

**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

Contents

School Questionnaire Grade 4	1
School Questionnaire Grade 8	11
Teacher Questionnaire Grade 4.....	21
Mathematics Teacher Questionnaire Grade 8	41
Science Teacher Questionnaire Grade 8	53
Student Questionnaire Grade 4.....	68
Student Questionnaire Grade 8.....	83

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	☐	☐	☐	☐
b) Come from economically affluent homes	☐	☐	☐	☐

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 | ☐ | ☐ |
| b) High speed internet | ☐ | ☐ |

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.*

A. General School Resources

Not at all

A little

Some

A lot

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

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

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

C. Resources for Science Instruction	Not at all	A little	Some	A lot
a) Teachers with a specialization in science	☐	☐	☐	☐
b) Computer software/applications for science instruction	☐	☐	☐	☐
c) Library resources relevant to science instruction	☐	☐	☐	☐

- 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	☐	☐	☐	☐	☐
b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
e) Parental involvement in school activities	☐	☐	☐	☐	☐
f) Parental commitment to ensure that students are ready to learn	☐	☐	☐	☐	☐

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	☐	☐	☐	☐	☐
h) Parental support for student achievement	☐	☐	☐	☐	☐
i) Students' desire to do well in school	☐	☐	☐	☐	☐
j) Students' ability to reach school's academic goals	☐	☐	☐	☐	☐
k) Students' respect for classmates who excel academically	☐	☐	☐	☐	☐

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	☐	☐	☐	☐
b) This school regularly reviews its practices to make them more environmentally sustainable	☐	☐	☐	☐
c) There is a schoolwide approach to teaching environmental sustainability to students	☐	☐	☐	☐
d) This school teaches students to appreciate the natural environment	☐	☐	☐	☐
e) This school teaches students how to take action to protect the natural environment	☐	☐	☐	☐
f) This school encourages teachers to learn about teaching environmental sustainability	☐	☐	☐	☐
g) This school promotes environmental sustainability within the community	☐	☐	☐	☐
h) This school promotes participation in networks or projects related to environmental sustainability	☐	☐	☐	☐

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	☐	☐	☐	☐
b) Absenteeism (i.e., unjustified absences)	☐	☐	☐	☐
c) Classroom disturbance	☐	☐	☐	☐
d) Cheating	☐	☐	☐	☐
e) Profanity	☐	☐	☐	☐
f) Vandalism	☐	☐	☐	☐
g) Theft	☐	☐	☐	☐
h) Intimidation or verbal abuse among students (including texting, emailing, etc.)	☐	☐	☐	☐

- | | | | | | |
|----|--|-----------------------|-----------------------|-----------------------|-----------------------|
| i) | Physical fights among students | ☐ | ☐ | ☐ | ☐ |
| j) | Intimidation or verbal abuse of teachers or staff
(including texting, emailing, etc.) | ☐ | ☐ | ☐ | ☐ |

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

Click **one** circle for each line.

- | | Not a
problem | Minor
problem | Moderate
problem | Serious
problem |
|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Arriving late or leaving early | ☐ | ☐ | ☐ | ☐ |
| b) Absenteeism | ☐ | ☐ | ☐ | ☐ |

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
than 25% | 25–50% | 51–75% | More
than 75% |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a) Recognize most of the letters of the alphabet | ☐ | ☐ | ☐ | ☐ |
| b) Read some words | ☐ | ☐ | ☐ | ☐ |
| c) Read sentences | ☐ | ☐ | ☐ | ☐ |
| d) Write letters of the alphabet | ☐ | ☐ | ☐ | ☐ |
| e) Write their names | ☐ | ☐ | ☐ | ☐ |
| f) Write words other than their names | ☐ | ☐ | ☐ | ☐ |

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
than 25% | 25–50% | 51–75% | More
than 75% |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| g) Count up to 100 or higher | ☐ | ☐ | ☐ | ☐ |
| h) Recognize written numbers from 1-10 | ☐ | ☐ | ☐ | ☐ |

- | | | | | | |
|----|--|-----------------------|-----------------------|-----------------------|-----------------------|
| i) | Recognize written numbers higher than 10 | ☐ | ☐ | ☐ | ☐ |
| j) | Write numbers from 1-10 | ☐ | ☐ | ☐ | ☐ |
| k) | Do simple addition | ☐ | ☐ | ☐ | ☐ |
| l) | Do simple subtraction | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ |
| b) Master's degree or professional degree (MD, DDS, lawyer, minister) | ☐ | ☐ |
| c) Doctorate (Ph.D., Ed.D.) | ☐ | ☐ |

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	☐	☐	☐	☐	☐
b) 2020 – 2021 school year	☐	☐	☐	☐	☐
c) 2021 – 2022 school year	☐	☐	☐	☐	☐
d) 2022 – 2023 school year	☐	☐	☐	☐	☐

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.

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 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	☐	☐	☐	☐
b) Come from economically affluent homes	☐	☐	☐	☐

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 | ☐ | ☐ |
| b) High speed internet | ☐ | ☐ |

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.

A. General School Resources	Not at all	A little	Some	A lot
------------------------------------	-------------------	-----------------	-------------	--------------

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

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

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

C. Resources for Science Instruction	Not at all	A little	Some	A lot
a) Teachers with a specialization in science	☐	☐	☐	☐
b) Computer software/applications for science instruction	☐	☐	☐	☐
c) Library resources relevant to science instruction	☐	☐	☐	☐

- | | | | | | |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|
| d) | Calculators for science instruction | ☐ | ☐ | ☐ | ☐ |
| e) | 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	☐	☐	☐	☐	☐
b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
e) Parental involvement in school activities	☐	☐	☐	☐	☐
f) Parental commitment to ensure that students are ready to learn	☐	☐	☐	☐	☐

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	☐	☐	☐	☐	☐
h) Parental support for student achievement	☐	☐	☐	☐	☐
i) Students' desire to do well in school	☐	☐	☐	☐	☐
j) Students' ability to reach school's academic goals	☐	☐	☐	☐	☐
k) Students' respect for classmates who excel academically	☐	☐	☐	☐	☐

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	☐	☐	☐	☐
b) The school has initiatives to promote student interest in mathematics and science (e.g., student clubs, competitions)	☐	☐	☐	☐
c) The school provides special activities in mathematics and science for interested students	☐	☐	☐	☐
d) The school emphasizes the importance of studying mathematics and science in the future	☐	☐	☐	☐

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	☐	☐	☐	☐
b) This school regularly reviews its practices to make them more environmentally sustainable	☐	☐	☐	☐
c) There is a schoolwide approach to teaching environmental sustainability to students	☐	☐	☐	☐
d) This school teaches students to appreciate the natural environment	☐	☐	☐	☐
e) This school teaches students how to take action to protect the natural environment	☐	☐	☐	☐
f) This school encourages teachers to learn about teaching environmental sustainability	☐	☐	☐	☐
g) This school promotes environmental sustainability within the community	☐	☐	☐	☐
h) This school promotes participation in networks or projects related to environmental sustainability	☐	☐	☐	☐

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.*

	Not a problem	Minor problem	Moderate problem	Serious problem
a) Arriving late at school	☐	☐	☐	☐
b) Absenteeism (i.e., unjustified absences)	☐	☐	☐	☐
c) Classroom disturbance	☐	☐	☐	☐
d) Cheating	☐	☐	☐	☐
e) Profanity	☐	☐	☐	☐
f) Vandalism	☐	☐	☐	☐

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.*

	Not a problem	Minor problem	Moderate problem	Serious problem
g) Theft	☐	☐	☐	☐
h) Intimidation or verbal abuse among students (including texting, emailing, etc.)	☐	☐	☐	☐
i) Physical injury to students	☐	☐	☐	☐
j) Intimidation or verbal abuse of teachers or staff (including texting, emailing, etc.)	☐	☐	☐	☐
k) Physical injury to teachers or staff	☐	☐	☐	☐

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

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

	Not a problem	Minor problem	Moderate problem	Serious problem
a) Arriving late or leaving early	☐	☐	☐	☐
b) Absenteeism	☐	☐	☐	☐

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	☐	☐
b) Master's degree or professional degree (MD, DDS, lawyer, minister)	☐	☐
c) Doctorate (Ph.D., Ed.D.)	☐	☐

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	☐	☐	☐	☐	☐
b) 2020 – 2021 school year	☐	☐	☐	☐	☐
c) 2021 – 2022 school year	☐	☐	☐	☐	☐
d) 2022 – 2023 school year	☐	☐	☐	☐	☐

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.

Offline Mode © IEA Online SurveySystem 2007 - 2022 - [Help](#)

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 | ☐ | ☐ |
| b) | Education—Secondary | ☐ | ☐ |
| c) | Mathematics | ☐ | ☐ |
| d) | Science | ☐ | ☐ |
| e) | English | ☐ | ☐ |
| f) | Other | ☐ | ☐ |

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.*

- | | Yes | No |
|---------------------|-----------------------|-----------------------|
| a) Mathematics | ☐ | ☐ |
| b) Science | ☐ | ☐ |
| c) Language/reading | ☐ | ☐ |
| d) Other subject | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ | ☐ |
| b) Teachers' degree of success in implementing the school's curriculum | ☐ | ☐ | ☐ | ☐ | ☐ |
| c) Teachers' expectations for student achievement | ☐ | ☐ | ☐ | ☐ | ☐ |
| d) Teachers' ability to inspire students | ☐ | ☐ | ☐ | ☐ | ☐ |
| e) Parental involvement in school activities | ☐ | ☐ | ☐ | ☐ | ☐ |
| f) Parental commitment to ensure | ☐ | ☐ | ☐ | ☐ | ☐ |

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	☐	☐	☐	☐	☐
h) Parental support for student achievement	☐	☐	☐	☐	☐
i) Students' desire to do well in school	☐	☐	☐	☐	☐
j) Students' ability to reach school's academic goals	☐	☐	☐	☐	☐
k) Students' respect for classmates who excel academically	☐	☐	☐	☐	☐

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	☐	☐	☐	☐
b) This school's security policies and practices are sufficient	☐	☐	☐	☐
c) The students behave in an orderly manner	☐	☐	☐	☐
d) The students are respectful of the teachers	☐	☐	☐	☐
e) The students respect school property	☐	☐	☐	☐
f) This school has clear rules about student conduct	☐	☐	☐	☐
g) This school's rules are enforced in a fair and consistent manner	☐	☐	☐	☐

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	☐	☐	☐	☐
b) I find my work full of meaning and purpose	☐	☐	☐	☐
c) I am enthusiastic about my job	☐	☐	☐	☐
d) My work inspires me	☐	☐	☐	☐
e) I am proud of the work I do	☐	☐	☐	☐
f) I feel appreciated as a teacher	☐	☐	☐	☐
g) I enjoy the challenges of teaching	☐	☐	☐	☐

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	☐	☐	☐	☐
b) I have too much material to cover in class	☐	☐	☐	☐
c) I have too many teaching hours	☐	☐	☐	☐
d) I need more time to prepare for class	☐	☐	☐	☐
e) I need more time to assist individual students	☐	☐	☐	☐
f) I feel too much pressure from parents	☐	☐	☐	☐
g) I have difficulty keeping up with all of the changes to the curriculum	☐	☐	☐	☐
h) I have too many administrative tasks	☐	☐	☐	☐

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

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	☐	☐	☐
b) Students suffering from lack of basic nutrition	☐	☐	☐
c) Students suffering from not enough sleep	☐	☐	☐
d) Students absent from class	☐	☐	☐
e) Disruptive students	☐	☐	☐
f) Uninterested students	☐	☐	☐
g) Distracted students	☐	☐	☐

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

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

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	☐	☐
b) The class has digital devices that students can share	☐	☐
c) The school has digital devices that the class can use sometimes	☐	☐
d) Students bring their own digital devices	☐	☐

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	☐	☐	☐	☐
b) Solve extended or contextualized problems	☐	☐	☐	☐
c) Create graphs, tables, or other data displays	☐	☐	☐	☐
d) Play games involving mathematics calculations or concepts	☐	☐	☐	☐

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	☐	☐	☐
b) Not enough access to digital devices	☐	☐	☐
c) Keeping students on task when the class is using digital devices	☐	☐	☐
d) Lack of technical support from the school	☐	☐	☐

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

- | | | | |
|--|-----------------------|-----------------------|-----------------------|
| j) Add and subtract simple fractions | ☐ | ☐ | ☐ |
| k) Represent, compare, and order decimals up to two decimal places | ☐ | ☐ | ☐ |
| l) Add and subtract with decimals up to two decimal places | ☐ | ☐ | ☐ |

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

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

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

C. Data

- | | Mostly taught before this year | Mostly taught this year | Not yet taught |
|---|---------------------------------------|--------------------------------|-----------------------|
| a) Read and interpret data displays | ☐ | ☐ | ☐ |
| b) Create or complete data displays | ☐ | ☐ | ☐ |
| c) Draw conclusions from two or more data sources | ☐ | ☐ | ☐ |

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
almost always | Sometimes | Never or
almost never |
|--|----------------------------|-----------------------|--------------------------|
| a) Correct assignments and give feedback to students | ☐ | ☐ | ☐ |
| b) Discuss the homework in class | ☐ | ☐ | ☐ |
| c) Monitor whether or not the homework was completed | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ |
| b) Asking students to answer questions during class | ☐ | ☐ | ☐ |
| c) Short, regular written assessments | ☐ | ☐ | ☐ |
| d) Longer tests (e.g., unit tests or exams) | ☐ | ☐ | ☐ |
| e) Long-term projects | ☐ | ☐ | ☐ |

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?

any of the following?

Click **one** circle for each line.

Click **one** circle for each line.

	Yes	No	Yes	No
a) Mathematics content	☐	☐	☐	☐
b) Mathematics pedagogy/instruction	☐	☐	☐	☐
c) Mathematics curriculum	☐	☐	☐	☐
d) Integrating technology into mathematics instruction	☐	☐	☐	☐
e) Improving students' critical thinking or problem solving skills	☐	☐	☐	☐
f) Mathematics assessment	☐	☐	☐	☐
g) Addressing individual students' needs	☐	☐	☐	☐

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	☐	☐	☐	☐
b) Observe natural phenomena such as the weather or a plant growing and describe what they see	☐	☐	☐	☐

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

26. 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 | ☐ | ☐ | ☐ |
| b) Having students predict the outcomes of experiments or investigations | ☐ | ☐ | ☐ |
| c) Having students create representations (e.g., models, graphs) to explain scientific phenomena | ☐ | ☐ | ☐ |
| d) Having students use scientific concepts to explain phenomena | ☐ | ☐ | ☐ |
| e) Having students conduct experiments (hands-on or virtually) | ☐ | ☐ | ☐ |

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

*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) Develop students' positive attitudes toward the natural environment | ☐ | ☐ | ☐ | ☐ |
| b) Encourage students to use fewer resources (e.g., water, energy) | ☐ | ☐ | ☐ | ☐ |
| c) Discuss how student actions in and outside of school can help the natural environment | ☐ | ☐ | ☐ | ☐ |
| d) Discuss environmental issues (e.g., climate change, endangered animals) | ☐ | ☐ | ☐ | ☐ |

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	☐	☐	☐	☐
b) Create graphs, tables, or other data displays	☐	☐	☐	☐
c) Play games involving science concepts	☐	☐	☐	☐
d) Conduct virtual experiments or other simulations	☐	☐	☐	☐
e) Read the textbook or watch instructional videos	☐	☐	☐	☐
f) Take a test	☐	☐	☐	☐

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	☐	☐	☐
b) Not enough access to digital devices	☐	☐	☐
c) Keeping students on task when the class is using digital devices	☐	☐	☐
d) Lack of technical support from the school	☐	☐	☐

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

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

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 before this year	Mostly taught this year	Not yet taught
a) Solids, liquids, gases, and how their shapes and volumes differ	☐	☐	☐

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

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

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

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	☐	☐	☐
b) Discuss the homework in class	☐	☐	☐

- 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	☐	☐	☐
b) Asking students to answer questions during class	☐	☐	☐
c) Short, regular written assessments	☐	☐	☐
d) Longer tests (e.g., unit tests or exams)	☐	☐	☐
e) Long-term projects	☐	☐	☐

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	☐	☐	☐	☐
b) Science pedagogy/instruction	☐	☐	☐	☐
c) Science curriculum	☐	☐	☐	☐
d) Integrating technology into science instruction	☐	☐	☐	☐
e) Improving students' critical thinking or inquiry skills	☐	☐	☐	☐
f) Science assessment	☐	☐	☐	☐
g) Addressing individual students' needs	☐	☐	☐	☐
h) Integrating science with other subjects (e.g., mathematics, technology)	☐	☐	☐	☐
i) Integrating environmentalism and sustainability into science instruction	☐	☐	☐	☐

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.

Offline Mode © IEA Online SurveySystem 2007 - 2022 - [Help](#)

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	☐	☐
b) Biology	☐	☐
c) Physics	☐	☐
d) Chemistry	☐	☐
e) Earth Science	☐	☐
f) Education–Mathematics	☐	☐
g) Education–Science	☐	☐
h) Education–General	☐	☐
i) Other	☐	☐

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	☐	☐	☐	☐	☐
b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
e) Parental involvement in school activities	☐	☐	☐	☐	☐
f) Parental commitment to ensure 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 | ☐ | ☐ | ☐ | ☐ | ☐ |
| h) | Parental support for student achievement | ☐ | ☐ | ☐ | ☐ | ☐ |
| i) | Students' desire to do well in school | ☐ | ☐ | ☐ | ☐ | ☐ |
| j) | Students' ability to reach school's academic goals | ☐ | ☐ | ☐ | ☐ | ☐ |
| k) | Students' respect for classmates who excel academically | ☐ | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ |
| b) This school's security policies and practices are sufficient | ☐ | ☐ | ☐ | ☐ |
| c) The students behave in an orderly manner | ☐ | ☐ | ☐ | ☐ |
| d) The students are respectful of the teachers | ☐ | ☐ | ☐ | ☐ |
| e) The students respect school property | ☐ | ☐ | ☐ | ☐ |
| f) This school has clear rules about student conduct | ☐ | ☐ | ☐ | ☐ |
| g) This school's rules are enforced in a fair and consistent manner | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ |
| b) I find my work full of meaning and purpose | ☐ | ☐ | ☐ | ☐ |
| c) I am enthusiastic about my job | ☐ | ☐ | ☐ | ☐ |

- | | | | | |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| d) My work inspires me | ☐ | ☐ | ☐ | ☐ |
| e) I am proud of the work I do | ☐ | ☐ | ☐ | ☐ |
| f) I feel appreciated as a teacher | ☐ | ☐ | ☐ | ☐ |
| g) I enjoy the challenges of teaching | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ |
| b) I have too much material to cover in class | ☐ | ☐ | ☐ | ☐ |
| c) I have too many teaching hours | ☐ | ☐ | ☐ | ☐ |
| d) I need more time to prepare for class | ☐ | ☐ | ☐ | ☐ |
| e) I need more time to assist individual students | ☐ | ☐ | ☐ | ☐ |
| f) I feel too much pressure from parents | ☐ | ☐ | ☐ | ☐ |
| g) I have difficulty keeping up with all of the changes to the curriculum | ☐ | ☐ | ☐ | ☐ |
| h) I have too many administrative tasks | ☐ | ☐ | ☐ | ☐ |

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.*

Every or almost	About half the lessons	Some lessons	Never
--------------------------------	-----------------------------------	-------------------------	--------------

every
lesson

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

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 | ☐ | ☐ | ☐ |
| b) Students suffering from lack of basic nutrition | ☐ | ☐ | ☐ |
| c) Students suffering from not enough sleep | ☐ | ☐ | ☐ |
| d) Students absent from class | ☐ | ☐ | ☐ |
| e) Disruptive students | ☐ | ☐ | ☐ |
| f) Uninterested students | ☐ | ☐ | ☐ |
| g) Distracted students | ☐ | ☐ | ☐ |
| 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	☐	☐	☐	☐
b) Listen to me explain how to solve problems	☐	☐	☐	☐
c) Memorize rules, procedures, and facts	☐	☐	☐	☐
d) Practice procedures on their own	☐	☐	☐	☐
e) Apply what they have learned to new problem situations on their own	☐	☐	☐	☐
f) Work problems together in the whole class with direct guidance from me	☐	☐	☐	☐
g) Work in mixed ability groups	☐	☐	☐	☐
h) Work in same ability groups	☐	☐	☐	☐

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	☐	☐
b) The class has digital devices that students can share	☐	☐
c) The school has digital devices that the class can use sometimes	☐	☐
d) Students bring their own digital devices	☐	☐

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	☐	☐	☐	☐
b) Solve extended or contextualized	☐	☐	☐	☐

problems

- | | | | | | |
|----|---|-----------------------|-----------------------|-----------------------|-----------------------|
| c) | Create graphs, tables, or other data displays | ☐ | ☐ | ☐ | ☐ |
| d) | Play games involving mathematics calculations or concepts | ☐ | ☐ | ☐ | ☐ |
| e) | Read the textbook or watch instructional videos | ☐ | ☐ | ☐ | ☐ |
| f) | Take a test | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ |
| b) Not enough access to digital devices | ☐ | ☐ | ☐ |
| c) Keeping students on task when the class is using digital devices | ☐ | ☐ | ☐ |
| d) Lack of technical support from the school | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ |
| b) Find and use factors, multiples, positive powers, or square roots of positive whole numbers | ☐ | ☐ | ☐ |
| c) Compare fractions and decimals | ☐ | ☐ | ☐ |
| d) Add, subtract, and multiply with fractions and decimals | ☐ | ☐ | ☐ |
| e) Divide fractions and decimals by a whole number | ☐ | ☐ | ☐ |

- | | | | | |
|----|---|-----------------------|-----------------------|-----------------------|
| f) | Determine proportions and ratios | ☐ | ☐ | ☐ |
| g) | Find percentages and convert between percentages and fractions/decimals | ☐ | ☐ | ☐ |

Click **one** circle for each line.

B. Algebra

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

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

- 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	☐	☐	☐
b) Represent data in graphs, charts, or plots	☐	☐	☐
c) Calculate and interpret the mean or median of a data distribution	☐	☐	☐
d) Calculate probabilities of simple and compound events	☐	☐	☐

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	☐	☐	☐
b) Have students correct their own homework	☐	☐	☐
c) Discuss the homework in class	☐	☐	☐
d) Monitor whether or not the homework was completed	☐	☐	☐
e) Use the homework to contribute towards students' grades or marks	☐	☐	☐

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	☐	☐	☐
b) Asking students to answer questions during class	☐	☐	☐
c) Short, regular written assessments	☐	☐	☐
d) Longer tests (e.g., unit tests or exams)	☐	☐	☐
e) Long-term projects	☐	☐	☐

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	☐	☐	☐	☐
b) Mathematics pedagogy/instruction	☐	☐	☐	☐
c) Mathematics curriculum	☐	☐	☐	☐
d) Integrating technology into mathematics instruction	☐	☐	☐	☐
e) Improving students' critical thinking or problem solving skills	☐	☐	☐	☐
f) Mathematics assessment	☐	☐	☐	☐
g) Addressing individual students' needs	☐	☐	☐	☐

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	☐	☐
b) Biology	☐	☐
c) Physics	☐	☐
d) Chemistry	☐	☐
e) Earth Science	☐	☐
f) Education–Mathematics	☐	☐
g) Education–Science	☐	☐
h) Education–General	☐	☐
i) Other	☐	☐

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	☐	☐	☐	☐	☐
b) Teachers' degree of success in implementing the school's curriculum	☐	☐	☐	☐	☐
c) Teachers' expectations for student achievement	☐	☐	☐	☐	☐
d) Teachers' ability to inspire students	☐	☐	☐	☐	☐
e) Parental involvement in school activities	☐	☐	☐	☐	☐
f) Parental commitment to ensure 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 | ☐ | ☐ | ☐ | ☐ | ☐ |
| h) | Parental support for student achievement | ☐ | ☐ | ☐ | ☐ | ☐ |
| i) | Students' desire to do well in school | ☐ | ☐ | ☐ | ☐ | ☐ |
| j) | Students' ability to reach school's academic goals | ☐ | ☐ | ☐ | ☐ | ☐ |
| k) | Students' respect for classmates who excel academically | ☐ | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ |
| b) This school's security policies and practices are sufficient | ☐ | ☐ | ☐ | ☐ |
| c) The students behave in an orderly manner | ☐ | ☐ | ☐ | ☐ |
| d) The students are respectful of the teachers | ☐ | ☐ | ☐ | ☐ |
| e) The students respect school property | ☐ | ☐ | ☐ | ☐ |
| f) This school has clear rules about student conduct | ☐ | ☐ | ☐ | ☐ |
| g) This school's rules are enforced in a fair and consistent manner | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ |
| b) I find my work full of meaning and purpose | ☐ | ☐ | ☐ | ☐ |
| c) I am enthusiastic about my job | ☐ | ☐ | ☐ | ☐ |

- | | | | | |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| d) My work inspires me | ☐ | ☐ | ☐ | ☐ |
| e) I am proud of the work I do | ☐ | ☐ | ☐ | ☐ |
| f) I feel appreciated as a teacher | ☐ | ☐ | ☐ | ☐ |
| g) I enjoy the challenges of teaching | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ |
| b) I have too much material to cover in class | ☐ | ☐ | ☐ | ☐ |
| c) I have too many teaching hours | ☐ | ☐ | ☐ | ☐ |
| d) I need more time to prepare for class | ☐ | ☐ | ☐ | ☐ |
| e) I need more time to assist individual students | ☐ | ☐ | ☐ | ☐ |
| f) I feel too much pressure from parents | ☐ | ☐ | ☐ | ☐ |
| g) I have difficulty keeping up with all of the changes to the curriculum | ☐ | ☐ | ☐ | ☐ |
| h) I have too many administrative tasks | ☐ | ☐ | ☐ | ☐ |

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.*

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

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

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 | ☐ | ☐ | ☐ |
| b) Students suffering from lack of basic nutrition | ☐ | ☐ | ☐ |
| c) Students suffering from not enough sleep | ☐ | ☐ | ☐ |
| d) Students absent from class | ☐ | ☐ | ☐ |
| e) Disruptive students | ☐ | ☐ | ☐ |
| f) Uninterested students | ☐ | ☐ | ☐ |
| g) Distracted students | ☐ | ☐ | ☐ |
| h) Students with mental, emotional, or psychological impairment | ☐ | ☐ | ☐ |
| i) Students with difficulties understanding the language of instruction | ☐ | ☐ | ☐ |

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

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	☐	☐	☐
b) Having students predict the outcomes of experiments or investigations	☐	☐	☐
c) Having students discuss variation in data from experiments or	☐	☐	☐

investigations

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

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

*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) | Develop students' positive attitudes toward the natural environment | ☐ | ☐ | ☐ | ☐ |
| b) | Encourage students to use fewer resources (e.g., water, energy) | ☐ | ☐ | ☐ | ☐ |
| c) | Discuss how student actions in and outside of school can help the natural environment | ☐ | ☐ | ☐ | ☐ |
| d) | Discuss environmental issues (e.g., climate change, endangered animals) | ☐ | ☐ | ☐ | ☐ |

20. 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) | ☐ | ☐ |
| b) | Have students participate in environmentally responsible activities (e.g., pick up trash) | ☐ | ☐ |
| c) | Have students do research or projects on a particular environmental topic (e.g., pollution, climate change) | ☐ | ☐ |
| d) | Provide opportunities for students to participate in outdoor environmental education programs outside of school | ☐ | ☐ |

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	☐	☐
b) The class has digital devices that students can share	☐	☐
c) The school has digital devices that the class can use sometimes	☐	☐
d) Students bring their own digital devices	☐	☐

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	☐	☐	☐	☐
b) Create graphs, tables, or other data displays	☐	☐	☐	☐
c) Play games involving science concepts	☐	☐	☐	☐
d) Conduct virtual experiments or other simulations	☐	☐	☐	☐
e) Read the textbook or watch instructional videos	☐	☐	☐	☐
f) Take a test	☐	☐	☐	☐

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	☐	☐	☐
b) Not enough access to digital devices	☐	☐	☐
c) Keeping students on task when the class is using digital devices	☐	☐	☐
d) Lack of technical support from the school	☐	☐	☐

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	☐	☐	☐
b) Structures and functions of major organs and organ systems	☐	☐	☐
c) How animals maintain stable body conditions	☐	☐	☐

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

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. Chemistry				
a)	Structure of atoms (i.e., protons, neutrons, electrons) and molecules	☐	☐	☐
b)	Differences among elements, compounds, and mixtures	☐	☐	☐
c)	How to interpret the periodic table of elements	☐	☐	☐
d)	Classifying matter according to physical and chemical properties	☐	☐	☐

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

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	☐	☐	☐
b)	Characteristics of matter and energy during state changes	☐	☐	☐
c)	Types of energy (e.g., kinetic, potential, thermal) and examples of energy transformations	☐	☐	☐
d)	Thermal conductivity and the transfer of thermal energy between objects of different temperatures	☐	☐	☐
e)	Reflection, refraction, or absorption of light	☐	☐	☐
f)	Characteristics of sound (i.e., amplitude, frequency) and its transmission, reflection, and absorption	☐	☐	☐
g)	Electrical conductors and simple electrical circuits	☐	☐	☐
h)	Polarity, strength, and uses of permanent magnets and electromagnets	☐	☐	☐
i)	Speed as distance changing over time	☐	☐	☐
j)	Acceleration as speed changing over time	☐	☐	☐
k)	Effects of common forces on speed and direction of motion	☐	☐	☐
l)	Density and buoyancy	☐	☐	☐

- 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	☐	☐	☐
b) Gases present in Earth's atmosphere and their relative abundance	☐	☐	☐
c) Changes in temperature and pressure based on altitude	☐	☐	☐
d) How geological events impact Earth's surface	☐	☐	☐
e) Processes in the rock cycle (e.g., lava cooling, weathering)	☐	☐	☐
f) How fossils form and what they show about Earth's history	☐	☐	☐
g) Processes in Earth's water cycle	☐	☐	☐
h) Differences between weather and climate and geographic factors affecting climate	☐	☐	☐
i) Evidence for climate change	☐	☐	☐
j) Use and conservation of Earth's resources, including land, water, and renewable and nonrenewable energy sources	☐	☐	☐
k) Phenomena caused by the motion of Earth and the Moon (e.g., seasons, tides, Moon phases)	☐	☐	☐
l) The Sun as a star and physical features of the Earth, Moon, and other planets	☐	☐	☐

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	☐	☐	☐
b) Have students correct their own homework	☐	☐	☐
c) Discuss the homework in class	☐	☐	☐
d) Monitor whether or not the homework was completed	☐	☐	☐
e) Use the homework to contribute towards students' grades or marks	☐	☐	☐

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	☐	☐	☐
b) Asking students to answer questions during class	☐	☐	☐
c) Short, regular written assessments	☐	☐	☐
d) Longer tests (e.g., unit tests or exams)	☐	☐	☐
e) Long-term projects	☐	☐	☐

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	☐	☐	☐	☐
b) Science pedagogy/instruction	☐	☐	☐	☐
c) Science curriculum	☐	☐	☐	☐
d) Integrating technology into science instruction	☐	☐	☐	☐
e) Improving students' critical thinking or inquiry skills	☐	☐	☐	☐
f) Science assessment	☐	☐	☐	☐
g) Addressing individual students' needs	☐	☐	☐	☐
h) Integrating environmentalism and sustainability into science instruction	☐	☐	☐	☐

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	☐	☐	☐	☐
b) I play sports	☐	☐	☐	☐
c) I ride a skateboard	☐	☐	☐	☐

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 | ☐ | ☐ | ☐ | ☐ |
| 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

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	☐	☐
b) A shared computer or tablet you can use	☐	☐
c) A smartphone	☐	☐
d) Access to the internet	☐	☐
e) Study desk/table for your use	☐	☐
f) Your own room	☐	☐
g) A gaming system (e.g., PlayStation, Nintendo Switch, Xbox)	☐	☐

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	☐	☐	☐	☐
b) Tablet devices (e.g., iPad, Surface Pro, Kindle)	☐	☐	☐	☐

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	☐	☐	☐	☐
b) I feel hungry	☐	☐	☐	☐

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	☐	☐	☐	☐
b) I can create school presentations using a computer, tablet, or smartphone	☐	☐	☐	☐
c) I can create tables, charts, and graphs using a computer, tablet, or smartphone	☐	☐	☐	☐
d) I can find information that I need online	☐	☐	☐	☐
e) I can tell if a website is trustworthy	☐	☐	☐	☐
f) I can easily do new things on computers, laptops, or smartphones	☐	☐	☐	☐
g) I can help my friends or family members with using their computers, laptops, or smartphones	☐	☐	☐	☐

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	☐	☐	☐	☐
b) It makes me sad when nature is destroyed	☐	☐	☐	☐
c) I enjoy finding out what kinds of plants and animals live in my surrounding area	☐	☐	☐	☐
d) I enjoy being in nature (e.g., forests, parks, deserts)	☐	☐	☐	☐
e) Addressing climate change should be a high priority	☐	☐	☐	☐

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)	☐	☐	☐	☐
b) I try to use fewer resources (e.g., water, food)	☐	☐	☐	☐
c) I talk about how to help the environment (e.g., saving water, picking up trash)	☐	☐	☐	☐
d) I try to learn about environmental problems (e.g., climate change, endangered animals)	☐	☐	☐	☐
e) I try to participate in group activities to help the environment	☐	☐	☐	☐
f) I tell my friends when they are doing	☐	☐	☐	☐

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	☐	☐	☐	☐
b) Left me out of their games or activities	☐	☐	☐	☐
c) Spread lies about me	☐	☐	☐	☐
d) Stole something from me	☐	☐	☐	☐
e) Damaged something of mine on purpose	☐	☐	☐	☐
f) Hit or hurt me (e.g., shoving, hitting, kicking)	☐	☐	☐	☐
g) Made me do things I didn't want to do	☐	☐	☐	☐
h) Sent me nasty or hurtful messages online	☐	☐	☐	☐
i) Shared nasty or hurtful messages about me online	☐	☐	☐	☐
j) Shared embarrassing photos of me online	☐	☐	☐	☐
k) Threatened me	☐	☐	☐	☐

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	☐	☐	☐	☐
b) I wish I did not have to study mathematics	☐	☐	☐	☐
c) Mathematics is boring	☐	☐	☐	☐
d) I learn many interesting things in mathematics	☐	☐	☐	☐
e) I like mathematics	☐	☐	☐	☐
f) I like any schoolwork that involves numbers	☐	☐	☐	☐
g) I like to solve mathematics problems	☐	☐	☐	☐
h) I look forward to mathematics lessons	☐	☐	☐	☐
i) Mathematics is one of my favorite subjects	☐	☐	☐	☐

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	☐	☐	☐	☐
b) My teacher is easy to understand	☐	☐	☐	☐
c) My teacher has clear answers to my questions	☐	☐	☐	☐
d) My teacher is good at explaining mathematics	☐	☐	☐	☐

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

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 | ☐ | ☐ | ☐ | ☐ |
| b) There is too much noise for students to work well | ☐ | ☐ | ☐ | ☐ |
| c) My teacher has to wait a long time for students to be quiet | ☐ | ☐ | ☐ | ☐ |
| d) Students interrupt the teacher | ☐ | ☐ | ☐ | ☐ |
| e) Students do not follow the classroom rules | ☐ | ☐ | ☐ | ☐ |
| f) Other students' behavior makes it hard for me to concentrate | ☐ | ☐ | ☐ | ☐ |

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 | ☐ | ☐ | ☐ | ☐ |

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

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
a lot | Agree
a little | Disagree
a little | Disagree
a lot |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I enjoy learning science | ☐ | ☐ | ☐ | ☐ |
| b) I wish I did not have to study science | ☐ | ☐ | ☐ | ☐ |
| c) Science is boring | ☐ | ☐ | ☐ | ☐ |
| d) I learn many interesting things in science | ☐ | ☐ | ☐ | ☐ |
| e) I like science | ☐ | ☐ | ☐ | ☐ |
| f) I look forward to learning science in school | ☐ | ☐ | ☐ | ☐ |

- | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| g) Science teaches me how things in the world work | ☐ | ☐ | ☐ | ☐ |
| h) I like to do science experiments | ☐ | ☐ | ☐ | ☐ |
| i) Science is one of my favorite subjects | ☐ | ☐ | ☐ | ☐ |

26. How much do you agree with these statements about your science 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 | ☐ | ☐ | ☐ | ☐ |
| b) My teacher is easy to understand | ☐ | ☐ | ☐ | ☐ |
| c) My teacher has clear answers to my questions | ☐ | ☐ | ☐ | ☐ |
| d) My teacher is good at explaining science | ☐ | ☐ | ☐ | ☐ |
| e) My teacher does a variety of things to help us learn | ☐ | ☐ | ☐ | ☐ |
| f) My teacher explains a topic again when we don't understand | ☐ | ☐ | ☐ | ☐ |
| g) My teacher gives me helpful feedback on my work | ☐ | ☐ | ☐ | ☐ |
| h) My teacher asks me to show what I have learned | ☐ | ☐ | ☐ | ☐ |
| i) My teacher asks me to explain my answers | ☐ | ☐ | ☐ | ☐ |

27. How often do these things happen in your science 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 | ☐ | ☐ | ☐ | ☐ |
| b) There is too much noise for students to work well | ☐ | ☐ | ☐ | ☐ |
| c) My teacher has to wait a long time for students to be quiet | ☐ | ☐ | ☐ | ☐ |
| d) Students interrupt the teacher | ☐ | ☐ | ☐ | ☐ |
| e) Students do not follow the classroom rules | ☐ | ☐ | ☐ | ☐ |
| f) Other students' behavior makes it hard for me to concentrate | ☐ | ☐ | ☐ | ☐ |

28. 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 | ☐ | ☐ | ☐ | ☐ |
| b) Science is harder for me than for many of my classmates | ☐ | ☐ | ☐ | ☐ |
| c) I am just not good at science | ☐ | ☐ | ☐ | ☐ |
| d) Science is easy for me | ☐ | ☐ | ☐ | ☐ |
| e) Science is harder for me than any other subject | ☐ | ☐ | ☐ | ☐ |
| f) Science makes me confused | ☐ | ☐ | ☐ | ☐ |

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	☐	☐	☐	☐
b) I play sports	☐	☐	☐	☐
c) I ride a skateboard	☐	☐	☐	☐

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	☐	☐	☐	☐

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

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 | ☐ | ☐ | ☐ | ☐ |
| b) Tablet devices (e.g., iPad, Surface Pro, Kindle) | ☐ | ☐ | ☐ | ☐ |

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 /
Guardian A | Parent /
Guardian B |
|---|------------------------|------------------------|
| Less than high school | ☐ | ☐ |
| Some high school | ☐ | ☐ |
| High school graduate | ☐ | ☐ |
| 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.) | ☐ | ☐ |
| I don't know | ☐ | ☐ |
| Not applicable | ☐ | ☐ |

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

☐☐

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 | ☐ | ☐ | ☐ | ☐ |
| b) I feel hungry | ☐ | ☐ | ☐ | ☐ |

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.*

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

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) I can write and edit text on a computer, tablet, or smartphone | ☐ | ☐ | ☐ | ☐ |
| b) I can create school presentations using a computer, tablet, or smartphone | ☐ | ☐ | ☐ | ☐ |
| c) I can create tables, charts, and graphs using a computer, tablet, or smartphone | ☐ | ☐ | ☐ | ☐ |

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

16. 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 | ☐ | ☐ | ☐ | ☐ |
| b) Nature exists to benefit humans regardless of the consequences | ☐ | ☐ | ☐ | ☐ |
| c) The most important reason for protecting natural areas is so people can enjoy them | ☐ | ☐ | ☐ | ☐ |
| d) I am confident that environmental problems will be solved by science and technology | ☐ | ☐ | ☐ | ☐ |
| e) It makes me sad when nature is destroyed by humans | ☐ | ☐ | ☐ | ☐ |
| f) I enjoy finding out what kinds of plants and animals live in my surrounding area | ☐ | ☐ | ☐ | ☐ |
| g) I enjoy being in nature (e.g., forests, parks, deserts) | ☐ | ☐ | ☐ | ☐ |
| h) Protecting nature is more important than economic growth | ☐ | ☐ | ☐ | ☐ |
| i) Addressing climate change should be a high priority | ☐ | ☐ | ☐ | ☐ |

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

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

Every day	Almost	Sometimes	Never
------------------	---------------	------------------	--------------

every
day

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

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? | ☐ | ☐ |
| 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, | ☐ | ☐ |

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

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)	☐	☐	☐	☐
b) Spread lies about me	☐	☐	☐	☐
c) Shared my secrets with others	☐	☐	☐	☐

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

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
a lot | Agree
a little | Disagree
a little | Disagree
a lot |
|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I enjoy learning mathematics | ☐ | ☐ | ☐ | ☐ |
| b) I wish I did not have to study | ☐ | ☐ | ☐ | ☐ |

mathematics

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

24. 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 | ☐ | ☐ | ☐ | ☐ |
| b) My teacher is easy to understand | ☐ | ☐ | ☐ | ☐ |
| c) My teacher has clear answers to my questions | ☐ | ☐ | ☐ | ☐ |
| d) My teacher is good at explaining mathematics | ☐ | ☐ | ☐ | ☐ |
| e) My teacher does a variety of things to help us learn | ☐ | ☐ | ☐ | ☐ |
| f) My teacher explains a topic again when we don't understand | ☐ | ☐ | ☐ | ☐ |
| g) My teacher gives me helpful feedback on my work | ☐ | ☐ | ☐ | ☐ |
| h) My teacher asks me to show what I have learned | ☐ | ☐ | ☐ | ☐ |
| i) My teacher asks me to explain my | ☐ | ☐ | ☐ | ☐ |

- 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	☐	☐	☐	☐
b) There is too much noise for students to work well	☐	☐	☐	☐
c) My teacher has to wait a long time for students to be quiet	☐	☐	☐	☐
d) Students interrupt the teacher	☐	☐	☐	☐
e) Students do not follow the classroom rules	☐	☐	☐	☐
f) Other students' behavior makes it hard for me to concentrate	☐	☐	☐	☐

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	☐	☐	☐	☐
b) Mathematics is harder for me than for many of my classmates	☐	☐	☐	☐
c) Mathematics is not one of my strengths	☐	☐	☐	☐
d) Mathematics is easy for me	☐	☐	☐	☐
e) I am good at working out difficult mathematics problems	☐	☐	☐	☐

- | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| f) I am good at explaining mathematics to others | ☐ | ☐ | ☐ | ☐ |
| g) Mathematics is harder for me than any other subject | ☐ | ☐ | ☐ | ☐ |
| h) Mathematics makes me confused | ☐ | ☐ | ☐ | ☐ |

27. 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 think learning mathematics will help me in my daily life | ☐ | ☐ | ☐ | ☐ |
| b) I need mathematics to learn other school subjects | ☐ | ☐ | ☐ | ☐ |
| c) I need to do well in mathematics to get into the college or university of my choice | ☐ | ☐ | ☐ | ☐ |
| d) I need to do well in mathematics to get the job I want | ☐ | ☐ | ☐ | ☐ |
| e) I would like a job that involves using mathematics | ☐ | ☐ | ☐ | ☐ |
| f) It is important to learn about mathematics to get ahead in the world | ☐ | ☐ | ☐ | ☐ |
| g) Learning mathematics will give me more job opportunities when I am an adult | ☐ | ☐ | ☐ | ☐ |
| h) My parents think that it is important that I do well in mathematics | ☐ | ☐ | ☐ | ☐ |
| i) It is important to do well in mathematics | ☐ | ☐ | ☐ | ☐ |

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.*

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

30. How much do you agree with these statements about your science 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	☐	☐	☐	☐
b) My teacher is easy to understand	☐	☐	☐	☐

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

31. How often do these things happen in your science 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 | ☐ | ☐ | ☐ | ☐ |
| b) There is too much noise for students to work well | ☐ | ☐ | ☐ | ☐ |
| c) My teacher has to wait a long time for students to be quiet | ☐ | ☐ | ☐ | ☐ |
| d) Students interrupt the teacher | ☐ | ☐ | ☐ | ☐ |
| e) Students do not follow the classroom rules | ☐ | ☐ | ☐ | ☐ |
| f) Other students' behavior makes it hard for me to concentrate | ☐ | ☐ | ☐ | ☐ |

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	☐	☐	☐	☐
b) Science is harder for me than for many of my classmates	☐	☐	☐	☐
c) Science is not one of my strengths	☐	☐	☐	☐
d) Science is easy for me	☐	☐	☐	☐
e) I am good at working out difficult science problems	☐	☐	☐	☐
f) I am good at explaining science to others	☐	☐	☐	☐
g) Science is harder for me than any other subject	☐	☐	☐	☐
h) Science makes me confused	☐	☐	☐	☐

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	☐	☐	☐	☐
b) I need science to learn other school subjects	☐	☐	☐	☐
c) I need to do well in science to get into the college or university of my choice	☐	☐	☐	☐
d) I need to do well in science to get the job I want	☐	☐	☐	☐
e) I would like a job that involves using science	☐	☐	☐	☐

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

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.*

- | | Yes | No |
|------------------------|-----------------------|-----------------------|
| a) Science fair | ☐ | ☐ |
| b) Science club | ☐ | ☐ |
| c) Science competition | ☐ | ☐ |

Homework

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

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

- | | Every day | 3 or 4 times a week | 1 or 2 times a week | Less than once a week | Never |
|----------------|-----------------------|----------------------------|----------------------------|------------------------------|-----------------------|
| a) Mathematics | ☐ | ☐ | ☐ | ☐ | ☐ |
| b) Science | ☐ | ☐ | ☐ | ☐ | ☐ |

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.