of students. If you do not have a national curriculum, please summarize for your state or provincial curricula.

S7. (i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	Check the corresponding grade(s) for each topic.												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
A. Biology				PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
a) Differences among major taxonomic groups of organisms (plants, animals, fungi, mammals, birds, reptiles, fish, amphibians, insects)	<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"/>	<input type="checkbox"/>
b) Major organs and organ systems in humans and other organisms (structure/function, life processes)	<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"/>	<input type="checkbox"/>
c) Cells, their structure and functions, including respiration and photosynthesis as cellular processes	<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"/>	<input type="checkbox"/>
d) Life cycles, sexual reproduction, and heredity (inherited versus acquired/learned characteristics)	<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"/>	<input type="checkbox"/>
e) Role of variation and adaptation in survival/extinction of species (including fossil evidence)	<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"/>	<input type="checkbox"/>

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

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|--|-----------------------|-----------------------|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| f) Interdependence of populations of organisms in an ecosystem (e.g., carbon and water cycles, energy flow, food webs, competition, predation, human impacts on ecosystems) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |
| g) Human health (e.g., causes, transmission, and prevention of common infectious diseases, immunity) and the importance of diet, exercise, and other lifestyle choices in maintaining health | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="checkbox"/> |

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

S7. (continued)

(i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
B. Chemistry																
a) Particulate structure, classification, and composition of matter (protons, neutrons, electrons, atoms, molecules, elements, compounds, mixtures)	<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"/>	<input type="checkbox"/>
b) The periodic table as an organizing principle for the known elements	<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"/>	<input type="checkbox"/>
c) Physical and chemical properties of matter	<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"/>	<input type="checkbox"/>
d) Mixtures and solutions (e.g., solvent, solute, concentration/dilution)	<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"/>	<input type="checkbox"/>
e) Properties of common acids and bases (e.g., acids have pH less than 7, reactions with indicators produce color changes, acids and bases neutralize each other)	<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"/>	<input type="checkbox"/>
f) Characteristics of chemical reactions (e.g., transformation of reactants, evidence of chemical change)	<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"/>	<input type="checkbox"/>
g) Matter and energy in chemical reactions (conservation of matter, familiar exothermic and endothermic reactions, factors affecting reaction rates)	<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"/>	<input type="checkbox"/>
h) The role of electrons in chemical bonds	<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"/>	<input type="checkbox"/>

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S7. (continued)

(i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
C. Physics																
a) Physical states and changes in matter (explanations of properties in terms of movement and distance between particles; phase change, changes in volume and/or pressure, physical changes)	<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"/>	<input type="checkbox"/>
b) Energy transformation and transfer (e.g., forms of energy, energy conservation, heat temperature, equilibrium)	<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"/>	<input type="checkbox"/>
c) Basic properties/behaviors of light (reflection, refraction, color, shadows, simple ray diagrams)	<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"/>	<input type="checkbox"/>
d) Basic properties/behaviors of sound (vibrations that produce sound, transmission through media, loudness, pitch)	<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"/>	<input type="checkbox"/>
e) Electric circuits (e.g., electrical conductors/insulators and the flow of electricity in series/parallel circuits)	<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"/>	<input type="checkbox"/>
f) Properties and uses of permanent magnets and electromagnets	<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"/>	<input type="checkbox"/>
g) Motion and forces (e.g., basic description of motion, common mechanical forces, properties of forces, effects of forces, simple machines, buoyancy, effects of density and pressure)	<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"/>	<input type="checkbox"/>

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S7. (continued)

(i) According to the national science curriculum, what proportion of grade 8 students should have been taught each of the following topics or skills by the end of grade 8?

Be sure to include curriculum expectations for all grades up to and including grade 8. Grades represent years of formal schooling. For example, if "Year 9" in your country corresponds to the eighth year of formal schooling, please choose grade 8.

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

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

	(i) Proportion of grade 8 students expected to be taught topic			(ii) Grade(s) topic is expected to be taught preprimary (PP) through the end of upper secondary (G12)												
	Check one circle for each line.			Check the corresponding grade(s) for each topic.												
	All or almost all students	Only the more able students	Not included in the curriculum through grade 8	PP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
D. Earth Science																
a) Earth's structure and physical features (e.g., Earth's crust, mantle, and core; composition and relative distribution of water; composition of Earth's atmosphere)	<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"/>	<input type="checkbox"/>
b) Earth's processes, cycles, and history (e.g., rock cycle, major geological events, formation of fossils and fossil fuels, water cycle, weather versus climate)	<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"/>	<input type="checkbox"/>
c) Earth's resources, their use, and conservation (e.g., renewable/nonrenewable resources, human use of land and water resources)	<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"/>	<input type="checkbox"/>
d) Earth in the Solar System and the universe (phenomena on Earth: seasons, eclipses, tides, phases of moon; members of the Solar System; physical features of Earth)	<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"/>	<input type="checkbox"/>

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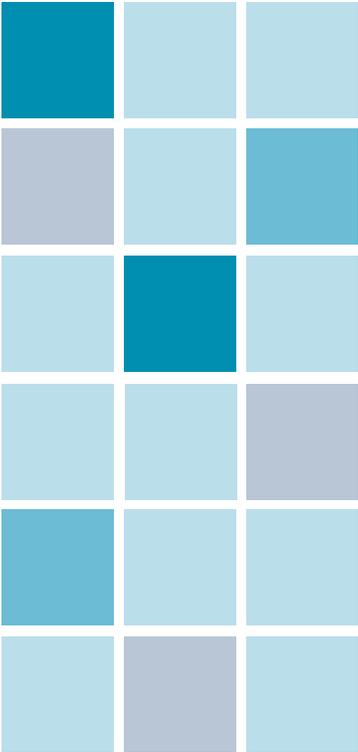
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