



TIMSS

2023

Identification Label

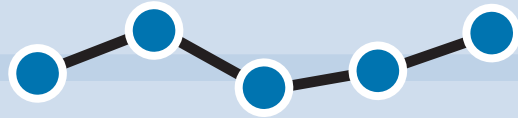
TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Teacher Questionnaire

<Grade 4>

<TIMSS National Research Center Name>

<Address>



IEA

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

Teacher Questionnaire

Your school has agreed to participate in TIMSS 2023 (Trends in International Mathematics and Science Study), an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). TIMSS measures trends in student achievement in mathematics and science and studies differences in national education systems in more than 60 countries in order to help improve teaching and learning worldwide.

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

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

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

It is estimated that you will need approximately 35 minutes to complete this questionnaire. We appreciate the time and effort that this takes and thank you for your cooperation and contribution.

When you have completed the questionnaire, please place it in the accompanying envelope and return it to:

<Insert country-specific information here>.

Thank you.

TIMSS 2023

About You

G1

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

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

G2

Which of these describes you?

Check **one** circle only.

- Female ---
- Male ---
- <Other > ---

G3

How old are you?

Check **one** circle only.

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

G4

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

Check **one** circle only.

- Did not complete <Upper secondary education—ISCED Level 3> ---
- <Upper secondary education—ISCED Level 3> ---

(If you have not completed <post-secondary or tertiary education>, go to #G6)

- <Post-secondary, non-tertiary education—ISCED Level 4> ---
- <Short-cycle tertiary education—ISCED Level 5> ---
- <Bachelor's or equivalent level—ISCED Level 6> ---
- <Master's or equivalent level—ISCED Level 7> ---
- <Doctor or equivalent level—ISCED Level 8> ---

G5

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

Check **one** circle for each line.

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

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

Check **one** circle for each line.

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

G6

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

Check **one** circle for each line.

	Very high	High	Medium	Low	Very low
a) Teachers' understanding of the school's curricular goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Teachers' degree of success in implementing the school's curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Teachers' expectations for student achievement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Teachers' ability to inspire students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Parental involvement in school activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Parental commitment to ensure that students are ready to learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Parental expectations for student achievement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Parental support for student achievement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Students' desire to do well in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Students' ability to reach school's academic goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) Students' respect for classmates who excel academically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

G7

How much do you agree or disagree with the following statements about your current school?

Check **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I feel safe at this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) This school's security policies and practices are sufficient	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) The students behave in an orderly manner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) The students are respectful of the teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) The students respect school property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) This school has clear rules about student conduct	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) This school's rules are enforced in a fair and consistent manner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

About Being a Teacher

G8

How often do you have these feelings about being a teacher?

Check **one** circle for each line.

	Very often	Often	Sometimes	Never or almost never
a) I am content with my profession as a teacher -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I find my work full of meaning and purpose -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I am enthusiastic about my job -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) My work inspires me -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I am proud of the work I do -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I feel appreciated as a teacher -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) I enjoy the challenges of teaching -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

G9

How much do you agree or disagree with the statements below?

Check **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) There are too many students in the classes -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I have too much material to cover in class -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I have too many teaching hours -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I need more time to prepare for class -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I need more time to assist individual students -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I feel too much pressure from parents -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) I have difficulty keeping up with all of the changes to the curriculum -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) I have too many administrative tasks -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

About Teaching the TIMSS Class

G10

A. How many students are in this class?

_____ students
Write in the number.

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

_____ <fourth grade> students
Write in the number.

G11

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

_____ students in this class
Write in the number.

G12

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

Check **one** circle for each line.

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

- a) Relate the lesson to students' daily lives ----- — — —
- b) Ask students to explain their answers ----- — — —
- c) Communicate goals or objectives for the lesson to the students ----- — — —
- d) Ask students to complete challenging exercises that require them to go beyond the instruction ----- — — —
- e) Encourage classroom discussions among students ----- — — —
- f) Link new content to students' prior knowledge ----- — — —
- g) Ask students to decide their own problem solving procedures ----- — — —

G13

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

Check **one** circle for each line.

	Not at all	Some	A lot
a) Students lacking prerequisite knowledge or skills -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Students suffering from lack of basic nutrition -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Students suffering from not enough sleep -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Students absent from class -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Disruptive students -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Uninterested students -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Distracted students -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Students with mental, emotional, or psychological impairment -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Students with difficulties understanding the language of instruction -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

M1

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

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

M2

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

Check **one** circle for each line.

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

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

Using Calculators and Digital Devices for Teaching Mathematics to the TIMSS Class

M3

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

Check **one** circle only.

Yes, with unrestricted use ---

Yes, with restricted use ---

No ---

M4

A. Do the students in this class have digital devices (including computers, tablets, or smartphones) available to use during mathematics lessons?

Check **one** circle only.

Yes ---

No --- 

(If No, go to #M5)

If Yes,

B. What access do the students have to digital devices?

Check **one** circle for each line.

- | | Yes | No |
|--|-----------------------|-----------------------|
| a) The class has digital devices for each student to use ----- | <input type="radio"/> | <input type="radio"/> |
| b) The class has digital devices that students can share ----- | <input type="radio"/> | <input type="radio"/> |
| c) The school has digital devices that the class can use sometimes ----- | <input type="radio"/> | <input type="radio"/> |
| d) Students bring their own digital devices ----- | <input type="radio"/> | <input type="radio"/> |

C. How often do you have students use digital devices during mathematics instruction?

Check **one** circle only.

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

D. How often do you ask the students in your class to use digital devices to do these mathematics activities?

Check **one** circle for each line.

- | | At least once a week | Once or twice a month | A few times a year | Never or almost never |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Practice problems and procedures ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Solve extended or contextualized problems ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Create graphs, tables, or other data displays ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Play games involving mathematics calculations or concepts ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Read the textbook or watch instructional videos ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Take a test ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

M5

How much do each of these keep you from incorporating digital devices into mathematics instruction?

Check **one** circle for each line.

- | | Not at all | Somewhat | A lot |
|---|-----------------------|-----------------------|-----------------------|
| a) Not knowing how to use digital devices to improve student learning ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Not enough access to digital devices ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Keeping students on task when the class is using digital devices ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Lack of technical support from the school ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

M6

The following list includes topics addressed by the TIMSS mathematics test. Choose the response that best describes when each topic is taught for students in this class.

If a topic was in the curriculum before <fourth grade>, choose “Mostly taught before this year.” If you have taught a topic this year, choose “Mostly taught this year.” If a topic is not in the <fourth grade> curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Check **one** circle for each line.

Mostly taught before this year
 Mostly taught this year
 Not yet taught

A. Number

- a) Recognize place value and order whole numbers ----- — —
- b) Add and subtract up to 4-digit numbers ----- — —
- c) Multiply up to 3-digit by 1-digit and 2-digit by 2-digit numbers ----- — —
- d) Divide up to 3-digit by 1-digit numbers ----- — —
- e) Solve problems with odd/even numbers, multiples, or factors ----- — —
- f) Round or make estimations with whole numbers ----- — —
- g) Find the missing number or operation in a number sentence ----- — —
- h) Extend a number pattern or find the missing number in a pattern ----- — —
- i) Represent, compare, and order fractions ----- — —
- j) Add and subtract simple fractions ----- — —
- k) Represent, compare, and order decimals up to two decimal places ----- — —
- l) Add and subtract with decimals up to two decimal places ----- — —

B. Measurement and Geometry

- a) Measure, estimate, add, and subtract lengths ----- — —
- b) Add and subtract mass, volume, or time in appropriate units ----- — —
- c) Find perimeters of polygons ----- — —
- d) Find areas of shapes covered with squares or volumes of shapes filled with cubes ----- — —
- e) Recognize and draw parallel and perpendicular lines ----- — —
- f) Compare and draw angles ----- — —
- g) Describe and draw common two-dimensional shapes (e.g., circles, triangles, quadrilaterals) ----- — —
- h) Describe and draw common three-dimensional shapes (e.g., cubes, rectangular solids, cones, cylinders, spheres) ----- — —


C. Data

- a) Read and interpret data displays ----- — —
- b) Create or complete data displays ----- — —
- c) Draw conclusions from two or more data sources ----- — —

M7

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

Check **one** circle only.

I do not assign mathematics homework --- 
(Go to #M8)

Less than once a week ---

1 or 2 times a week ---

3 or 4 times a week ---

Every day ---

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

Check **one** circle for each line.

Always or almost always

Sometimes

Never or almost never

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

b) Discuss the homework in class ----- --- ---

c) Monitor whether or not the homework was completed ----- --- ---

M8

How much importance do you place on these strategies to assess students' learning in mathematics?

Check **one** circle for each line.

A lot

Some

None

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

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

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

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

e) Long-term projects ----- --- ---

M9

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

B. Do you need future professional development in any of the following?

Check **one** circle for each line.

Check **one** circle for each line.

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

S1

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

Check **one** circle only.

Yes ---

No ---

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

_____ minutes per week

Write in the number of minutes per week.

Please convert the number of hours into minutes.

S2

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

Check **one** circle for each line.

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

- a) Listen to me explain new science content ----- - - -
- b) Observe natural phenomena such as the weather or a plant growing and describe what they see ----- - - -
- c) Watch me demonstrate an experiment or investigation --- - - -
- d) Read their textbooks or other resource materials ----- - - -
- e) Memorize facts and principles ----- - - -
- f) Do field work outside the class ----- - - -
- g) Work in mixed ability groups ----- - - -
- h) Work in same ability groups ----- - - -

S3

How much emphasis do you place on the following when teaching science to students in this class?

Check **one** circle for each line.

A lot
Some
None

- a) Encouraging students to ask questions about scientific phenomena ----- - -
- b) Having students predict the outcomes of experiments or investigations ----- - -
- c) Having students create representations (e.g., models, graphs) to explain scientific phenomena ----- - -
- d) Having students use scientific concepts to explain phenomena ----- - -
- e) Having students conduct experiments (hands-on or virtually) ----- - -

S4

How often do you do the following when teaching this class?

Check **one** circle for each line.

- At least once a week**
Once or twice a month
A few times a year
Never or almost never
- a) Develop students' positive attitudes toward the natural environment ----- — — —
- b) Encourage students to use less resources (e.g., <water, energy>) ----- — — —
- c) Discuss how student actions in and outside of school can help the natural environment - — — —
- d) Discuss environmental issues (e.g., <climate change, endangered animals>) ----- — — —

S5

Do you do these things to teach students about environmental issues and sustainability?

Check **one** circle for each line.

- Yes**
No
- a) Take students to visit natural areas (e.g., <a pond or meadow>) ----- —
- b) Have students participate in environmentally responsible activities (e.g., <pick up trash>) -- —
- c) Have students do research or projects on a particular environmental topic (e.g., <pollution, climate change>) ----- —
- d) Provide opportunities for students to participate in outdoor environmental education programs outside of school ----- —

S6

How much do you agree or disagree that education about environmental sustainability should be a priority for schools?

Check **one** circle only.

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

S7

A. Do the students in this class have digital devices (including computers, tablets, or smartphones) available to use during science lessons?

Check **one** circle only.

Yes ---

No ---

(If No, go to #S8)

If Yes,

B. What access do the students have to digital devices?

Check **one** circle for each line.

	Yes	No
a) The class has digital devices for each student to use -----	<input type="radio"/>	<input type="radio"/>
b) The class has digital devices that students can share -----	<input type="radio"/>	<input type="radio"/>
c) The school has digital devices that the class can use sometimes -----	<input type="radio"/>	<input type="radio"/>
d) Students bring their own digital devices -----	<input type="radio"/>	<input type="radio"/>

C. How often do you have students use digital devices during science instruction?

Check **one** circle only.

At least once a week ---

Once or twice a month ---

A few times a year ---

Never or almost never ---

D. How often do you ask the students in your class to use digital devices to do these science activities?

Check **one** circle for each line.

	At least once a week	Once or twice a month	A few times a year	Never or almost never
a) Solve extended or contextualized problems -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Create graphs, tables, or other data displays -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Play games involving science concepts -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Conduct virtual experiments or other simulations -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Read the textbook or watch instructional videos -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Take a test -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

S8

How much do each of these keep you from incorporating digital devices into science instruction?

Check **one** circle for each line.

	Not at all	Somewhat	A lot
a) Not knowing how to use digital devices to improve student learning -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Not enough access to digital devices -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Keeping students on task when the class is using digital devices -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Lack of technical support from the school -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following list includes topics and concepts addressed by the TIMSS science test. Choose the response that best describes when each topic or concept is taught for students in this class.

If a topic or concept was in the curriculum before <fourth grade>, choose “Mostly taught before this year.” If you have taught a topic this year, choose “Mostly taught this year.” If a topic is not in the <fourth grade> curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Check **one** circle for each line.

Mostly taught before this year
 Mostly taught this year
 Not yet taught

A. Life Science

- a) Basic differences between living and nonliving things -----○—○—○
- b) Defining characteristics of major groups of living things -----○—○—○
- c) Functions of major structures in living things (e.g., roots in plants)-----○—○—○
- d) Life cycle stages of common plants and animals (e.g., flowering plants, frogs) -----○—○—○
- e) Inherited characteristics of living things -----○—○—○
- f) How living things survive in their environments (e.g., physical characteristics, behaviors) -----○—○—○
- g) How human actions impact the environment -----○—○—○
- h) Common ecosystems and their organisms (e.g., forest, desert) -----○—○—○
- i) Interpreting simple food chains -----○—○—○
- j) Competition within ecosystems -----○—○—○
- k) Ways for humans to maintain good health and avoid illness -----○—○—○

B. Physical Science

- a) Solids, liquids, gases, and how their shapes and volumes differ -----○—○—○
- b) Grouping objects based on their physical properties -----○—○—○
- c) Examples of mixtures and how they can be separated (e.g., filtration, evaporation)-----○—○—○
- d) Magnetic attraction and repulsion -----○—○—○
- e) Examples of physical and chemical changes in everyday life -----○—○—○
- f) How to make solids dissolve faster in liquids (e.g., stirring, heating) -----○—○—○
- g) Concentration of solutions -----○—○—○
- h) Sources of energy (e.g., the Sun, wind, water, coal, oil, and gas)-----○—○—○
- i) How light is related to shadows, reflections, and rainbows -----○—○—○
- j) How vibrations are related to sound -----○—○—○
- k) Movement of heat from hotter to cooler objects -----○—○—○
- l) Simple electrical circuits -----○—○—○
- m) How motion is affected by forces (e.g., gravity, pushing, pulling, friction) -----○—○—○
- n) Examples of simple machines (e.g., levers, ramps) -----○—○—○

Choose the response that best describes when each topic or concept is taught for students in this class.

If a topic or concept was in the curriculum before <fourth grade>, choose "Mostly taught before this year." If you have taught a topic this year, choose "Mostly taught this year." If a topic is not in the <fourth grade> curriculum for this year or you have not yet taught a topic, choose "Not yet taught."

Check **one** circle for each line.

Mostly taught before this year
 Mostly taught this year
 Not yet taught


C. Earth Science

- a) Composition of Earth's surface (i.e., land, fresh water, salt water) ----- — —
- b) Earth's resources and their use by humans ----- — —
- c) Renewable and nonrenewable resources ----- — —
- d) How wind and water change Earth's surface over time ----- — —
- e) What fossils can show about Earth's history ----- — —
- f) How weather changes day to day and with geographic location ----- — —
- g) Effects of increasing temperatures on Earth ----- — —
- h) Composition of the Solar System (the Sun, Earth, Moon, and other planets) ----- — —
- i) How the Moon's movement around the Earth changes its appearance ----- — —
- j) How Earth's rotation causes day and night ----- — —
- k) How Earth's annual movement around the Sun causes seasons or seasonal change ----- — —

S10

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

Check **one** circle only.

I do not assign science homework --- 

(Go to #S11)

Less than once a week ---

1 or 2 times a week ---

3 or 4 times a week ---

Every day ---

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

Check **one** circle for each line.

Always or almost always

Sometimes

Never or almost never

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

b) Discuss the homework in class ----- — —

c) Monitor whether or not the homework was completed ----- — —

S11

How much importance do you place on these strategies to assess students' learning in science?

Check **one** circle for each line.

A lot

Some

None

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

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

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

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

e) Long-term projects ----- — —

S12

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

B. Do you need future professional development in any of the following?

Check **one** circle for each line.

Check **one** circle for each line.

	Yes	No		Yes	No
a) Science content -----	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
b) Science pedagogy/ instruction-----	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
c) Science curriculum-----	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
d) Integrating technology into science instruction ---	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
e) Improving students' critical thinking or inquiry skills-----	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
f) Science assessment -----	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
g) Addressing individual students' needs-----	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
h) Integrating science with other subjects (e.g., mathematics, technology) -----	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>
i) Integrating environmentalism and sustainability into science instruction ---	<input type="radio"/>	<input type="radio"/>	-----	<input type="radio"/>	<input type="radio"/>

Thank You

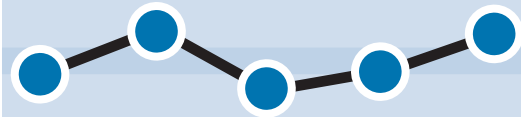
Thank you for the thought, time, and effort you have put into completing this questionnaire.



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