

**Trends in International Mathematics and  
Science Study (TIMSS 2027)  
Main Study Sampling, Recruitment, and  
Data Collection**

**OMB #1850-0695 v.21**

**Appendix C  
Questionnaires**

**Submitted by  
National Center for Education Statistics  
U.S. Department of Education**

**October 2025**

This package includes the TIMSS 2023 questionnaires as placeholders, as the 2027 instruments are expected to very similar. The final TIMSS 2027 main study questionnaires will be submitted via change memo in January 2027. If items remain that reference 'environmental sustainability' or 'climate change' (such as item 15 on the TIMSS 2023 Grade 4 School Questionnaire), these will be removed from the final TIMSS 2027 questionnaires.

## **Appendix C**

### **TIMSS 2027 Questionnaires**

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## School Questionnaire

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

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

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

It is estimated that you will need approximately 30 minutes to complete this questionnaire. We appreciate the time and effort that this takes and thank you for your cooperation and contribution.

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 "Back" 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 click on the "Finish" button at the end of the last question in order to submit your answers.

Thank you.

NCES is authorized to collect information from the questionnaire under the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). Your responses will be combined with those from other participants to produce summary statistics and reports.

This survey is estimated to take an average of 30 minutes, including time for reviewing instructions, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing burden to: Trends in International Mathematics and Science Study (TIMSS), National Center for Education Statistics, Potomac Center Plaza (PCP), 550 12th St., SW, 4th floor, Washington, DC 20202.

### School Enrollment and Characteristics

#### 1. What is the total enrollment of students in your school as of March 20, 2023?

students

*Type in the number.*

#### 2. What is the total enrollment of fourth-grade students in your school as of March 20, 2023?

students

Type in the number.

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

Click **one** circle for each line.

	0 to 10%	11 to 25%	26 to 50%	More than 50%
a) Come from economically disadvantaged homes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Come from economically affluent homes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4. Around the 1st of October 2022, what percentage of students at this school were eligible to receive free or reduced-price lunches through the National School Lunch Program?**

percentage of students

Type in the number.

**5. Approximately what percentage of students in your school have English as their native language?**

Click **one** circle only.

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

**6. Of the students currently enrolled in your school, what percentage has been identified as limited-English proficient (LEP)/English language learners (ELL)?**

Click **one** circle only.

- ☐ 0%
- ☐ 1-5%
- ☐ 6-10%
- ☐ 11-25%
- ☐ 26-50%
- ☐ 51-75%
- ☐ 76-90%

☐ Over 90%

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

Click **one** circle only.

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

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

Click **one** circle only.

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

**Instructional Time**

**For the fourth-grade students in your school:**

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

days

Type in the number.

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

minutes

Type in the number of minutes per day.

Please convert the number of hours into minutes.

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

Click **one** circle only.

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

### Resources and Technology

**9. How many computers (including tablets) does your school have for use by fourth-grade students?**

computers

*Type in the number.*

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

*Click **one** circle only.*

- ☐ Yes
- ☐ No

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

*Click **one** circle only.*

- ☐ Yes
- ☐ No

**12. Do students in your school have access to these resources?**

*Click **one** circle for each line.*

- |                              | Yes                   | No                    |
|------------------------------|-----------------------|-----------------------|
| a) A library or media center | <input type="radio"/> | <input type="radio"/> |
| b) High speed internet       | <input type="radio"/> | <input type="radio"/> |

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

*Click **one** circle for each line.*

<b>A. General School Resources</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Not at all	A little	Some	A lot	

a)	Instructional materials (e.g., textbooks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b)	Supplies (e.g., papers, pencils, materials)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c)	School buildings and grounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d)	Heating/cooling and lighting systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e)	Instructional space (e.g., classrooms)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f)	Technologically competent staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g)	Audio-visual resources for delivery of instruction (e.g., interactive white boards, digital projectors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h)	Digital devices for student use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i)	Resources for students with disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 13. (continued)

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

*Click **one** circle for each line.*

<b>B. Resources for Mathematics Instruction</b>	<b>Not at all</b>	<b>A little</b>	<b>Some</b>	<b>A lot</b>
a) Teachers with a specialization in mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Computer software/applications for mathematics instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Library resources relevant to mathematics instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Calculators for mathematics instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Concrete objects or materials to help students understand quantities or procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Click **one** circle for each line.*

<b>C. Resources for Science Instruction</b>	<b>Not at all</b>	<b>A little</b>	<b>Some</b>	<b>A lot</b>
a) Teachers with a specialization in science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Computer software/applications for science instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Library resources relevant to science instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- d) Science equipment and materials for experiments ☐ ☐ ☐ ☐

### School Emphasis on Academic Success

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

Click **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"/>

#### 14. (continued)

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

Click **one** circle for each line.

	Very high	High	Medium	Low	Very low
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"/>

### School Emphasis on Environmental Sustainability

#### 15. How much do you agree with these statements?



Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) This school has a shared vision about its role in supporting environmental sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) This school regularly reviews its practices to make them more environmentally sustainable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) There is a schoolwide approach to teaching environmental sustainability to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) This school teaches students to appreciate the natural environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) This school teaches students how to take action to protect the natural environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) This school encourages teachers to learn about teaching environmental sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) This school promotes environmental sustainability within the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) This school promotes participation in networks or projects related to environmental sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### School Discipline and Safety

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

Click **one** circle for each line.

	Not a problem	Minor problem	Moderate problem	Serious problem
a) Arriving late at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Absenteeism (i.e., unjustified absences)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Classroom disturbance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Cheating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Profanity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Vandalism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Theft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Intimidation or verbal abuse among students (including texting, emailing, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |   |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| i) Physical fights among students   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j) Intimidation or verbal abuse of teachers or staff<br>(including texting, emailing, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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

Click **one** circle for each line.

- |                                   | Not a<br>problem      | Minor<br>problem      | Moderate<br>problem   | Serious<br>problem    |
|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Arriving late or leaving early | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Absenteeism                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**School Readiness**

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

Click **one** circle for each line.

- |  | Less<br>than 25%      | 25–50%                | 51–75%                | More<br>than 75%      |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Recognize most of the letters of the alphabet | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Read some words                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Read sentences                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Write letters of the alphabet                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Write their names                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Write words other than their names            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**18. (continued)**

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

Click **one** circle for each line.

- |  | Less<br>than 25%      | 25–50%                | 51–75%                | More<br>than 75%      |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| g) Count up to 100 or higher           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) Recognize written numbers from 1-10 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- |    |  |                       |                       |                       |                       |
|----|--|-----------------------|-----------------------|-----------------------|-----------------------|
| i) | Recognize written numbers higher than 10 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j) | Write numbers from 1-10                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k) | Do simple addition                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l) | Do simple subtraction                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

### Principal's Experience and Education

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

years

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

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

years

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

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

Click **one** circle only.

- ☐ Did not complete Bachelor's degree (4-year college program)
- ☐ Bachelor's degree (4-year college program)
- ☐ Master's degree or professional degree (MD, DDS, lawyer, minister)
- ☐ Doctorate (Ph.D., Ed.D.)

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

Click **one** circle for each line.

- |   | Yes                   | No                    |
|---|-----------------------|-----------------------|
| a) Principal Certification  | <input type="radio"/> | <input type="radio"/> |
| b) Master's degree or professional degree (MD, DDS, lawyer, minister) | <input type="radio"/> | <input type="radio"/> |
| c) Doctorate (Ph.D., Ed.D.)   | <input type="radio"/> | <input type="radio"/> |

### COVID-19 Pandemic

**23. For how long was your school fully closed for in-person instruction because of the COVID-19 pandemic?**

Click **one** circle for each line.

**The school did not    Less than 1    1 to 3    4 to 6    More than 6**

	fully close	month	months	months	months
a) 2019 – 2020 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) 2020 – 2021 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) 2021 – 2022 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) 2022 – 2023 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

To submit your completed questionnaire, please click the “Finish” button.

## School Questionnaire

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

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

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

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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 "Back" 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 click on the "Finish" button at the end of the last question in order to submit your answers.

Thank you.

NCES is authorized to collect information from the questionnaire under the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). Your responses will be combined with those from other participants to produce summary statistics and reports.

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### School Enrollment and Characteristics

#### 1. What is the total enrollment of students in your school as of March 20, 2023?

students

*Type in the number.*

#### 2. What is the total enrollment of eighth-grade students in your school as of March 20, 2023?

students

Type in the number.

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

Click **one** circle for each line.

	0 to 10%	11 to 25%	26 to 50%	More than 50%
a) Come from economically disadvantaged homes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Come from economically affluent homes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4. Around the 1st of October 2022, what percentage of students at this school were eligible to receive free or reduced-price lunches through the National School Lunch Program?**

percentage of students

Type in the number.

**5. Approximately what percentage of students in your school have English as their native language?**

Click **one** circle only.

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

**6. Of the students currently enrolled in your school, what percentage has been identified as limited-English proficient (LEP)/English language learners (ELL)?**

Click **one** circle only.

- ☐ 0%
- ☐ 1-5%
- ☐ 6-10%
- ☐ 11-25%
- ☐ 26-50%
- ☐ 51-75%
- ☐ 76-90%

☐ Over 90%

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

Click **one** circle only.

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

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

Click **one** circle only.

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

**Instructional Time**

**For the eighth-grade students in your school:**

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

days

Type in the number.

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

minutes

Type in the number of minutes per day.

Please convert the number of hours into minutes.

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

Click **one** circle only.

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

### Resources and Technology

**9. How many computers (including tablets) does your school have for use by eighth-grade students?**

computers

*Type in the number.*

**10. Does your school have a science laboratory that can be used by eighth-grade students?**

*Click **one** circle only.*

- ☐ Yes
- ☐ No

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

*Click **one** circle only.*

- ☐ Yes
- ☐ No

**12. Do students in your school have access to these resources?**

*Click **one** circle for each line.*

- |                              | Yes                   | No                    |
|------------------------------|-----------------------|-----------------------|
| a) A library or media center | <input type="radio"/> | <input type="radio"/> |
| b) High speed internet       | <input type="radio"/> | <input type="radio"/> |

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

*Click **one** circle for each line.*

<b>A. General School Resources</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Not at all	A little	Some	A lot	



a)	Instructional materials (e.g., textbooks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b)	Supplies (e.g., papers, pencils, materials)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c)	School buildings and grounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d)	Heating/cooling and lighting systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e)	Instructional space (e.g., classrooms)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f)	Technologically competent staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g)	Audio-visual resources for delivery of instruction (e.g., interactive white boards, digital projectors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h)	Digital devices for student use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i)	Resources for students with disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 13. (continued)

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

*Click **one** circle for each line.*

<b>B. Resources for Mathematics Instruction</b>	<b>Not at all</b>	<b>A little</b>	<b>Some</b>	<b>A lot</b>
a) Teachers with a specialization in mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Computer software/applications for mathematics instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Library resources relevant to mathematics instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Calculators for mathematics instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Concrete objects or materials to help students understand quantities or procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Click **one** circle for each line.*

<b>C. Resources for Science Instruction</b>	<b>Not at all</b>	<b>A little</b>	<b>Some</b>	<b>A lot</b>
a) Teachers with a specialization in science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Computer software/applications for science instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Library resources relevant to science instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |    |   |                       |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|
| d) | Calculators for science instruction             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) | Science equipment and materials for experiments | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

### School Emphasis on Academic Success

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

Click **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"/>

#### 14. (continued)

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

Click **one** circle for each line.

	Very high	High	Medium	Low	Very low
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"/>

#### 15. How much do you agree with these statements about mathematics and science education within your school?

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) The school provides students with information about career options in mathematics and science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) The school has initiatives to promote student interest in mathematics and science (e.g., student clubs, competitions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) The school provides special activities in mathematics and science for interested students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) The school emphasizes the importance of studying mathematics and science in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### School Emphasis on Environmental Sustainability

#### 16. How much do you agree with these statements about your school?

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) This school has a shared vision about its role in supporting environmental sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) This school regularly reviews its practices to make them more environmentally sustainable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) There is a schoolwide approach to teaching environmental sustainability to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) This school teaches students to appreciate the natural environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) This school teaches students how to take action to protect the natural environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) This school encourages teachers to learn about teaching environmental sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) This school promotes environmental sustainability within the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) This school promotes participation in networks or projects related to environmental sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### School Discipline and Safety

**17. To what degree is each of the following a problem among eighth-grade students in your school?**

*Click **one** circle for each line.*

	<b>Not a problem</b>	<b>Minor problem</b>	<b>Moderate problem</b>	<b>Serious problem</b>
a) Arriving late at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Absenteeism (i.e., unjustified absences)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Classroom disturbance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Cheating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Profanity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Vandalism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**17. (continued)**

**To what degree is each of the following a problem among eighth-grade students in your school?**

*Click **one** circle for each line.*

	<b>Not a problem</b>	<b>Minor problem</b>	<b>Moderate problem</b>	<b>Serious problem</b>
g) Theft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Intimidation or verbal abuse among students (including texting, emailing, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Physical injury to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Intimidation or verbal abuse of teachers or staff (including texting, emailing, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) Physical injury to teachers or staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

*Click **one** circle for each line.*

	<b>Not a problem</b>	<b>Minor problem</b>	<b>Moderate problem</b>	<b>Serious problem</b>
a) Arriving late or leaving early	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Absenteeism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Principal's Experience and Education**

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

years

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

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

years

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

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

Click **one** circle only.

- ☐ Did not complete Bachelor's degree (4-year college program)
- ☐ Bachelor's degree (4-year college program)
- ☐ Master's degree or professional degree (MD, DDS, lawyer, minister)
- ☐ Doctorate (Ph.D., Ed.D.)

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

Click **one** circle for each line.

	Yes	No
a) Principal Certification	<input type="radio"/>	<input type="radio"/>
b) Master's degree or professional degree (MD, DDS, lawyer, minister)	<input type="radio"/>	<input type="radio"/>
c) Doctorate (Ph.D., Ed.D.)	<input type="radio"/>	<input type="radio"/>

### COVID-19 Pandemic

23. For how long was your school fully closed for in-person instruction because of the COVID-19 pandemic?

Click **one** circle for each line.

	The school did not fully close	Less than 1 month	1 to 3 months	4 to 6 months	More than 6 months
a) 2019 – 2020 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) 2020 – 2021 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) 2021 – 2022 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) 2022 – 2023 school year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

To submit your completed questionnaire, please click the “Finish” button.

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## Teacher Questionnaire

### 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 the United States.

Some of the questions in the questionnaire refer to the **"TIMSS class"** or **"this class."** This is the class that is identified with the login documentation, 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 the United States. 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.

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 "Back" button. To go to a particular section or item, please click on the corresponding link in the "Table of Contents." For some questions, you will be automatically taken to the appropriate next question based on your response.

When you have completed the questionnaire, please click on the "Finish" button at the end of the last question in order to submit your answers.

Thank you.

NCES is authorized to collect information from the questionnaire under the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). Your responses will be combined with those from other participants to produce summary statistics and reports.

This survey is estimated to take an average of 35 minutes, including time for reviewing instructions, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing burden to: Trends in International Mathematics and Science Study (TIMSS), National Center for Education Statistics, Potomac Center Plaza (PCP), 550 12th St., SW, 4th floor, Washington, DC 20202.

### About You

#### 1. What year did you start teaching?

*Please type in a year.*

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

years

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

**3. Which of these describes you?**

*Click **one** circle only.*

☐ Female

☐ Male

**4. How old are you?**

*Click **one** circle only.*

☐ Under 25

☐ 25–29

☐ 30–39

☐ 40–49

☐ 50–59

☐ 60 or more

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

*Click **one** circle only.*

☐ Did not complete high school

☐ High school graduate

**(If you have not completed any college, you will be directed to Q7)**

☐ Associate's degree (2-year college program)

☐ Bachelor's degree (4-year college program)

☐ Master's degree or professional degree (MD, DDS, lawyer, minister)

☐ Doctorate (Ph.D., Ed.D.)

**6. A. During your college or university education, what was your major or main area(s) of study?**

*Click **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) | English                      | <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?**

*Click **one** circle for each line.*

- |                     | <b>Yes</b>            | <b>No</b>             |
|---------------------|-----------------------|-----------------------|
| 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"/> |

### **School Emphasis on Academic Success**

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

*Click **one** circle for each line.*

- |  | <b>Very high</b>      | <b>High</b>           | <b>Medium</b>         | <b>Low</b>            | <b>Very low</b>       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 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                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

that students are ready to learn

## 7. (continued)

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

Click **one** circle for each line.

	Very high	High	Medium	Low	Very low
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"/>

## School Environment

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

Click **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

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

Click **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"/>

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

*Click 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**

**11. A. How many students are in this class?**

students

*Type in the number.*

**B. How many of the students in #11A are in fourth grade?**

fourth-grade students

Type in the number.

**12. How many fourth-grade students experience difficulties understanding spoken English?**

students in this class

Type in the number.

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

Click **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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Ask students to explain their answers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Communicate goals or objectives for the lesson to the students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Ask students to complete challenging exercises that require them to go beyond the instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Encourage classroom discussions among students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Link new content to students' prior knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Ask students to decide their own problem solving procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

Click **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 ☐ ☐ ☐
- i) Students with difficulties understanding the language of instruction ☐ ☐ ☐

### Teaching Mathematics to the TIMSS Class

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

minutes per week

*Type in the number of minutes per week.*

*Please convert the number of hours into minutes.*

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

*Click **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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Listen to me explain how to solve problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Memorize rules, procedures, and facts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Practice procedures on their own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Apply what they have learned to new problem situations on their own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Work problems together in the whole class with direct guidance from me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Work in mixed ability groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Work in same ability groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

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

*Click **one** circle only.*

- ☐ Yes, with unrestricted use
- ☐ Yes, with restricted use
- ☐ No

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

Click **one** circle only.

- ☐ Yes
- ☐ No

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

Click **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?**

Click **one** circle only.

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

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

Click **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 ☐ ☐ ☐ ☐

f) Take a test ☐ ☐ ☐ ☐

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

*Click **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"/>

### Mathematics Topics Taught to the TIMSS Class

**20. 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.”**

*Click **one** circle for each line.*

A. Number	Mostly taught before this year	Mostly taught this year	Not yet taught
a) Recognize place value and order whole numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Add and subtract up to 4-digit numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Multiply up to 3-digit by 1-digit and 2-digit by 2-digit numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Divide up to 3-digit by 1-digit numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Solve problems with odd/even numbers, multiples, or factors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Round or make estimations with whole numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Find the missing number or operation in a number sentence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Extend a number pattern or find the missing number in a pattern	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Represent, compare, and order fractions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |  |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|
| j) Add and subtract simple fractions                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k) Represent, compare, and order decimals up to two decimal places | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l) Add and subtract with decimals up to two decimal places         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**20. (continued)**

**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.”**

*Click **one** circle for each line.*

**B. Measurement and Geometry**

- |   | <b>Mostly taught before this year</b> | <b>Mostly taught this year</b> | <b>Not yet taught</b> |
|---|---------------------------------------|--------------------------------|-----------------------|
| a) Measure, estimate, add, and subtract lengths   | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| b) Add and subtract mass, volume, or time in appropriate units  | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| c) Find perimeters of polygons  | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| d) Find areas of shapes covered with squares or volumes of shapes filled with cubes                               | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| e) Recognize and draw parallel and perpendicular lines  | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| f) Compare and draw angles  | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| g) Describe and draw common two-dimensional shapes (e.g., circles, triangles, quadrilaterals)                     | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| h) Describe and draw common three-dimensional shapes (e.g., cubes, rectangular solids, cones, cylinders, spheres) | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |

*Click **one** circle for each line.*

**C. Data**

- |   | <b>Mostly taught before this year</b> | <b>Mostly taught this year</b> | <b>Not yet taught</b> |
|---|---------------------------------------|--------------------------------|-----------------------|
| a) Read and interpret data displays               | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| b) Create or complete data displays               | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |
| c) Draw conclusions from two or more data sources | <input type="radio"/>                 | <input type="radio"/>          | <input type="radio"/> |

**Mathematics Homework for the TIMSS Class**



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

Click **one** circle only.

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

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

Click **one** circle for each line.

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

**Mathematics Assessment of the TIMSS Class**

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

Click **one** circle for each line.

- |   | A lot                 | Some                  | None                  |
|---|-----------------------|-----------------------|-----------------------|
| a) Observing students as they work                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Asking students to answer questions during class | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Short, regular written assessments               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Longer tests (e.g., unit tests or exams)         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Long-term projects                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Professional Development to Teach Mathematics**

**23.**

**A. In the past two years, have  
you participated in**

**B. Do you need future  
professional development in**

professional development in  
any of the following?

Click **one** circle for each line.

any of the following?

Click **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"/>

### Teaching Science to the TIMSS Class

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

Click **one** circle only.

- ☐ Yes
- ☐ No

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

minutes per week

Type in the number of minutes per week.

Please convert the number of hours into minutes.

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

Click **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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Observe natural phenomena such as the weather or a plant growing and describe what they see	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |    |   |                       |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|
| c) | Watch me demonstrate an experiment or investigation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) | Read their textbooks or other resource materials    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) | Memorize facts and principles                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) | Do field work outside the class                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) | Work in mixed ability groups                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) | Work in same ability groups                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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

*Click **one** circle for each line.*

- |  | <b>A lot</b>          | <b>Some</b>           | <b>None</b>           |
|--|-----------------------|-----------------------|-----------------------|
| a) Encouraging students to ask questions about scientific phenomena                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Having students predict the outcomes of experiments or investigations                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Having students create representations (e.g., models, graphs) to explain scientific phenomena | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Having students use scientific concepts to explain phenomena                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Having students conduct experiments (hands-on or virtually)                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**27. How often do you do the following when teaching this class?**

*Click **one** circle for each line.*

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

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

Click **one** circle for each line.

Yes

No

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

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

Click **one** circle only.

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

**Using Digital Devices for Teaching Science to the TIMSS Class**

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

Click **one** circle only.

- ☐ Yes
- ☐ No

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

Click **one** circle for each line.

Yes

No

- a) The class has digital devices for each student to use ☐ Yes ☐ No
- b) The class has digital devices that students can share ☐ Yes ☐ No
- c) The school has digital devices that the class can use sometimes ☐ Yes ☐ No
- d) Students bring their own digital devices ☐ Yes ☐ No

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

Click **one** circle only.

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

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

Click **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"/>

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

Click **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"/>

**Science Topics Taught to the TIMSS Class**

**32. 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.”**

*Click **one** circle for each line.*

**A. Life Science**

	<b>Mostly taught before this year</b>	<b>Mostly taught this year</b>	<b>Not yet taught</b>
a) Basic differences between living and nonliving things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Defining characteristics of major groups of living things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Functions of major structures in living things (e.g., roots in plants)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Life cycle stages of common plants and animals (e.g., flowering plants, frogs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Inherited characteristics of living things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) How living things survive in their environments (e.g., physical characteristics, behaviors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) How human actions impact the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Common ecosystems and their organisms (e.g., forest, desert)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Interpreting simple food chains	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Competition within ecosystems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) Ways for humans to maintain good health and avoid illness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**32. (continued)**

**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.”**

*Click **one** circle for each line.*

**B. Physical Science**

	<b>Mostly taught before this year</b>	<b>Mostly taught this year</b>	<b>Not yet taught</b>
a) Solids, liquids, gases, and how their shapes and volumes differ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |   |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|
| b) Grouping objects based on their physical properties                                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Examples of mixtures and how they can be separated (e.g., filtration, evaporation) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Magnetic attraction and repulsion  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Examples of physical and chemical changes in everyday life                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) How to make solids dissolve faster in liquids (e.g., stirring, heating)            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

### 32. (continued)

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.”

Click **one** circle for each line.

- | B. Physical Science   | Mostly taught<br>before this<br>year | Mostly<br>taught<br>this year | Not yet<br>taught     |
|---|--------------------------------------|-------------------------------|-----------------------|
| g) Concentration of solutions   | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |
| h) Sources of energy (e.g., the Sun, wind, water, coal, oil, and gas)           | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |
| i) How light is related to shadows, reflections, and rainbows                   | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |
| j) How vibrations are related to sound  | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |
| k) Movement of heat from hotter to cooler objects                               | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |
| l) Simple electrical circuits   | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |
| m) How motion is affected by forces (e.g., gravity, pushing, pulling, friction) | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |
| n) Examples of simple machines (e.g., levers, ramps)                            | <input type="radio"/>                | <input type="radio"/>         | <input type="radio"/> |

### 32. (continued)

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.”

Click **one** circle for each line.

- | C. Earth Science | Mostly | Mostly | Not yet |
|------------------|--------|--------|---------|
|------------------|--------|--------|---------|

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

### Science Homework for the TIMSS Class

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

Click **one** circle only.

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

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

Click **one** circle for each line.

	Always or almost always	Sometimes	Never or almost never
a) Correct assignments and give feedback to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Discuss the homework in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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

### Science Assessment of the TIMSS Class

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

*Click **one** circle for each line.*

	A lot	Some	None
a) Observing students as they work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Asking students to answer questions during class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Short, regular written assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Longer tests (e.g., unit tests or exams)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Long-term projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Professional Development to Teach Science

**35.**

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

*Click **one** circle for each line.*

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

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

To submit your completed questionnaire, please click the “Finish” button.

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**Teacher Questionnaire**  
**Mathematics**

**Teacher Questionnaire**  
**Mathematics**

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

Some of the questions in the questionnaire refer to the **"TIMSS class"** or **"this class."** This is the class that is identified with the login documentation, 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 the United States. 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.

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 "Back" button. To go to a particular section or item, please click on the corresponding link in the "Table of Contents." For some questions, you will be automatically taken to the appropriate next question based on your response.

When you have completed the questionnaire, please click on the "Finish" button at the end of the last question in order to submit your answers.

Thank you.

NCES is authorized to collect information from the questionnaire under the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). Your responses will be combined with those from other participants to produce summary statistics and reports.

This survey is estimated to take an average of 35 minutes, including time for reviewing instructions, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing burden to: Trends in International Mathematics and Science Study (TIMSS), National Center for Education Statistics, Potomac Center Plaza (PCP), 550 12th St., SW, 4th floor, Washington, DC 20202.

**About You**

**1. What year did you start teaching?**

Please type in a year.

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

years

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

**3. Which of these describes you?**

Click **one** circle only.

- ☐ Female
- ☐ Male

**4. How old are you?**

Click **one** circle only.

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

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

Click **one** circle only.

- ☐ Did not complete high school
- ☐ High school graduate

**(If you have not completed any college, you will be directed to Q7)**

- ☐ Associate's degree (2-year college program)
- ☐ Bachelor's degree (4-year college program)
- ☐ Master's degree or professional degree (MD, DDS, lawyer, minister)
- ☐ Doctorate (Ph.D., Ed.D.)

**6. During your college or university education, what was your major or main area(s) of study?**

Click **one** circle for each line.

---

	Yes	No
a) Mathematics	<input type="radio"/>	<input type="radio"/>
b) Biology	<input type="radio"/>	<input type="radio"/>
c) Physics	<input type="radio"/>	<input type="radio"/>
d) Chemistry	<input type="radio"/>	<input type="radio"/>
e) Earth Science	<input type="radio"/>	<input type="radio"/>
f) Education–Mathematics	<input type="radio"/>	<input type="radio"/>
g) Education–Science	<input type="radio"/>	<input type="radio"/>
h) Education–General	<input type="radio"/>	<input type="radio"/>
i) Other	<input type="radio"/>	<input type="radio"/>

### School Emphasis on Academic Success

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

Click **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"/>

#### 7. (continued)

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

Click **one** circle for each line.

Very high	High	Medium	Low	Very low
-----------	------	--------	-----	----------

- |    |   |                       |                       |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 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"/> |

### School Environment

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

Click **one** circle for each line.

- |   | Agree<br>a lot        | Agree<br>a little     | Disagree<br>a little  | Disagree<br>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

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

Click **one** circle for each line.

- |   | Very often            | Often                 | Sometimes             | Never or<br>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"/> |

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

*Click **one** circle for each line.*

- |   | <b>Agree<br/>a lot</b> | <b>Agree<br/>a little</b> | <b>Disagree<br/>a little</b> | <b>Disagree<br/>a lot</b> |
|---|------------------------|---------------------------|------------------------------|---------------------------|
| 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**

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

students

*Type in the number.*

**12. How many eighth-grade students experience difficulties understanding spoken English?**

students in this class

*Type in the number.*

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

*Click **one** circle for each line.*

- | <b>Every<br/>or<br/>almost</b> | <b>About half<br/>the lessons</b> | <b>Some<br/>lessons</b> | <b>Never</b> |
|--------------------------------|-----------------------------------|-------------------------|--------------|
|--------------------------------|-----------------------------------|-------------------------|--------------|

every  
lesson

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

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

Click **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"/> |

**Teaching Mathematics to the TIMSS Class**

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

minutes per week

Type in the number of minutes per week.

Please convert the number of hours into minutes.

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



Click **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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Listen to me explain how to solve problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Memorize rules, procedures, and facts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Practice procedures on their own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Apply what they have learned to new problem situations on their own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Work problems together in the whole class with direct guidance from me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Work in mixed ability groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Work in same ability groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**17. Which best describes the mathematics course you are teaching to the class with the TIMSS students?**

Click **one** circle only.

- ☐ Basic or general eighth-grade math (not algebra or pre-algebra)
- ☐ Pre-algebra or introduction to algebra
- ☐ Two-year pre-algebra
- ☐ Algebra I (one-year course)
- ☐ Algebra I (first year of a two-year Algebra I course)
- ☐ Algebra I (second year of two-year Algebra I course)
- ☐ Geometry
- ☐ Algebra II
- ☐ Integrated or sequential math
- ☐ Other math class

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

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

Click **one** circle only.

- ☐ Yes, with unrestricted use
- ☐ Yes, with restricted use
- ☐ No

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

Click **one** circle only.

- ☐ Yes
- ☐ No

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

Click **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?**

Click **one** circle only.

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

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

Click **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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

problems

- |    |   |                       |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|
| 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"/> |

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

Click **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"/> |

**Mathematics Topics Taught to the TIMSS Class**

**21. 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 eighth 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 eighth-grade curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Click **one** circle for each line.

- | A. Number  | Mostly taught before this year | Mostly taught this year | Not yet taught        |
|--|--------------------------------|-------------------------|-----------------------|
| a) Add and subtract positive and negative numbers  | <input type="radio"/>          | <input type="radio"/>   | <input type="radio"/> |
| b) Find and use factors, multiples, positive powers, or square roots of positive whole numbers | <input type="radio"/>          | <input type="radio"/>   | <input type="radio"/> |
| c) Compare fractions and decimals  | <input type="radio"/>          | <input type="radio"/>   | <input type="radio"/> |
| d) Add, subtract, and multiply with fractions and decimals                                     | <input type="radio"/>          | <input type="radio"/>   | <input type="radio"/> |
| e) Divide fractions and decimals by a whole number   | <input type="radio"/>          | <input type="radio"/>   | <input type="radio"/> |

- |    |   |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|
| f) | Determine proportions and ratios  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) | Find percentages and convert between percentages and fractions/decimals | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Click **one** circle for each line.

### B. Algebra

- |    | Mostly<br>taught<br>before this<br>year  | Mostly<br>taught<br>this year | Not yet<br>taught     |                       |
|----|--|-------------------------------|-----------------------|-----------------------|
| a) | Simplify and compare algebraic expressions   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |
| b) | Solve simple linear equations  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |
| c) | Solve simple linear inequalities   | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |
| d) | Solve simultaneous linear equations (two variables)  | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |
| e) | Write expressions, equations, or inequalities to represent problems                        | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |
| f) | Interpret linear functions in graphs, tables, or words                                     | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |
| g) | Interpret simple non-linear functions (e.g., quadratic, cubic) in graphs, tables, or words | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |
| h) | Generalize linear and non-linear pattern relationships or sequences                        | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/> |

### 21. (continued)

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

If a topic was in the curriculum before eighth 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 eighth-grade curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Click **one** circle for each line.

### C. Geometry and Measurement

- |    | Mostly<br>taught<br>before<br>this year  | Mostly<br>taught<br>this<br>year | Not yet<br>taught     |                       |
|----|--|----------------------------------|-----------------------|-----------------------|
| a) | Read and plot points in the Cartesian plane  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| b) | Recognize and draw different types of angles and lines   | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| c) | Use geometric properties of polygons to calculate lengths, perimeter, and area (including the Pythagorean Theorem) | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| d) | Determine the results of geometric translation, reflection, and rotation   | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |
| e) | Use properties of similar and congruent figures  | <input type="radio"/>            | <input type="radio"/> | <input type="radio"/> |

- f) Calculate surface area and volume of common three-dimensional shapes ☐ ☐ ☐

Click **one** circle for each line.

#### D. Data and Probability

	Mostly taught before this year	Mostly taught this year	Not yet taught
a) Interpret data from one or more data sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Represent data in graphs, charts, or plots	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Calculate and interpret the mean or median of a data distribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Calculate probabilities of simple and compound events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Mathematics Homework for the TIMSS Class

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

Click **one** circle only.

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

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

Click **one** circle for each line.

	Always or almost always	Sometimes	Never or almost never
a) Correct assignments and give feedback to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Have students correct their own homework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Discuss the homework in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Monitor whether or not the homework was completed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Use the homework to contribute towards students' grades or marks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Mathematics Assessment of the TIMSS Class

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

*Click one circle for each line.*

	A lot	Some	None
a) Observing students as they work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Asking students to answer questions during class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Short, regular written assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Longer tests (e.g., unit tests or exams)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Long-term projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Professional Development to Teach Mathematics

**24.**

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

*Click one circle for each line.*

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

*Click 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"/>

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

To submit your completed questionnaire, please click the "Finish" button.

**Teacher Questionnaire**  
**Science**

**Teacher Questionnaire**  
**Science**

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

Some of the questions in the questionnaire refer to the **"TIMSS class"** or **"this class."** This is the class that is identified with the login documentation, 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 the United States. 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.

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 "Back" button. To go to a particular section or item, please click on the corresponding link in the "Table of Contents." For some questions, you will be automatically taken to the appropriate next question based on your response.

When you have completed the questionnaire, please click on the "Finish" button at the end of the last question in order to submit your answers.

Thank you.

NCES is authorized to collect information from the questionnaire under the Education Sciences Reform Act of 2002 (ESRA 2002, 20 U.S.C. §9543). You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. All of the information you provide may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S.C. §9573 and 6 U.S.C. §151). Your responses will be combined with those from other participants to produce summary statistics and reports.

This survey is estimated to take an average of 35 minutes, including time for reviewing instructions, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing burden to: Trends in International Mathematics and Science Study (TIMSS), National Center for Education Statistics, Potomac Center Plaza (PCP), 550 12th St., SW, 4th floor, Washington, DC 20202.

**About You**

**1. What year did you start teaching?**

Please type in a year.

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

years

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

**3. Which of these describes you?**

Click **one** circle only.

- ☐ Female
- ☐ Male

**4. How old are you?**

Click **one** circle only.

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

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

Click **one** circle only.

- ☐ Did not complete high school
- ☐ High school graduate

**(If you have not completed any college, you will be directed to Q7)**

- ☐ Associate's degree (2-year college program)
- ☐ Bachelor's degree (4-year college program)
- ☐ Master's degree or professional degree (MD, DDS, lawyer, minister)
- ☐ Doctorate (Ph.D., Ed.D.)

**6. During your college or university education, what was your major or main area(s) of study?**

Click **one** circle for each line.

---



	Yes	No
a) Mathematics	<input type="radio"/>	<input type="radio"/>
b) Biology	<input type="radio"/>	<input type="radio"/>
c) Physics	<input type="radio"/>	<input type="radio"/>
d) Chemistry	<input type="radio"/>	<input type="radio"/>
e) Earth Science	<input type="radio"/>	<input type="radio"/>
f) Education–Mathematics	<input type="radio"/>	<input type="radio"/>
g) Education–Science	<input type="radio"/>	<input type="radio"/>
h) Education–General	<input type="radio"/>	<input type="radio"/>
i) Other	<input type="radio"/>	<input type="radio"/>

### School Emphasis on Academic Success

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

Click **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"/>

#### 7. (continued)

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

Click **one** circle for each line.

Very high	High	Medium	Low	Very low
-----------	------	--------	-----	----------

- |    |   |                       |                       |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 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"/> |

### School Environment

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

Click **one** circle for each line.

- |   | Agree<br>a lot        | Agree<br>a little     | Disagree<br>a little  | Disagree<br>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

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

Click **one** circle for each line.

- |   | Very often            | Often                 | Sometimes             | Never or<br>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"/> |

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

*Click **one** circle for each line.*

- |   | <b>Agree<br/>a lot</b> | <b>Agree<br/>a little</b> | <b>Disagree<br/>a little</b> | <b>Disagree<br/>a lot</b> |
|---|------------------------|---------------------------|------------------------------|---------------------------|
| 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**

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

students

*Type in the number.*

**12. How many eighth-grade students experience difficulties understanding spoken English?**

students in this class

*Type in the number.*

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

*Click **one** circle for each line.*

- | <b>Every or<br/>almost<br/>every lesson</b> | <b>About half<br/>the lessons</b> | <b>Some<br/>lessons</b> | <b>Never</b> |
|---|-----------------------------------|-------------------------|--------------|
|---|-----------------------------------|-------------------------|--------------|

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

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

*Click **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"/> |

**Teaching Science to the TIMSS Class**

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

minutes per week

*Type in the number of minutes per week.*

*Please convert the number of hours into minutes.*

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

*Click **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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Observe natural phenomena and describe what they see	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Watch me demonstrate an experiment or investigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Read their textbooks or other resource materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Memorize facts and principles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Use scientific formulas and laws to solve routine problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Do field work outside of class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Work in mixed ability groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Work in same ability groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**17. Which best describes the science course you are teaching to the class with the TIMSS students?**

Click **one** circle only.

- ☐ General science (several content areas of science taught separately)
- ☐ Integrated science (several content areas of science combined and taught together throughout the year)
- ☐ Life science (e.g., biology, ecosystems, human health)
- ☐ Physical science (e.g., physics or chemistry)
- ☐ Earth science (e.g., geology, Earth and the solar system, fossils)

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

Click **one** circle for each line.

	A lot	Some	None
a) Encouraging students to ask questions about scientific phenomena	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Having students predict the outcomes of experiments or investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Having students discuss variation in data from experiments or	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

investigations

- |    |   |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|
| d) | Having students use multiple sources of evidence to explain scientific phenomena              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) | Having students create representations (e.g., models, graphs) to explain scientific phenomena | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) | Having students use scientific concepts to explain phenomena                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) | Having students argue about science questions   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) | Having students conduct experiments (hands-on or virtually)                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**19. How often do you do the following when teaching this class?**

*Click **one** circle for each line.*

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

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

*Click **one** circle for each line.*

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

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

*Click **one** circle only.*

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

### Using Digital Devices for Teaching Science to the TIMSS Class

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

Click **one** circle only.

- ☐ Yes
- ☐ No

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

Click **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?

Click **one** circle only.

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

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

Click **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"/>

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

Click **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"/>

Science Topics Taught to the TIMSS Class

24. 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 eighth 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 eighth-grade curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Click **one** circle for each line.

	Mostly taught before this year	Mostly taught this year	Not yet taught
A. Biology			
a) Defining characteristics of major taxonomic groups of organisms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Structures and functions of major organs and organ systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) How animals maintain stable body conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



d)	Major structures and functions in plant and animal cells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e)	Basic processes of photosynthesis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f)	Basic processes of cellular respiration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g)	Life cycles of mammals, birds, amphibians, insects, and plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h)	Processes for reproduction and inheritance in plants and animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i)	How variation in traits relates to natural selection and changes in life on Earth over time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j)	Interpreting food web diagrams and the flow of energy in ecosystems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k)	Cycling of water, oxygen, and carbon through ecosystems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l)	Predation, competition, and symbiosis in ecosystems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m)	How changes in an ecosystem affect the populations of organisms that live there	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n)	How human actions can positively or negatively impact the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o)	How to prevent transmission of common diseases among humans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p)	Importance of diet, exercise, and lifestyle choices for maintaining good human health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 24. (continued)

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 eighth 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 eighth-grade curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Click **one** circle for each line.

		Mostly taught before this year	Mostly taught this year	Not yet taught
<b>B. Chemistry</b>				
a)	Structure of atoms (i.e., protons, neutrons, electrons) and molecules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b)	Differences among elements, compounds, and mixtures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c)	How to interpret the periodic table of elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d)	Classifying matter according to physical and chemical properties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

e)	Methods for separating mixtures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f)	Solution concentration and rate of dissolving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g)	Properties of acids and bases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h)	Matter and energy in chemical reactions, including evidence of chemical change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i)	How to change the rate of chemical reactions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j)	Chemical bonds (e.g., role of electrons)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 24. (continued)

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 eighth 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 eighth-grade curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Click **one** circle for each line.

C. Physics		Mostly taught before this year	Mostly taught this year	Not yet taught
a)	Separation and motion of atoms/molecules in solids, liquids, and gases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b)	Characteristics of matter and energy during state changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c)	Types of energy (e.g., kinetic, potential, thermal) and examples of energy transformations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d)	Thermal conductivity and the transfer of thermal energy between objects of different temperatures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e)	Reflection, refraction, or absorption of light	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f)	Characteristics of sound (i.e., amplitude, frequency) and its transmission, reflection, and absorption	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g)	Electrical conductors and simple electrical circuits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h)	Polarity, strength, and uses of permanent magnets and electromagnets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i)	Speed as distance changing over time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j)	Acceleration as speed changing over time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k)	Effects of common forces on speed and direction of motion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l)	Density and buoyancy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- m) Functioning of simple machines (e.g., levers, inclined planes, pulleys) ☐ ☐ ☐

#### 24. (continued)

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 eighth 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 eighth-grade curriculum for this year or you have not yet taught a topic, choose “Not yet taught.”

Click **one** circle for each line.

#### D. Earth Science

	Mostly taught before this year	Mostly taught this year	Not yet taught
a) Earth's structure and distribution of water on its surface	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Gases present in Earth's atmosphere and their relative abundance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Changes in temperature and pressure based on altitude	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) How geological events impact Earth's surface	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Processes in the rock cycle (e.g., lava cooling, weathering)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) How fossils form and what they show about Earth's history	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Processes in Earth's water cycle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Differences between weather and climate and geographic factors affecting climate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Evidence for climate change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Use and conservation of Earth's resources, including land, water, and renewable and nonrenewable energy sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) Phenomena caused by the motion of Earth and the Moon (e.g., seasons, tides, Moon phases)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l) The Sun as a star and physical features of the Earth, Moon, and other planets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Science Homework for the TIMSS Class

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

Click **one** circle only.

- ☐ I do not assign science homework
- ☐ Less than once a week
- ☐ 1 or 2 times a week

☐ 3 or 4 times a week

☐ Every day

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

*Click **one** circle for each line.*

	Always or almost always	Sometimes	Never or almost never
a) Correct assignments and give feedback to students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Have students correct their own homework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Discuss the homework in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Monitor whether or not the homework was completed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Use the homework to contribute towards students' grades or marks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Science Assessment of the TIMSS Class**

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

*Click **one** circle for each line.*

	A lot	Some	None
a) Observing students as they work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Asking students to answer questions during class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Short, regular written assessments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Longer tests (e.g., unit tests or exams)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Long-term projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Professional Development to Teach Science**

**27.**

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

*Click **one** circle for each line.*

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

*Click **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 environmentalism and sustainability into science instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

To submit your completed questionnaire, please click the "Finish" button.

## Directions

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

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

## Examples

### Example 1

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

#### Do you go to school?

Click **one** circle only.

☐ Yes

☐ No

### Example 2

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

#### How often do you do these things?

Click **one** circle for each line.

	Every day	Almost every day	Sometimes	Never
a) I talk with my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I play sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I ride a skateboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Example 3

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

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

Click **one** circle for each line.

Agree  
a lot

Agree  
a little

Disagree  
a little

Disagree  
a lot

- |                                 |                       |                       |                       |                       |
|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Watching movies is fun       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Ice cream tastes good        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Waking up early is difficult | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I enjoy doing chores         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- Read each question carefully, and pick the answer you think is best.
- Click the circle next to or under your answer.
- Ask for help if you do not understand something or are not sure how to answer.
- You may change your answers at any time before submitting the questionnaire.

## About You

### 1. A. Which of these describes you?

Click **one** circle only.

- ☐ Girl
- ☐ Boy

### 1. B. Are you Hispanic or Latino?

Click **one** circle only.

- ☐ Yes, I am Hispanic or Latino
- ☐ No, I am not Hispanic or Latino

### 1. C. Which of the following best describes you?

Check **all** that apply.

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Middle Eastern or North African
- ☐ Native Hawaiian or other Pacific Islander

## 2. A. When were you born?

### a) Month

*Click the circle next to the month you were born.*

- ☐ January
- ☐ February
- ☐ March
- ☐ April
- ☐ May
- ☐ June
- ☐ July
- ☐ August
- ☐ September
- ☐ October
- ☐ November
- ☐ December

## 2. B. When were you born?

### b) Year

*Click the circle next to the year you were born.*

- ☐ 2011
- ☐ 2012
- ☐ 2013
- ☐ 2014
- ☐ 2015
- ☐ 2016
- ☐ 2017
- ☐ Other



### 3. A. How often do you speak English at home?

Click **one** circle only.

- ☐ I always speak English at home
- ☐ I almost always speak English at home
- ☐ I sometimes speak English and sometimes speak another language at home
- ☐ I never speak English at home





### 3. B. What language do you speak at home (other than English)?

Check **all** that apply.

- ☐ Spanish
- ☐ Other (please specify)

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

Click **one** circle only.

- ☐ None or very few (0–10 books)  
This shows 10 books  

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

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

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


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



## 5. Do you have any of these things at your home?

Click **one** circle for each line.

	Yes	No
a) Your own computer or tablet	<input type="radio"/>	<input type="radio"/>
b) A shared computer or tablet you can use	<input type="radio"/>	<input type="radio"/>
c) A smartphone	<input type="radio"/>	<input type="radio"/>
d) Access to the internet	<input type="radio"/>	<input type="radio"/>
e) Study desk/table for your use	<input type="radio"/>	<input type="radio"/>
f) Your own room	<input type="radio"/>	<input type="radio"/>
g) A gaming system (e.g., PlayStation, Nintendo Switch, Xbox)	<input type="radio"/>	<input type="radio"/>

## 6. How many of the following devices are currently used in your home?

Click **one** circle for each line.

	None	One	Two	Three or more
a) Desktop or laptop computers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Tablet devices (e.g., iPad, Surface Pro, Kindle)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 7. Were your parents/guardians born in the United States? (“United States” includes the 50 states, its territories, the District of Columbia, and U.S. military bases abroad.)

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

### A. Parent/Guardian A

Click **one** circle only.

- ☐ Yes
- ☐ No
- ☐ I don't know
- ☐ Not applicable

## **B. Parent/Guardian B**

Click **one** circle only.

- ☐ Yes
- ☐ No
- ☐ I don't know
- ☐ Not applicable

## **8. Were you born in the United States?**

Click **one** circle only.

- ☐ Yes
- ☐ No

## **9. About how often are you absent from school?**

Click **one** circle only.

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

## **10. Have you ever repeated a grade in elementary school?**

Click **one** circle only.

- ☐ Yes
- ☐ No

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

Click **one** circle for each line.

	Every day	Almost every day	Sometimes	Never
a) I feel tired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I feel hungry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 12. How much do you agree with these statements?

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I can write and edit text on a computer, tablet, or smartphone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I can create school presentations using a computer, tablet, or smartphone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I can create tables, charts, and graphs using a computer, tablet, or smartphone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I can find information that I need online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I can tell if a website is trustworthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I can easily do new things on computers, laptops, or smartphones	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) I can help my friends or family members with using their computers, laptops, or smartphones	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 13. How much effort did you apply to succeed on this test?

Click **one** circle only.

- ☐ No effort at all
- ☐ Very little effort
- ☐ Some effort

☐ Quite a bit of effort

☐ A lot of effort

#### 14. How much do you agree with these statements?

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I care about the protection of plants and animals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) It makes me sad when nature is destroyed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I enjoy finding out what kinds of plants and animals live in my surrounding area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I enjoy being in nature (e.g., forests, parks, deserts)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Addressing climate change should be a high priority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 15. How often do you do these things to help the natural environment?

Click **one** circle for each line.

	Every day	Almost every day	Sometimes	Never
a) I try to reuse things (e.g., bags, bottles)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I try to use fewer resources (e.g., water, food)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I talk about how to help the environment (e.g., saving water, picking up trash)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I try to learn about environmental problems (e.g., climate change, endangered animals)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I try to participate in group activities to help the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I tell my friends when they are doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

things that harm the environment

**16. The following questions ask about activities you do outside of school.**

Click **one** circle for each line.

**Yes**

**No**

- a) Do you play on a sports team outside of school?
- b) Do you often play a musical instrument outside of school?
- c) Are you studying something in a class outside of school?
- d) Do you belong to a club outside of school (like Boy/Girl Scouts, 4-H, or Boys and Girls Club)?

## Your School

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

Click **one** circle for each line.

**Agree  
a lot**

**Agree  
a little**

**Disagree  
a little**

**Disagree  
a lot**

- a) I like being in school
- b) I feel safe when I am at school
- c) I feel like I belong at this school
- d) Teachers at my school care about me
- e) I am proud to go to this school
- f) I have friends at this school
- g) Students at this school like me the way I am

**18. During this school year, how often have other students from your school done any of the following things to you in person, through messaging, or through social media?**

Click **one** circle for each line.

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

## Mathematics in School

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

Click **one** circle only.

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

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

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I enjoy learning mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I wish I did not have to study mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Mathematics is boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I learn many interesting things in mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I like mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I like any schoolwork that involves numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) I like to solve mathematics problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) I look forward to mathematics lessons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Mathematics is one of my favorite subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) My teacher makes it clear what we should learn in each lesson	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) My teacher is easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) My teacher has clear answers to my questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) My teacher is good at explaining mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



- |    |  |                       |                       |                       |                       |
|----|--|-----------------------|-----------------------|-----------------------|-----------------------|
| e) | My teacher does a variety of things to help us learn       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) | My teacher explains a topic again when we don't understand | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) | My teacher gives me helpful feedback on my work            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) | My teacher asks me to show what I have learned             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) | My teacher asks me to explain my answers                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## 22. How often do these things happen in your mathematics lessons?

Click **one** circle for each line.

- |   | Every or almost every lesson | About half the lessons | Some lessons          | Never                 |
|---|------------------------------|------------------------|-----------------------|-----------------------|
| a) Students don't listen to what the teacher says               | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| b) There is too much noise for students to work well            | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| c) My teacher has to wait a long time for students to be quiet  | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| d) Students interrupt the teacher                               | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| e) Students do not follow the classroom rules                   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| f) Other students' behavior makes it hard for me to concentrate | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |

## 23. How much do you agree with these statements about mathematics?

Click **one** circle for each line.

- |                                     | Agree a lot           | Agree a little        | Disagree a little     | Disagree a lot        |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I usually do well in mathematics | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- |  |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| b) Mathematics is harder for me than for many of my classmates | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) I am just not good at mathematics                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Mathematics is easy for me                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I am good at working out difficult mathematics problems     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Mathematics is harder for me than any other subject         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) Mathematics makes me confused                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Science in School

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

Click **one** circle only.

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

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

Click **one** circle for each line.

- |   | Agree<br>a lot        | Agree<br>a little     | Disagree<br>a little  | Disagree<br>a lot     |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I enjoy learning science                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) I wish I did not have to study science       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) Science is boring                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I learn many interesting things in science   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I like science                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) I look forward to learning science in school | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- |  |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| g) Science teaches me how things in the world work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) I like to do science experiments                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) Science is one of my favorite subjects          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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

*Click **one** circle for each line.*

- |  | <b>Agree<br/>a lot</b> | <b>Agree<br/>a little</b> | <b>Disagree<br/>a little</b> | <b>Disagree<br/>a lot</b> |
|--|------------------------|---------------------------|------------------------------|---------------------------|
| a) My teacher makes it clear what we should learn in each lesson | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| b) My teacher is easy to understand                              | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| c) My teacher has clear answers to my questions                  | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| d) My teacher is good at explaining science                      | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| e) My teacher does a variety of things to help us learn          | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| f) My teacher explains a topic again when we don't understand    | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| g) My teacher gives me helpful feedback on my work               | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| h) My teacher asks me to show what I have learned                | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| i) My teacher asks me to explain my answers                      | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |

**27. How often do these things happen in your science lessons?**

*Click **one** circle for each line.*

- | <b>Every or<br/>almost<br/>every<br/>lesson</b> | <b>About<br/>half<br/>the<br/>lessons</b> | <b>Some<br/>lessons</b> | <b>Never</b> |
|---|---|-------------------------|--------------|
|---|---|-------------------------|--------------|

- |   |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Students don't listen to what the teacher says               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) There is too much noise for students to work well            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) My teacher has to wait a long time for students to be quiet  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Students interrupt the teacher                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Students do not follow the classroom rules                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Other students' behavior makes it hard for me to concentrate | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## 28. How much do you agree with these statements about science?

Click **one** circle for each line.

- |  | Agree<br>a lot        | Agree<br>a little     | Disagree<br>a little  | Disagree<br>a lot     |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I usually do well in science                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Science is harder for me than for many of my classmates | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) I am just not good at science                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) Science is easy for me                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Science is harder for me than any other subject         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Science makes me confused                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## 29. Are you preparing for or have you participated in a science club, a science fair, or a science competition?

Click **one** circle only.

☐ Yes

☐ No

**Thank you!**

To submit your completed questionnaire, please click the "Finish" button.

## Directions

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

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

## Examples

### Example 1

**Do you go to school?**

Click **one** circle only.

☐ Yes

☐ No

### Example 2

**How often do you do these things?**

Click **one** circle for each line.

	Every day	Almost every day	Sometimes	Never
a) I talk with my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I play sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I ride a skateboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Example 3

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

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) Watching movies is fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- b) Ice cream tastes good ☐ ☐ ☐ ☐
- c) Waking up early is difficult ☐ ☐ ☐ ☐
- d) I enjoy doing chores ☐ ☐ ☐ ☐

- Read each question carefully, and pick the answer you think is best.
- Click the circle next to or under your answer.
- Ask for help if you do not understand something or are not sure how to answer.
- You may change your answers at any time before submitting the questionnaire.

## About You

### 1. A. Which of these describes you?

Click **one** circle only.

- ☐ Girl
- ☐ Boy

### 1. B. Are you Hispanic or Latino?

Click **one** circle only.

- ☐ Yes, I am Hispanic or Latino
- ☐ No, I am not Hispanic or Latino

### 1. C. Which of the following best describes you?

Check **all** that apply.

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Middle Eastern or North African
- ☐ Native Hawaiian or other Pacific Islander
- ☐ White

### 2. A. When were you born?

## **a) Month**

*Click the circle next to the month you were born.*

- ☐ January
- ☐ February
- ☐ March
- ☐ April
- ☐ May
- ☐ June
- ☐ July
- ☐ August
- ☐ September
- ☐ October
- ☐ November
- ☐ December

## **2. B. When were you born?**

### **b) Year**

*Click the circle next to the year you were born.*

- ☐ 2006
- ☐ 2007
- ☐ 2008
- ☐ 2009
- ☐ 2010
- ☐ 2011
- ☐ 2012
- ☐ 2013
- ☐ 2014

- ☐ Other

**3. A. How often do you speak English at home?**

Click **one** circle only.

- ☐ Always
- ☐ Almost always
- ☐ Sometimes
- ☐ Never

**3. B. What language do you speak at home (other than English)?**

Check **all** that apply.

- ☐ Spanish
- ☐ Other (please specify)

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

Click **one** circle only.

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

**5. Do you have any of these things at your home?**

Click **one** circle for each  
line.

Yes

No



- |   |                       |                       |
|---|-----------------------|-----------------------|
| a) Your own computer or tablet                                | <input type="radio"/> | <input type="radio"/> |
| b) A shared computer or tablet you can use                    | <input type="radio"/> | <input type="radio"/> |
| c) A smartphone   | <input type="radio"/> | <input type="radio"/> |
| d) Access to the internet                                     | <input type="radio"/> | <input type="radio"/> |
| e) Study desk/table for your use                              | <input type="radio"/> | <input type="radio"/> |
| f) Your own room  | <input type="radio"/> | <input type="radio"/> |
| g) A gaming system (e.g., PlayStation, Nintendo Switch, Xbox) | <input type="radio"/> | <input type="radio"/> |

**6. How many of the following devices are currently used in your home?**

*Click **one** circle for each line.*

- |   | None                  | One                   | Two                   | Three or more         |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Desktop or laptop computers                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) Tablet devices (e.g., iPad, Surface Pro, Kindle) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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

**7. What is the highest level of education completed by your parents/guardians?**

*Click **one** circle in each column.*

- |   | Parent /<br>Guardian A | Parent /<br>Guardian B |
|---|------------------------|------------------------|
| Less than high school                       | <input type="radio"/>  | <input type="radio"/>  |
| Some high school                            | <input type="radio"/>  | <input type="radio"/>  |
| High school graduate                        | <input type="radio"/>  | <input type="radio"/>  |
| Associate's degree (2-year college program) | <input type="radio"/>  | <input type="radio"/>  |

- |  |                       |                       |
|--|-----------------------|-----------------------|
| Bachelor's degree (4-year college program)                         | <input type="radio"/> | <input type="radio"/> |
| Master's degree or professional degree (MD, DDS, lawyer, minister) | <input type="radio"/> | <input type="radio"/> |
| Doctorate (Ph.D., Ed.D.)   | <input type="radio"/> | <input type="radio"/> |
| I don't know   | <input type="radio"/> | <input type="radio"/> |
| Not applicable   | <input type="radio"/> | <input type="radio"/> |

## 8. How far in your education do you expect to go?

Click **one** circle only.

- ☐ Finish middle school
- ☐ Finish high school
- ☐ Finish Associate's degree (2-year college program)
- ☐ Finish Bachelor's degree (4-year college program)
- ☐ Finish Master's degree or professional degree (MD, DDS, lawyer, minister)
- ☐ Finish Doctorate (Ph.D., Ed.D.)

## 9. Were your parents/guardians born in the United States? ("United States" includes the 50 states, its territories, the District of Columbia, and U.S. military bases abroad.)

### A. Parent/Guardian A

Click **one** circle only.

- ☐ Yes
- ☐ No
- ☐ I don't know
- ☐ Not applicable

### B. Parent/Guardian B

Click **one** circle only.

- ☐ Yes
- ☐ No

- ☐ I don't know
- ☐ Not applicable

**10. A. Were you born in the United States?**

*Click **one** circle only.*

- ☐ Yes
- ☐ No

**10. B. If you were not born in the United States, how old were you when you came to the United States?**

*Click **one** circle only.*

- ☐ Older than 10 years old
- ☐ 5 to 10 years old
- ☐ Younger than 5 years old

**11. About how often are you absent from school?**

*Click **one** circle only.*

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

**12. Have you ever repeated a grade?**

*Click **one** circle for each line.*

**Yes**

**No**

- a) In elementary school
- b) In middle or junior high school

- |                       |                       |
|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> |
| <input type="radio"/> | <input type="radio"/> |

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

*Click **one** circle for each line.*

---

**Every day    Almost every day    Sometimes    Never**

- |                  |                       |                       |                       |                       |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I feel tired  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) I feel hungry | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**14. How often do you use the internet to do the following tasks for mathematics or science schoolwork (including classroom tasks, homework, and studying outside of class)?**

*Click **one** circle for each line.*

---

- |  | <b>At least<br/>once<br/>a week</b> | <b>Once or<br/>twice<br/>a month</b> | <b>Never or<br/>almost<br/>never</b> |
|--|-------------------------------------|--------------------------------------|--------------------------------------|
| a) Access the textbook or other course materials                         | <input type="radio"/>               | <input type="radio"/>                | <input type="radio"/>                |
| b) Access assignments posted online by my teacher                        | <input type="radio"/>               | <input type="radio"/>                | <input type="radio"/>                |
| c) Collaborate with classmates on assignments or projects                | <input type="radio"/>               | <input type="radio"/>                | <input type="radio"/>                |
| d) Ask my teacher questions  | <input type="radio"/>               | <input type="radio"/>                | <input type="radio"/>                |
| e) Find information, articles, or tutorials about mathematics or science | <input type="radio"/>               | <input type="radio"/>                | <input type="radio"/>                |
| f) Access learning games or activities related to mathematics or science | <input type="radio"/>               | <input type="radio"/>                | <input type="radio"/>                |

**15. How much do you agree with these statements?**

*Click **one** circle for each line.*

---

- |  | <b>Agree<br/>a lot</b> | <b>Agree<br/>a little</b> | <b>Disagree<br/>a little</b> | <b>Disagree<br/>a lot</b> |
|--|------------------------|---------------------------|------------------------------|---------------------------|
| a) I can write and edit text on a computer, tablet, or smartphone                  | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| b) I can create school presentations using a computer, tablet, or smartphone       | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| c) I can create tables, charts, and graphs using a computer, tablet, or smartphone | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |

- |    |   |                       |                       |                       |                       |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|
| d) | I can find information that I need online   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) | I can tell if a website is trustworthy  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) | I can easily do new things on computers, laptops, or smartphones                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) | I can help my friends or family members with using their computers, laptops, or smartphones | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## 16. How much do you agree with these statements?

*Click **one** circle for each line.*

- |  | <b>Agree<br/>a lot</b> | <b>Agree<br/>a little</b> | <b>Disagree<br/>a little</b> | <b>Disagree<br/>a lot</b> |
|--|------------------------|---------------------------|------------------------------|---------------------------|
| a) I care about the protection of plants and animals                                   | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| b) Nature exists to benefit humans regardless of the consequences                      | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| c) The most important reason for protecting natural areas is so people can enjoy them  | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| d) I am confident that environmental problems will be solved by science and technology | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| e) It makes me sad when nature is destroyed by humans                                  | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| f) I enjoy finding out what kinds of plants and animals live in my surrounding area    | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| g) I enjoy being in nature (e.g., forests, parks, deserts)                             | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| h) Protecting nature is more important than economic growth                            | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| i) Addressing climate change should be a high priority                                 | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |

## 17. How often do you do these things to help the natural environment?

*Click **one** circle for each line.*

<b>Every day</b>	<b>Almost</b>	<b>Sometimes</b>	<b>Never</b>
------------------	---------------	------------------	--------------

every  
day

- |   |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I try to reuse things (e.g., bags, bottles)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) I try to use fewer resources (e.g., water, food)                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) I talk about how to help the environment (e.g., saving water, picking up trash)        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I try to learn about environmental problems (e.g., climate change, endangered animals) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I try to participate in group activities to help the environment                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) I tell my friends when they are doing things that harm the environment                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**18. How much effort did you apply to succeed on this test?**

Click **one** circle only.

- ☐ No effort at all
- ☐ Very little effort
- ☐ Some effort
- ☐ Quite a bit of effort
- ☐ A lot of effort

**19. The following questions ask about activities you do outside of school.**

Click **one** circle for each line.

**Yes**

**No**

- |   |                       |                       |
|---|-----------------------|-----------------------|
| a) Do you play on a sports team outside of school?                  | <input type="radio"/> | <input type="radio"/> |
| b) Do you often play a musical instrument outside of school?        | <input type="radio"/> | <input type="radio"/> |
| c) Are you studying something in a class outside of school?         | <input type="radio"/> | <input type="radio"/> |
| d) Do you belong to a club outside of school (like Boy/Girl Scouts, | <input type="radio"/> | <input type="radio"/> |

## Your School

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

*Click **one** circle for each line.*

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I like being in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I feel safe when I am at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I feel like I belong at this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Teachers at this school care about me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I am proud to go to this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I have friends at this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Students in this school respect me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Students at this school like me the way I am	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**21. During this school year, how often have other students from your school done any of the following things to you in person, through messaging, or through social media?**

*Click **one** circle for each line.*

	At least once a week	Once or twice a month	A few times a year	Never
a) Said mean things about my physical appearance (e.g., my hair, my size)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Spread lies about me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Shared my secrets with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |   |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| d) Refused to talk to me  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) Said hurtful things to or about me because of my cultural background (e.g., race, ethnicity, religion) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) Stole something from me  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) Made me do things I didn't want to do  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) Sent me nasty or hurtful messages online   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) Shared nasty or hurtful things about me online   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j) Shared embarrassing photos of me online  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k) Threatened me  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l) Physically hurt me   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| m) Excluded me from their group (e.g., parties, messaging)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| n) Damaged something of mine on purpose   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

## Mathematics in School

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

Click **one** circle only.

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

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

Click **one** circle for each line.

- |                                   | Agree<br>a lot        | Agree<br>a little     | Disagree<br>a little  | Disagree<br>a lot     |
|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I enjoy learning mathematics   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) I wish I did not have to study | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



mathematics

- |   |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| c) Mathematics is boring                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I learn many interesting things in mathematics | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I like mathematics                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) I like any schoolwork that involves numbers    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) I like to solve mathematics problems           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) I look forward to mathematics class            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) Mathematics is one of my favorite subjects     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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

Click **one** circle for each line.

- |  | <b>Agree<br/>a lot</b> | <b>Agree<br/>a little</b> | <b>Disagree<br/>a little</b> | <b>Disagree<br/>a lot</b> |
|--|------------------------|---------------------------|------------------------------|---------------------------|
| a) My teacher makes it clear what we should learn in each lesson | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| b) My teacher is easy to understand                              | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| c) My teacher has clear answers to my questions                  | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| d) My teacher is good at explaining mathematics                  | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| e) My teacher does a variety of things to help us learn          | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| f) My teacher explains a topic again when we don't understand    | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| g) My teacher gives me helpful feedback on my work               | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| h) My teacher asks me to show what I have learned                | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| i) My teacher asks me to explain my                              | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |

- j) My teacher asks us to apply what we have learned in new situations ☐ ☐ ☐ ☐

## 25. How often do these things happen in your mathematics lessons?

Click **one** circle for each line.

	Every or almost every lesson	About half the lessons	Some lessons	Never
a) Students don't listen to what the teacher says	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) There is too much noise for students to work well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) My teacher has to wait a long time for students to be quiet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Students interrupt the teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Students do not follow the classroom rules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Other students' behavior makes it hard for me to concentrate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 26. How much do you agree with these statements about mathematics?

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I usually do well in mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Mathematics is harder for me than for many of my classmates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Mathematics is not one of my strengths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Mathematics is easy for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I am good at working out difficult mathematics problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |  |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| f) I am good at explaining mathematics to others       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) Mathematics is harder for me than any other subject | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) Mathematics makes me confused                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**27. How much do you agree with these statements about mathematics?**

*Click **one** circle for each line.*

- |  | <b>Agree<br/>a lot</b> | <b>Agree<br/>a little</b> | <b>Disagree<br/>a little</b> | <b>Disagree<br/>a lot</b> |
|--|------------------------|---------------------------|------------------------------|---------------------------|
| a) I think learning mathematics will help me in my daily life                          | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| b) I need mathematics to learn other school subjects                                   | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| c) I need to do well in mathematics to get into the college or university of my choice | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| d) I need to do well in mathematics to get the job I want                              | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| e) I would like a job that involves using mathematics                                  | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| f) It is important to learn about mathematics to get ahead in the world                | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| g) Learning mathematics will give me more job opportunities when I am an adult         | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| h) My parents think that it is important that I do well in mathematics                 | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |
| i) It is important to do well in mathematics   | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>        | <input type="radio"/>     |

## Science in School

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

*Click **one** circle only.*

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

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

*Click **one** circle for each line.*

	<b>Agree a lot</b>	<b>Agree a little</b>	<b>Disagree a little</b>	<b>Disagree a lot</b>
a) I enjoy learning science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I wish I did not have to study science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Science is boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I learn many interesting things in science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I like science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I look forward to learning science in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Science teaches me how things in the world work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) I like to conduct science experiments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Science is one of my favorite subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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

*Click **one** circle for each line.*

	<b>Agree a lot</b>	<b>Agree a little</b>	<b>Disagree a little</b>	<b>Disagree a lot</b>
a) My teacher makes it clear what we should learn in each lesson	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) My teacher is easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |   |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| c) My teacher has clear answers to my questions                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) My teacher is good at explaining science                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) My teacher does a variety of things to help us learn               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) My teacher explains a topic again when we don't understand         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) My teacher gives me helpful feedback on my work                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) My teacher asks me to show what I have learned                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) My teacher asks me to explain my answers                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j) My teacher asks us to apply what we have learned in new situations | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

### 31. How often do these things happen in your science lessons?

Click **one** circle for each line.

- |   | Every<br>or<br>almost<br>every<br>lesson | About<br>half<br>the<br>lessons | Some<br>lessons       | Never                 |
|---|--|---------------------------------|-----------------------|-----------------------|
| a) Students don't listen to what the teacher says               | <input type="radio"/>                    | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| b) There is too much noise for students to work well            | <input type="radio"/>                    | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| c) My teacher has to wait a long time for students to be quiet  | <input type="radio"/>                    | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| d) Students interrupt the teacher                               | <input type="radio"/>                    | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| e) Students do not follow the classroom rules                   | <input type="radio"/>                    | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |
| f) Other students' behavior makes it hard for me to concentrate | <input type="radio"/>                    | <input type="radio"/>           | <input type="radio"/> | <input type="radio"/> |

### 32. How much do you agree with these statements about science?

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I usually do well in science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Science is harder for me than for many of my classmates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Science is not one of my strengths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Science is easy for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I am good at working out difficult science problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I am good at explaining science to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Science is harder for me than any other subject	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Science makes me confused	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 33. How much do you agree with these statements about science?

Click **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I think learning science will help me in my daily life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I need science to learn other school subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I need to do well in science to get into the college or university of my choice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I need to do well in science to get the job I want	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) I would like a job that involves using science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- |  |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| f) It is important to learn about science to get ahead in the world        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) Learning science will give me more job opportunities when I am an adult | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) My parents think that it is important that I do well in science         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) It is important to do well in science                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**34. In this school year, are you preparing for or have you participated in any of the following activities?**

*Click **one** circle for each line.*

---

- |                        | <b>Yes</b>            | <b>No</b>             |
|------------------------|-----------------------|-----------------------|
| a) Science fair        | <input type="radio"/> | <input type="radio"/> |
| b) Science club        | <input type="radio"/> | <input type="radio"/> |
| c) Science competition | <input type="radio"/> | <input type="radio"/> |

## Homework

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

*Click **one** circle for each line.*

---

- |                | <b>Every day</b>      | <b>3 or 4 times a week</b> | <b>1 or 2 times a week</b> | <b>Less than once a week</b> | <b>Never</b>          |
|----------------|-----------------------|----------------------------|----------------------------|------------------------------|-----------------------|
| a) Mathematics | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>        | <input type="radio"/> |
| b) Science     | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/>      | <input type="radio"/>        | <input type="radio"/> |

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

To submit your completed questionnaire, please click the "Finish" button.