

MEMORANDUM

NATIONAL CENTER FOR EDUCATION STATISTICS

Institute of Education Sciences
United States Department of Education

Date: January 14, 2024 – [updated February 28, 2025](#)
To: Beverly Pratt OMB
Through: Carrie Clarady, OMB Liaison, NCES
From: Samantha Burg, NCES
Re: Program for International Student Assessment 2025 (PISA 2025) Main Study Update (OMB# 1850-0755 v.31)

This change memo outlines changes in the change request for the Program for International Student Assessment (PISA) 2025. These changes include revision to the student video to be used in the main study that updates to remove references to the field test and minor edits to the script to simplify messaging.

Appendix C-2 provides updated versions of the school and student questionnaires for final content. The specific changes are detailed below. Generally, the student questionnaire was reduced internationally to allow for a fixed-form rather than the matrix design employed in the field trial. This resulted in a large number of items being removed from the final questionnaire.

Changes to all documents are described below in the “Proposed Changes for PISA 2025 Main Study” section.

Background to PISA:

PISA is an international assessment of 15-year-olds, which focuses on assessing students’ reading, mathematics, and science literacy. That is, PISA assesses functional skills that students have acquired as they near the end of mandatory schooling (aged 15 years), and students’ knowledge and skills gained both in and out of school environments. It is sponsored by the Organization for Economic Cooperation and Development (OECD) and is conducted in the US by the National Center for Education Statistics (NCES) of the U.S. Department of Education.

The United States has participated in PISA since it was first administered in 2000 and we plan to participate in 2025. This allows us to track trends over time and to compare the performance of U.S. students with that of students in other education systems. In each administration of PISA, one of the subject areas (reading, mathematics, or science literacy) is the major domain and has the broadest content coverage, while the other two subjects are the minor domains.

In 2025, science literacy will be the focal domain, reading and mathematics literacy will be the minor domains, and an additional assessment of self-regulated learning called Learning in a Digital World will also be included. In addition to the cognitive assessments, PISA includes questionnaires administered to school principals and assessed

students. To prepare for the 2025 main study, PISA countries conducted a field test in 2024. The primary purpose of the field test was to evaluate newly developed assessment and questionnaire items but it also serves to test the assessment operations.

Memo Update

To ensure compliance with President Donald Trump’s executive orders (EO) 14168 titled *Defending Women From Gender Ideology Extremism and Restoring Biological Truth to the Federal Government* on January 20, 2025, any data collection items which referred to “gender” was changed to “sex”, with similar changes made in the supporting documents. Throughout this memo, all changes shown in blue should be understood as changes made *after* the 30-day public comment period.

Proposed Changes for PISA 2025 Main Study:

The changes to PISA 2025 documents are described below. Just as a reminder specific illustrated changes are marked in red; additions are in **simple red font**, while deletions are in ~~red strikethrough~~.

1. Specific material changes to Part A

Significant revisions were made to the Preface of Part A to update the history and plans of OMB package review, eliminating reference to previous package contents in order to focus on the package currently under review.

Section A.2: We updated and clarified with a footnote, changing “gender” to “sex” in the description of the background questionnaires.

Participating students will be asked to provide information pertaining primarily to the major assessment domain, science, and about their demographics (e.g., age, ~~gender~~ **sex**, language, race and ethnicity); socio-economic background of the student (e.g., parental education, economic background); student's education career; and access to educational resources and their use at home and at school.

Footnote:

² PISA 2025 will allow countries the option to include a third response option for student **gender**. ~~The proposed U.S. adaptation to the school questionnaire items asking about gender are provided in Appendix C. No third option will be applied to the student question. In response to the January 20, 2025 Executive Order “Defending Women From Gender Ideology Extremism And Restoring Biological Truth To The Federal Government”, the U.S. PISA instruments collect the sex of students, with two response options. See Appendices A and C for these items.~~

Section A.7: *We updated the paragraph about PISA’s plans for SPD15 compliance.*

In March 2024, the Office of Management and Budget (OMB) announced revisions to Statistical Policy Directive No. 15: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity (SPD 15) and published the revised SPD15 standard in the Federal Register (89 FR 22182). In

a previous package (OMB# 1850-0755 v.30, cleared in June 2024), NCES stated our intentions to consult with other NCES-administered international studies and their governing consortia and to then declare our final plans for the race/ethnicity item to be used in the PISA 2025 Main Study; the Terms of Clearance for that review by OMB required that for this submission, “the agency will either have included: The updated race/ethnicity question in this information collection to be in compliance with the revised SPD 15 (effective as of March 28, 2024), or a high-level plan describing how and by when this information will be in compliance with the revised SPD 15, factoring in the international consortium.”

After review, discussion and continuing examination, NCES finds that it is unable to introduce a new item between the Field Test and Main Study administrations of this round of PISA when working with the international consortium. Because the instrument is programmed by the international consortium, there is no time or contract flexibility available for programming a new item. Finally, through additional consultations with other international studies and the PISA consortium, NCES has concluded that there are negative research and scientific ramifications of making changes to a core demographic item between Field Test and Main Study administrations, particularly when there has been no examination of these item types within the population being assessed. This package is not compliant with the new standard and contains no changes to the race and ethnicity items that were part of the PISA 2025 Field Test and had always been planned for the PISA 2025 Main Study collection; the race and ethnicity items included in PISA are consistent with the SPD15 1997 revision.

This is the last planned package for PISA 2025. There are no current plans for the next administration of PISA, but NCES anticipates that any new PISA studies will be covered by the SPD-15 Action Plan, to be submitted to OMB on or before September 28, 2025.

~~In March 2024, the Office of Management and Budget (OMB) announced revisions to Statistical Policy Directive No. 15: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity (SPD-15) and published the revised SPD15 standard in the Federal Register (89 FR 22182). This package is not compliant with the new standard and contains no changes to the race and ethnicity items that are part of the PISA 2025 Main Study collection; the race and ethnicity items included in PISA are consistent with the SPD15 1997 revision.~~

~~NCES is unable to introduce a new item between the Field Test and Main Study administrations of this round of PISA when working with the international consortium. Because the instrument is programmed by the international consortium, there is no time or contract flexibility available for programming a new item. Finally, through additional consultations with other international studies and the PISA consortium, NCES has concluded that there are negative research and scientific ramifications of making changes to a core demographic item between Field Test and Main Study administrations, particularly when there has been no examination of these item types with the population being assessed.~~

Section A.16., Page 16: Revised the schedule to account for a change to the main study reporting schedule.

April - December 2023	Prepare data collection manuals, forms, assessment materials, and questionnaires for field test
November 2023-February 2024	Contact and gain cooperation of states, districts, and schools for field test
January–April 2024	Select student samples and collect field test data
June 2024	Deliver raw data to international sponsoring organization
August – September 2024	Receive Field test Report from international sponsors
June 2024–March 2025	Prepare for the main study phase/recruit schools
March 2025–May 2025	Collect main study data
March - April 2026	Receive final data files from international sponsors
August October 2025 - December September 2026	Produce General Audience Report and Survey Operations/Technical Report for the U.S.

2. Specific material changes to Part B

Page 5: Revised the discussion of the design for the main study student questionnaire. The main study student questionnaire will be a fixed-form instrument rather than the alternative matrix design used in the field test.

~~The goal is for the student questionnaire to take approximately 35 minutes to complete in the field test and the main study. As in PISA 2022, the PISA 2025 field test implemented a matrix sampling design where different respondents will receive different sets of items to reduce student burden while extending content coverage across relevant areas. This approach is viable for PISA 2025~~

due to the limited time available for the questionnaire and the large student sample size in large-scale assessments. ~~This design is expected to be carried to the main study.~~

The approach proposed for PISA 2025 will utilize an alternative matrix sampling design that rotates questions within constructs instead of across constructs. In the PISA 2025 proposed within-construct matrix sampling design, every student will receive questions on all constructs but only answer a subset of all questions for each construct, thus resulting in a complete database in terms of construct-level indices. This approach will be implemented for a select number of scales in the field test. A decision on the use of this design for the main study was made based on an empirical evaluation of the PISA 2025 field test results. The design for the main study will be a fixed-form student questionnaire. Several of the field test items have been deleted. These deletions are detailed in Appendix C-2. ~~Following the Field Trial, a decision will be made about the feasibility of multiple partly overlapping forms for the main study, including consideration of a within-construct matrix sampling design.~~

Additionally, in the description of the Student core questionnaire (p. 5) and Student sampling section (p. 7), “gender” was changed to “sex” as shown below.

Student core questionnaire. Participating students will be asked to provide information pertaining primarily to the major assessment domain in 2025, science. Information to be collected includes demographics (e.g., age, ~~gender~~**sex**, language, race, and ethnicity); socio-economic background of the student (e.g., parental education, economic background); student's education career; and access to educational resources and their use at home and at school, which have been standard questions in PISA since the earliest rounds. Domain-specific information

Student sampling. Beginning in January 2024 for the field test, student lists will be collected to draw a student sample in each school. The student lists are designed to collect students' names, grade, ~~gender~~**sex**, and month and year of birth. Edit checks will be run during sampling to check column mappings and completeness of data to ensure that all student listing forms are constructed properly for sampling (see Appendix A-1).

3. Specific material changes to Appendix A-2

Page 15 Changed “Gender” to “Sex” in further most right column heading.

Figure 1: Example of Electronic Student File

Student First Name	Student Middle Name	Student Last Name	Grade	Month of Birth	Year of Birth	Gender-Sex
Ted		Brooks	10	12	2006	2
Jeffery		Jenkins	9	11	2006	2
Rose		Matthews	10	7	2006	1

Page 48 Changed “Gender” to “Sex” in column heading

Exhibit 3.5. Student Tracking Form (Example After Completion)

PISA Student Tracking Form

School Name & ID		PISA No.		School Coordinator					Test Administrator			Session ID	
Omega High School		23		Sandy Patterson					Joseph O'Neal			11	
		Student List							Participation				
Line No.	Student Name	Line No.	Student ID	Password	Grade	Gender Sex	Month of Birth	Year of Birth	SEN	ACCOM	Test	StQ	Comments
1	Adams, Ted	1	1999002300	123456789	10	2	12	2009					
2	Arnette, Jeffrey	2	1999002301	123456790	10	2	11	2009			4		

Page 49 Changed “Gender” to “Sex” in the Codes table (1st column)

Codes

Codes to enter into Special Educational Needs (SEN) column:	Codes to enter into Test column:	Codes to enter into StQ column:	Codes to enter in Accommodations column:
1 – Functional disability	1 – Participant	1 – Participant	SMG – Small Group
2 – Cognitive, behavioural, or emotional disability	2 – Parent refusal	0 – Non-participant	ONE – One-on-one
3 – Limited assessment language experience	3 – Excluded on SEN basis		TEM – Uses template
5 – Home schooled	4 – Now enrolled at another school		EQP – Special Equipment
	5 – Not enrolled in this school, enrolment unknown		SEA – Preferential seating
Gender-Sex Codes	9 – Does not meet criteria for eligibility		SLD – Directions in second language
Female=1	0 – Non-participant for any other reason		AUD – Auditory amplification
Male=2			OTR – Other accommodations
Codes used by Test Administrator			
Codes used by School Coordinator			
Codes used by both Test Administrator and School Coordinator			

Pages 100-110: Revised the student video text to simplify messaging.

Page 102

To get started, let's look at a brief overview of PISA. PISA is an acronym that stands for the Program for International Student Assessment. ~~It is designed to find out whether 15-year-old students from across the globe can use what they have learned in school to apply that knowledge to real-life situations and problems. PISA is less interested in knowing whether the students can repeat what they have been taught in class. It's the brainchild of the OECD. And what's the OECD? It's another acronym that stands for the Organization for Economic Cooperation and Development.~~

~~In the late 1990s, countries that are members of the OECD came up with the idea to measure whether 15-year-olds around the world are well-prepared to participate in society. They chose 15-year-olds, rather than 12- or 17-year-olds, because most 15-year-olds are about to complete their compulsory education.~~

~~Experts in the field of education from around the world work together to create a test that focuses on core subjects like reading, mathematics, and science. PISA surveys are designed to find out whether students can use what they have learned in school and apply that knowledge to real-life situations and problems. PISA is less interested in knowing whether the students can repeat what they have been taught in class.~~

~~PISA is organized by OECD which stands for the Organization for Economic Cooperation and Development. OECD is an intergovernmental organization which works with countries to find solutions to social, economic and environmental challenges. PISA is part of this work because it provides educational information to help nations identify and develop the knowledge and skills that drive better jobs and better lives, generate prosperity and promote social inclusion.~~

Page 103

~~Adding on to what you just heard....~~

~~PISA is the world's largest international education study with more than 500,000 students participating in each cycle during an assessment year.~~

~~It measures how well 15-year-old students apply what they've learned in and out of school to real-world problems in reading, science, mathematics, and a new assessment called Learning in a Digital World. PISA provides information about how well students in the United States are performing in comparison to students in countries around the world.~~

~~But the point of PISA is not to tell each individual student how well he or she has mastered a set of skills. Instead, PISA results are analyzed and extrapolated to the national level. PISA provides information about how well students in the United States are performing in comparison to students in countries around the world.~~

~~So, which countries participate in the largest international education study in the world? To understand how far-reaching PISA is, let's take a look at this map. In total more than 90 countries and education systems take part in PISA, and you can see them here in gold. The OECD website provides a full list of the participating countries.~~

~~You can think of PISA as an Olympics of the mind. Countries and education systems from every continent, except Antarctica, participate in PISA—in total more than 80 countries and education systems participate in PISA.~~

Page 104

PREVIOUS:



The National Center for Education Statistics website provides a list of each of the countries and education systems that are participating, and provides a look at historical participation in PISA.

REVISED: Screen and text deleted.

Page 104

PREVIOUS:

Who Participates in PISA?



~~Who participates in PISA within the United States? PISA samples schools across the country to take part in the assessment. Not every school in every state is asked to participate, since PISA relies on a sample of students and schools to represent all the students and schools like them across the country.~~

REVISED: New screen image and text

Who Participates in PISA?



Within the United States, PISA samples schools across the country to take part in the assessment. Not every school in every state is asked to participate, since PISA relies on a sample of students and schools to represent all the students and schools like them across the country.

Page 104

PREVIOUS:

**In the United States, only about
3,000 students were selected for
the PISA 2022 field test.**

~~In the United States, only about 3,000 students were selected for the PISA 2025.~~

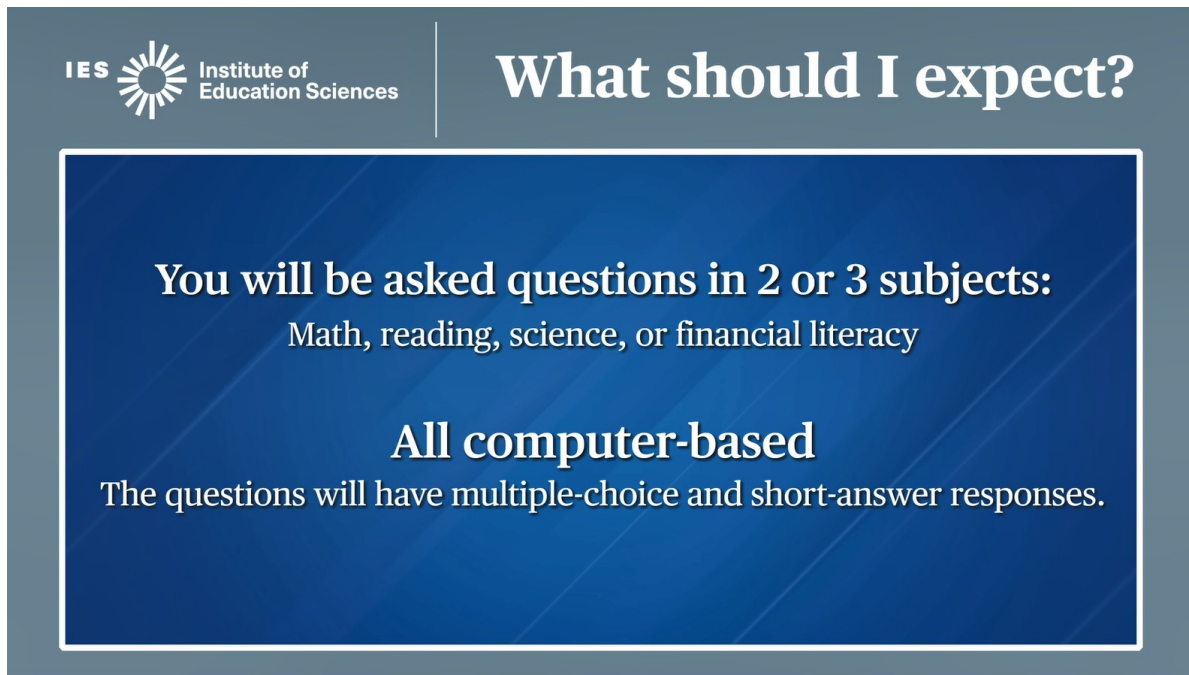
REVISED: New screen edit and edit to text to revise student count.

**In the United States, only
about 8,000 students were
selected for PISA 2025.**

In the United States, only about 8,000 students were selected for the PISA 2025.

Page 105:

PREVIOUS:



IES Institute of Education Sciences

What should I expect?

You will be asked questions in 2 or 3 subjects:
Math, reading, science, or financial literacy

All computer-based
The questions will have multiple-choice and short-answer responses.

PISA assesses students' knowledge and skills in ~~math, reading, science, or learning in a digital world~~ science, reading, math, and a new subject this year called learning in a digital world. On assessment day, you will be asked questions in two or three of these subjects. The questions will be based on real-life situations. Remember, PISA is about applying the knowledge you have learned in and out of school, and not just memorizing facts. In a few moments we will show you a sample PISA item.

PISA is completely computer-based. ~~Assessment~~ The questions will be multiple-choice and short-answer. There are no essays or extended writing responses.

PREVIOUS:

What should I expect?

Questionnaires about:

You and your attitudes and experiences in school

Financial matters

Familiarity with information and communication technology

**No one-student takes the entire assessment-
no individual scores**

**The assessment takes place at school.
You will be excused from class to participate.**

~~After the main assessment, you will be asked to complete questions about your attitudes and experiences in school, your attitudes and thoughts about learning science subjects, and your familiarity with information and communication technology. This helps policymakers learn more about students' experiences and attitudes and how they relate to students' level of knowledge and skills.~~

~~Because no one student takes the entire assessment, unlike many tests you take, you will not get your own score on PISA.~~

~~PISA takes place at your school. You will be excused from class during the PISA assessment.~~

~~Now, let's take a look at an example item from previous PISA tests, and what you can expect to see on assessment day.~~

REVISED: Screen and text revised

What should I expect?

Questionnaires about:

You and your attitudes and experiences in school

Familiarity with information and communication technology

After the subject assessments, you will be asked to complete questions about your attitudes and experiences in school, and your familiarity with information and communication technology. This data helps us learn more about students' experiences and attitudes and how they relate to students' level of knowledge and skills.

What should I expect?

No one student takes the entire assessment-
no individual scores

The assessment takes place at school.
You will be excused from class to participate.

Because no one student takes the entire assessment, unlike many tests you take, you will not get your own score on PISA. And there is no impact on your grades.

Your identity and participation will be kept confidential, and you will not be directly associated with your PISA responses after the assessment.

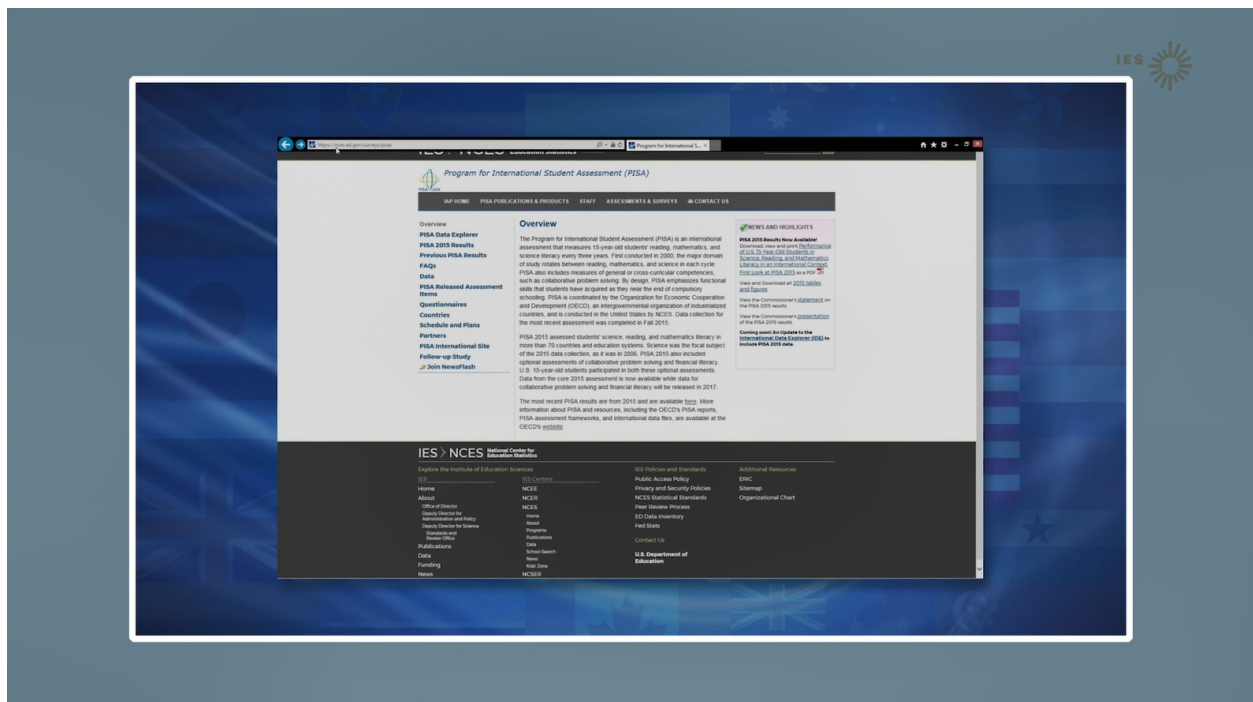
PISA takes place during school hours. You will be excused from class during the PISA assessment.

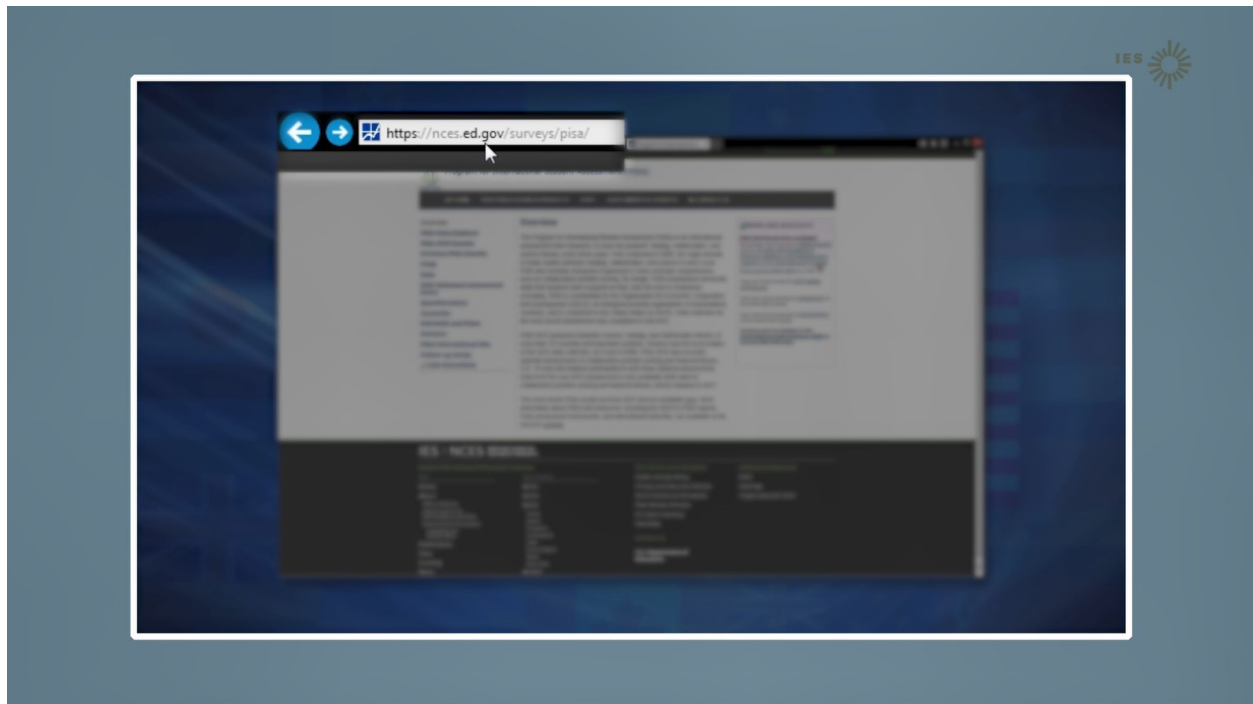
PISA items are presented in a layout in which the question, or description of the problem, is presented on the left side of the screen.

PISA questions may look very different than some of the other tests you take, so let's take a look at an example question, and what you can expect to see on PISA day.

PISA questions are typically grouped together by a context or scenario. The question, or description of the problem, is presented on the left side of the screen...

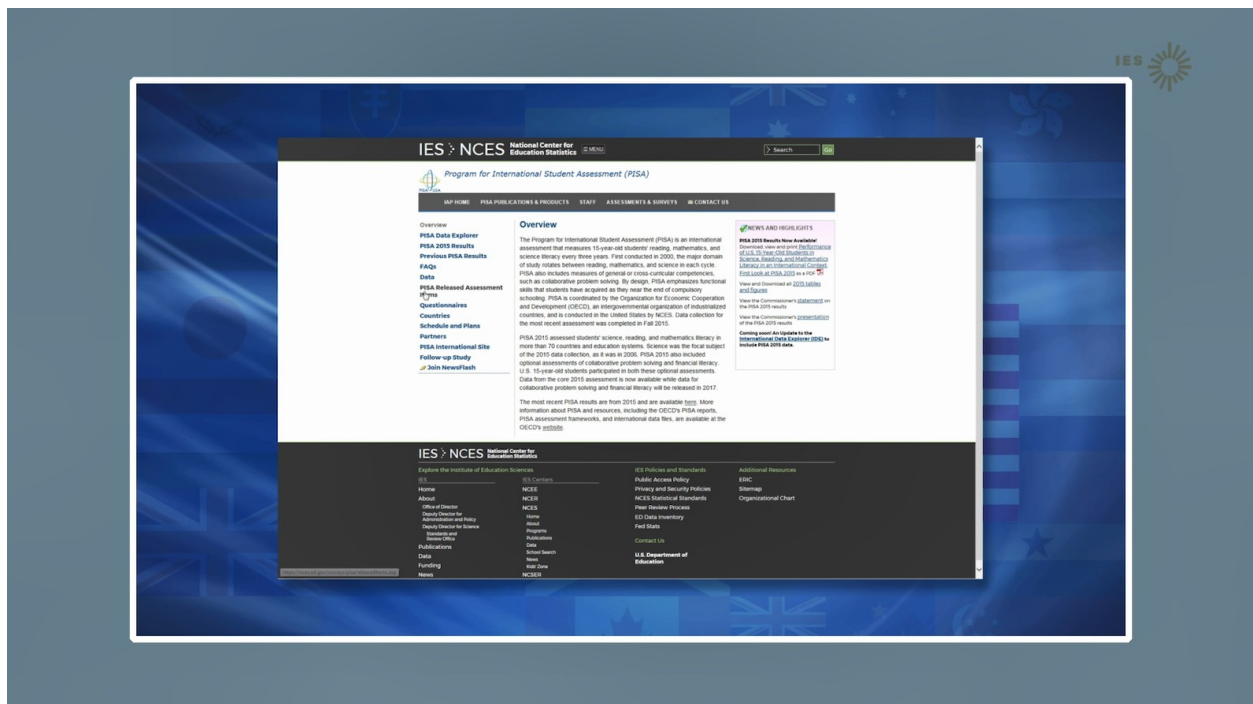
PREVIOUS:





[Highlight the NCES PISA web address.]

The International studies website at NCES has questions that are similar to the ones you will take during the PISA test.



[Website address shrinks back and study page is clear]

IES NCES National Center for Education Statistics

Program for International Student Assessment (PISA)

Overview
PISA Data Explorer
PISA 2015 Results
Previous PISA Results
FAQs
Data
PISA Released Assessment Items
Questionnaires
Countries
Schedule and Plans
Partners
PISA International Site
Follow-up Study
Join NewsFlash

PISA Released Assessment Items

Following each survey cycle, PISA releases some assessment items that were used in the assessment, while the majority are kept confidential for reuse in future assessments to enable PISA to measure trends. The released items illustrate the knowledge and competencies that PISA measures.

[Go to PISA Released Assessment Items](#)

In addition to releasing assessment items, PISA makes available the assessment frameworks which provide the specifications used in developing the PISA assessments. The frameworks provide the definition of the PISA subjects or domains as well as key features represented in the items.

[Go to PISA 2015 Assessment and Analytical Framework: Science, Reading, Mathematics and Financial Literacy](#)

Key Features of the PISA 2015 Assessment Frameworks, by Domain*

	Science literacy	Reading literacy	Mathematics literacy	Collaborative Problem Solving	Financial literacy
Content	Knowledge of science Physical systems Living systems Earth and space systems Technology systems Knowledge about science	Text Medium Print Digital Environment Authored Message-based Text format Continuous	Knowledge of Mathematics Change and relationships Space and Shape Quantity Uncertainty and data	Collaborative problem solving skills Establishing and maintaining shared understanding Taking appropriate action to solve the problem Establishing and maintaining team	Money and transactions Planning and managing finances Risk and reward Financial landscape

There are a few computer items that can be shared publically. Assessment items that are scheduled to be used again cannot be shared publically because they are confidential, and doing so would jeopardize the results.

IES

PISA Released Paper-Based Assessment (PBA) Items and Scoring Guides

The **Reading Literacy Items** document contains 31 released reading items grouped into 14 units from PISA 2000 and 2009. The **Mathematics Literacy Items** document contains 40 mathematics items grouped into 27 units from PISA 2000 and 2003, and 28 mathematics items grouped into 11 units from PISA 2006 and 2012. The **Science Literacy Items** document contains 31 released science items grouped into 10 units from PISA 2000 and 2006. The **Problem Solving Items** document contains 10 problem-solving items grouped into 10 units from PISA 2003. The **Financial Literacy Items** document contains 10 sample items grouped into 5 units which are a subset of the PISA 2012 assessment.

The documents below include the released items without any scoring information, making them ready for classroom use.

- Reading Literacy Items (2000 and 2009)
- Mathematics Literacy Items (2000 and 2003)
- Mathematics Literacy Items (2006 and 2012)
- Science Literacy Items (2000 and 2006)
- Problem-Solving Items (2003)
- Financial Literacy Items (2012)

Below are the released items along with answer keys and scoring guides. The scoring guides have been adapted from the original for ease of use, as well as performance data. The data include the percentage of students in the United States and the Organisation for Economic Co-operation and Development (OECD) countries, on average, who answered each question correctly. The OECD average is based on the average of OECD countries that participated in each PISA cycle.

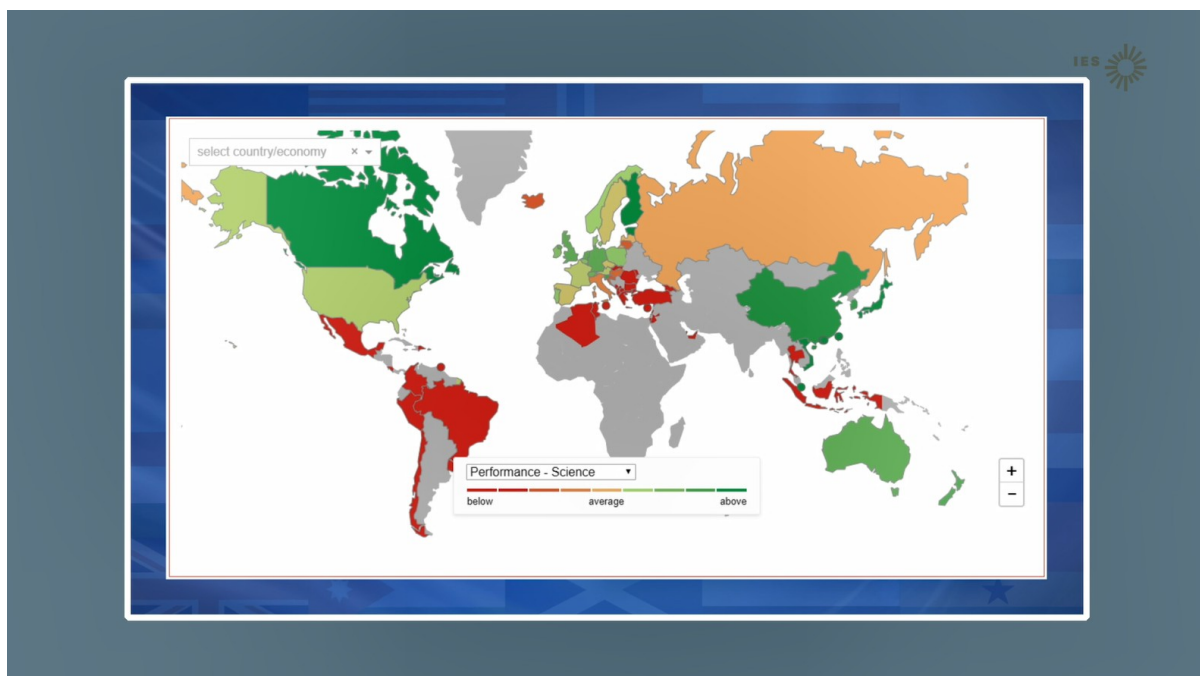
Reading Literacy Items and Scoring Guides (2000 and 2009)
 Mathematics Literacy Items and Scoring Guides (2000 and 2003)
 Mathematics Literacy Items and Scoring Guides (2006 and 2012)
 Science Literacy Items and Scoring Guides (2000 and 2006)
 Problem Solving Items and Scoring Guides (2003)
 Financial Literacy Items and Scoring Guides (2012)

Note: For the full scoring, itemizing, and scoring PDF files, visit the Data Section. For more information on

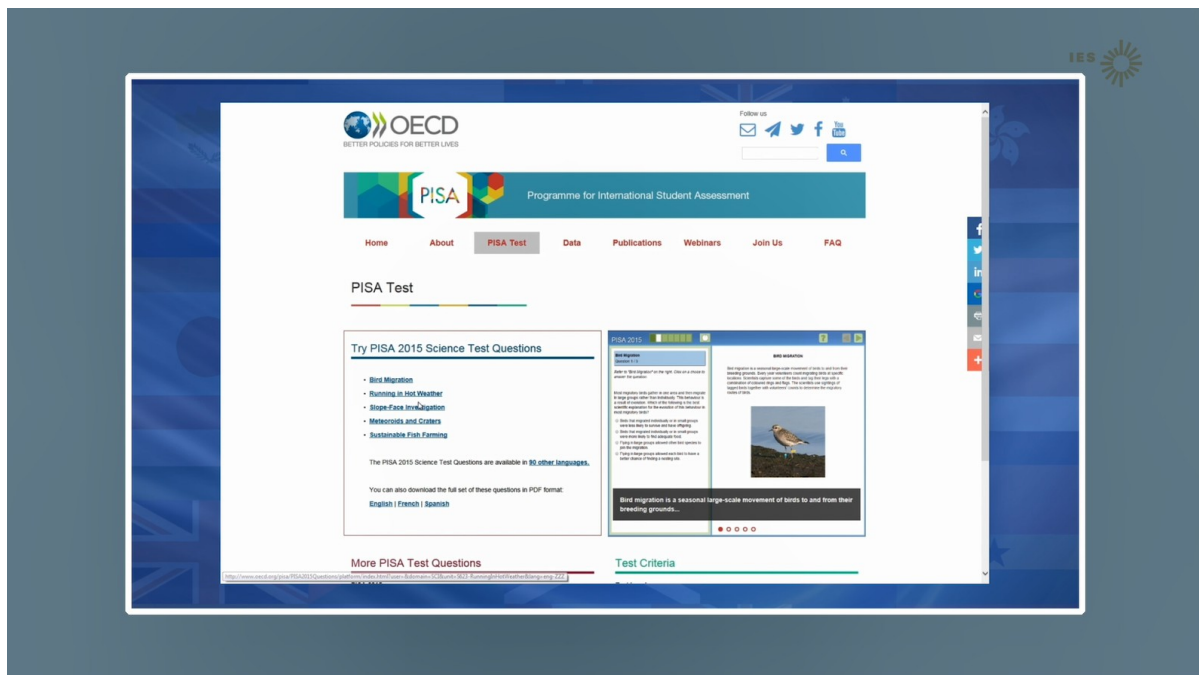
On the NCES released items page, you can click on the word version or PDF version of released items.



Another PISA resource with released assessment items and recent PISA results is the OECD website.



The OECD website for PISA includes interactive maps,...

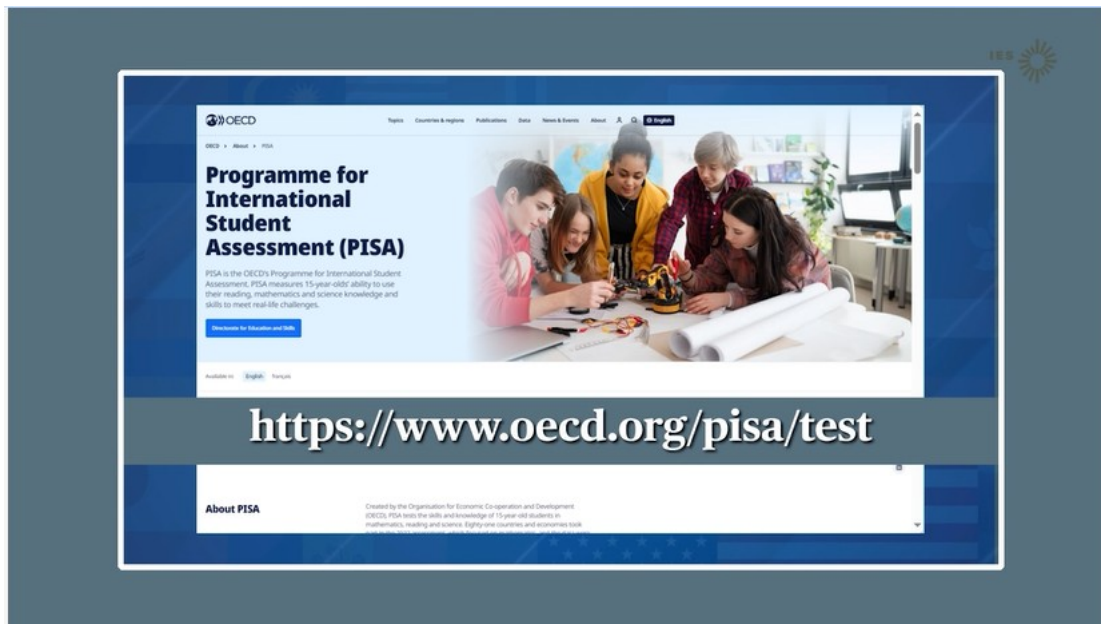


...released items,



...and other PISA information and videos.

REVISED: The previous 9 screens were deleted and replaced with a single screen and text.



We don't expect you to study or prepare for PISA. But, if you want to see more examples that are similar to the ones you will take during the PISA test go to the OECD website and search for PISA. You can also find recent PISA results on the OECD PISA website.

Page 109

PREVIOUS:

~~You play a crucial role in the success of PISA because you are the most important part!~~

~~Each student who takes part represents thousands of students across the nation.~~

~~Your participation can help improve the U.S. education system for future students.~~

~~AND you are also performing a national service.~~

REVISED:

You play a crucial role in the success of PISA because you are the most important part! Each student who takes part represents thousands of students across the nation.

Your participation provides representation for other students like you - at your school, within your state, and across the nation - who are not part of the sample.

AND you are also performing a national service. You are helping to understand student abilities and experiences that can lead to better educational outcomes for you and your peers.

Page 110

PREVIOUS:

NCES.ED.GOV/SURVEYS/PISA

~~There is a lot of information about PISA. It is most easily found on the PISA website at the National Center for Education Statistics.~~

REVISED: Slight text edit.

NCES.ED.GOV/SURVEYS/PISA

There is a lot of information about PISA. It is most easily found on the PISA website at the National Center for Education Statistics, **or NCES.**

Page 110

PREVIOUS:

Thank You!

PISA will be held:

Date:
Time:
Location:



Questions?

Thank you for your time and for taking part in PISA.

REVISED: Simplified screen and changed text.

Thank You!

Questions?



Thank you for your time and for taking part in PISA. **Your PISA School Coordinator will share with you the details of when PISA is happening in your school and answer any questions you have about the assessment.**

4. Specific material changes to Appendix C-2 (a-c)

This package provides the U.S. versions of the full-scale questionnaires for the 2025 main study. The changes comprise questions that will be deleted based on review and discussion within NCES and feedback from other stakeholders.

PISA includes both student and school questionnaires. In addition, there are two sets of student questionnaires—core and survey questions related to Information Communication Technology (ICT). Due to the size of these files, the submission is broken into three separate files—Student Core (C-2a), Student ICT (C-2b), and School Questionnaire (C-2c).

Deletions and Modification from the Student Core Questionnaire (Appendix C-2a)

Table 1. Student Questionnaire – Full Question deletions

Item ID	Question stem and item text	Reason deleted
ST253	How many digital devices with screens are there in your home?	International Consortium decision based on FT result
ST256	How many of the following types of books are in your home?	International Consortium decision based on FT result. NOTE: Item ST256Q01 was to be deleted by the US. Now the entire question and all items will be removed.
ST258	In the past 30 days, how often did you not eat because there was not enough money to buy food?	Due to sensitivities to this content, the question will be removed.
ST278/ ST402	What is the floor of your home mostly made of?	This question has no context in the US. In the field test, this item confused students.
ST259	The scale below represents how society in <country of test> is set up. At the top of the scale (value 10) are the people who are the best off. They earn the most money, receive the best education, and have the most respected jobs. At the bottom of the scale (value 1) are the people who are the worst off. They earn the least money, receive no education, and have no jobs or the least respected jobs.	Due to sensitivities to this content, the question will be removed. NOTE: This question is also deleted in the International source questionnaire.
ST228	How many of the following people usually live at your main home with you?	In the PISA 2025 FT, questions aiming to capture information about modern living arrangements and about parents' education and occupation were introduced. timing data indicates that

		students a spent long time in questions ST228 and ST229 and layout may be challenging for students in some countries. Also, the response categories in the drop-down list may not be realistic for mother or female guardian/father or male guardian (e.g., “five or more”).
ST229	How many of the following people usually live at your homes with you?	Same comment as ST228.
ST407	Does your parent or guardian have a paid job?	International Consortium decision based on FT result
ST464	On a scale from 1-10, how would you rate the quality of your science instruction this school year?	International Consortium decision based on FT result
ST530	When learning science topics at school, how often do the following activities occur? Q01) Students are given opportunities to explain their ideas. Q02) Students spend time in the laboratory doing practical experiments. Q03) Students are allowed to design their own experiments. Q04) There is a class debate about investigations. Q05) Students are asked to do an investigation to test ideas. Q06) Students have the opportunity to repeat experiments and compare observations. Q07) Students carry out practical work. Q08) Students write up laboratory reports. Q09) Students present something to the rest of the class. Q10) Students are given time to research scientific ideas from a range of sources. Q11) Students are able to choose different methods (e.g., field studies, experiments, simulations) to conduct investigations. Q12) Students compare and evaluate different experimental designs. Q13) Students interpret data and make judgements about its accuracy. Q14) Students design their own projects under the guidance of teachers.	International Consortium decision based on FT result
Item ID	Question stem and item text	Reason deleted
ST534	When learning science topics at school, how often do the following activities occur? Q01) Students are required to debate science questions. Q02) Students are asked to draw conclusions from an experiment they have conducted.	International Consortium decision based on FT result

	Q03) The teacher explains how a science idea can be applied to a number of different phenomena (e.g., the movement of objects, substances with similar properties). Q04) Students design their own experiments. Q05) Students are required to engage in discussions among themselves. Q06) Use scientific information from diagrams, graphs, or simulations to support an argument Q07) Uses scientific solutions to solve real life challenges Q08) Identifying scientific aspects of a real-world problem Q09) Students compare sources of scientific information to determine their reliability Q10) Students are asked to consider the ethics of scientific investigations Q11. Students develop and carry out experiments with teacher guidance	
ST467	When learning science topics at school, how often do the following activities occur? Q01TA) Students provide evidence to support arguments about scientific questions. Q02TA) Students use evidence from experiments to support their conclusions Q03TA) Students determine which variables need to be controlled in an experiment. Q04TA) There is a class discussion about how to solve scientific problems. Q05TA) Students are encouraged to question and critique scientific arguments made by other students. Q06TA) Students discuss how scientists develop theories among themselves. Q07TA) The teacher asked us to explain our reasoning during a discussion about scientific theories.	International Consortium decision based on FT result
ST466	This school year, how often did your teacher do the following things in your science lessons? Q01JA) The teacher explained how new and old topics were related. Q02JA) The teacher summarized what we learned at the end of the lesson. Q03JA) The teacher explained at the beginning of the lesson what the learning goals are. Q05JA) The teacher gave different work to those of us who had difficulties learning. Q06JA) The teacher gave different work to those of us who could advance faster. Q08JA) The teacher asked us to discuss with each other what	International Consortium decision based on FT result

	we learned. Q09JA) The teacher read to us from a <textbook>. Q10JA) The teacher explained how scientific discoveries can help people in their everyday lives. Q11JA) The teacher demonstrates a scientific idea by using an experiment or model. Q12JA) The teacher explained how scientific knowledge is generated and refined over time.	
ST107	How often do these things happen in your lessons for this science course? Q01NA) The teacher adapts the lesson to my class's needs and knowledge. Q02NA) The teacher provides individual help when a student has difficulties understanding a topic or task. Q03NA) The teacher changes the structure of the lesson on a topic that most students find difficult to understand. Q04NA) The teacher provides individual support for advanced students. Q05NA) The teacher plans a lesson based on each students' individual learning needs when required. Q06NA) The teacher creates assessments based on each students' individual learning needs when required. Q07NA) The teacher changes the way in which they teach students based on their preferred learning style.	International Consortium decision based on FT result
ST508	During your science lessons, does your teacher do the following? Q01NA) Discuss the homework in class. Q02NA) Monitor whether homework was completed. Q03NA) Correct homework assignments. Q04NA) Give you feedback on your homework.	International Consortium decision based on FT result
ST494	To what extent do you agree or disagree with the following statements? Q03JA) Science is one of my favorite subjects. Q06JA) Science is easy for me. Q09JA) I want to do well in my science class.	International Consortium decision based on FT result
ST113	How much do you agree with the statements below? Q01TA) Making an effort in my science classes is worth it because this will help me in the work I want to do later on. Q02TA) What I learn in my science classes is important for me because I need this for what I want to do later on. Q03TA) Studying science is worthwhile for me because what I learn will improve my career prospects. Q04TA) Many things I learn in my <school science> subject(s) will help me to get a job.	International Consortium decision based on FT result

	SQ05DA) Studying science is worthwhile for me because what I learn will improve my career prospects.	
ST130	How much do you agree with the statements below? Q01NA) Learning advanced science topics would be easy for me Q02NA) I can usually give good answers to test questions on science topics Q03NA) I learn science topics quickly Q04NA) science topics are easy for me Q05NA) When I am being taught science, I can understand the concepts very well Q06NA) I can easily understand new ideas in science Q07DA) I get higher grades in science than my peers do Q08DA) I consistently get good grades in science Q09DA) I get higher grades in science than I do in other subjects	International Consortium decision based on FT result
ST497	How much do you agree or disagree with the following statements about what you have learnt in school about environmental issues? Q01) I have participated in my school's decision-making processes about environmental issues. Q02) What I learn in school encourages me to consider what I can do to impact the local environment positively. Q03) What I learn in school encourages me to positively impact national and global environmental issues (e.g., Climate change). Q04) I have learned in school that when I use more energy at home, I might be contributing to global climate change. Q05) I have learned in school that most plastic bags do not biodegrade and instead they break into smaller parts and enter the food chain. Q06) I take part in activities organized by the school to help improve the living conditions of others (e.g., those affected by drought, wildfires, or food shortages). Q07) As a result of what I have learned in school, I have become more respectful of other cultures' knowledge about the environment. Q08) I take part in activities organized by my school to improve habitats for other living things. Q09) As a result of what I have learned in school, I know how to positively impact the environment whilst working with others. Q10) I have learned in school how others are positively impacting the environment. Q11) At school, I have learned to eat sustainably.	International Consortium decision based on FT result

	Q12) From school I have learned that I can make a difference.	
ST463	How informed are you about the following aspects of Human-caused, induced climate change? Q01DA) The difference between natural and human-caused, climate change Q02DA) The relationship between global warming and climate change Q03DA) The difference between weather and climate Q04DA) The causes of global warming Q05DA) The effects of global warming Q06DA) The varying impacts of climate change	International Consortium decision based on FT result
ST093	Do you think problems associated with the environmental issues below will improve or get worse over the next 20 years? Q01TA) Air pollution Q09DA) Energy shortages Q03TA) Extinction of plants and animals Q10DA) Loss of biodiversity Q04TA) Clearing of forests for other land use Q05TA) Water shortages Q11DA) Water pollution Q06TA) Nuclear waste Q07NA) The increase of greenhouse gases in the atmosphere Q12DA) The causes of climate change Q13DA) The effects of climate change Q14DA) That humans have contributed to changes in our climate systems Q15DA) Effects of plastic pollution Q16DA) Causes of food waste Q17DA) Advantages of renewable Energy Q18DA) Climate change impacts varies across nations Q19DA) Effects of sea level rise	International Consortium decision based on FT result
ST503	Why do you participate in additional science instruction in this school year? Q01NA) I want to learn more. Q02NA) I want to prepare for exams. Q03NA) My teachers recommended it. Q04NA) My parents recommended it. Q08NA) My friends participate in it. Q05NA) I want to improve my grades. Q06NA) I need help understanding the class material. Q07NA) It is necessary for a job that I would like to have in the future.	International Consortium decision based on FT result
ST504	Do you attend more or less hours of additional instruction per week during holidays or during test preparation times (e.g. prior to final exams)?	International Consortium decision based on FT result

	Q01NA) During test preparation Q02NA) During holidays	
ST505	Who are the providers of your additional science instruction? Q01) Teachers from my regular school Q02) Teachers from other schools Q03) Tutors or instructors from a business or commercial company Q04) Tutors or instructors from the school district Q05) Tutors or instructors from a not-for-profit organization or community club Q06) Computer software or app from a business or commercial company Q07) Computer software or app from the school district Q08) Computer program from a not-for-profit organization or community club Q09) An older student	International Consortium decision based on FT result
ST510	How is this additional instruction paid for? Q01) District pays for or provides it. Q02) My school pays for or provides it. Q03) My family pays for it. Q04) I pay for it. Q05) Other people or organizations pay for it (e.g. foundations, friends). Q06) Nobody pays for it. Q07) I do not know	International Consortium decision based on FT result
ST511	Where do you attend this additional instruction? Q01) In my regular school building Q02) At some other place, i.e., not in my regular school building Q03) Online	International Consortium decision based on FT result
ST512	How many years altogether have you attended additional instruction?	
ST507	In a typical school week, approximately how many hours do you spend studying in the following subjects? Q01) Science Q02) English/Language Arts Q03) World language (other than English/Language arts) Q04) Total time for all studying in all subjects, including subjects not listed above	International Consortium decision based on FT result
ST509	How often do you do these things? Q01TA) Watch TV programs about science Q02TA) Borrow or buy books or magazines on science topics Q03TA) Visit web sites about <school science> topics Q04TA) Read science magazines or science articles in newspapers	International Consortium decision based on FT result

	Q05TA) Attend a science-related club Q06NA) Simulate natural phenomena in computer programs/virtual labs Q07NA) Simulate technical processes in computer programs/virtual labs Q08) Visit web sites of ecology organizations or follow news of science, environmental, or ecology organizations via blogs and microblogging	
ST330	Have you done any of the following to find out about future study or types of work? Q02WA) I attended a work-site visit. Q03WA) I visited a job fair. Q04WA) I spoke to a career counselor at my school. Q05WA) I spoke to a career counselor outside of my school. Q06WA) I completed a questionnaire to find out about my interests and abilities. Q07WA) I researched the internet for information about careers. Q08WA) I went on an organized tour of a college, university, or technical college. Q09WA) I searched the Internet for information about colleges, universities or technical colleges.. Q11WA) I researched information on student financing (e.g., student loans or grants).	International Consortium decision based on FT result
ST529	Considering your academic performance since the beginning of this year, do you expect to be capable of completing the following education qualifications? Q01) High school diploma or equivalent Q02) Vocational or technical certificate/diploma after high school (such as cosmetology or auto mechanics) Q03) Associate's degree Q04) Bachelor's degree or equivalent Q05) Master's degree or professional degree (e.g., law, medicine) or equivalent Q06) Doctoral degree or equivalent	International Consortium decision based on FT result
ST532	What level of education do you think is required to undertake the following occupations in your country? Q01) Expected occupation from ST329 Q02) Teacher (primary or secondary) Q03) Motor vehicle mechanic Q04) Nurse or midwife Q05) Hairdresser Q06) Medical doctor Q07) Engineer Q08) Lawyer Q09) Police officer	International Consortium decision based on FT result

ST063	Which of the following science courses did you attend this school year or last school year? Q01) Physics Q02) Chemistry Q03) Biology Q04) Earth and space (e.g., geology, astronomy) Q05) Earth sciences (e.g., geography, oceanography, meteorology). Q06) Environmental science (e.g., ecology) Q07) Specialized science (e.g., Forensic science, Medical science, Marine biology) Q08) Applied sciences and technology (e. g., engineering, robotics). Q09) General, integrated, or comprehensive science course (e.g., anatomy and physiology, biological and physical sciences).	International Consortium decision based on FT result
ST064	To what extent can you choose the following for your science courses? Q01) I can choose the science course(s) I study. Q02) I can choose the level of difficulty. Q03) I can choose the number of science courses or class periods. Q04) I can choose from different teachers teaching the same course(s).	International Consortium decision based on FT result
ST513	How often did you attend each of the following science courses over the last two school years? Q01) Physics Q02) Chemistry Q03) Biology Q04) Earth and space (e.g., geology, astronomy) Q05) Earth sciences (e.g., geography, oceanography, meteorology). Q06) Environmental science (e.g., ecology) Q07) Specialized science (e.g., Forensic science, Medical science, Marine biology) Q08) Applied sciences and technology (e. g., engineering, robotics). Q09) General, integrated, or comprehensive science course (e.g., anatomy and physiology, biological and physical sciences).	International Consortium decision based on FT result
ST514	Have you studied any of the following areas of science in the past two school years? Q01) Structure of the Earth (e.g., plate tectonics, layers of the Earth, rock cycle) Q02) Atmosphere, weather and climate Q03) Force and motion	International Consortium decision based on FT result

	Q04) Electricity Q05) Chemical reactions Q06) Structure and function of the human body Q07) Sexual and asexual reproduction Q08) Evolution Q09) Climate change Q10) Environments and habitats Q11) Atomic structure Q12) Properties of matter Q13) Our solar system and its place in the universe Q14) Cells and their functions Q15) Genetics Q16) Energy transfers and transformation Q17) Disturbances to the environment (e.g., pollution, overfishing, deforestation)	
ST369	To what extent do you agree or disagree with the following statements? Q01JA) When I do well my parents tell me I worked hard. Q02JA) If I did well, my parents would be proud of how smart I am Q03JA) Even if I did poorly in the subject, my parents would still believe in me/respect me Q04JA) If I didn't do well in a subject, my parents would try to make me feel better Q05JA) If I did well, my parents would be proud of how hard I tried Q06JA) If I did poorly, my parents would help me understand what I could do differently to succeed Q07JA) If I didn't do well in a subject, my parents would make me feel bad about myself Q08JA) If I did poorly, my parents would think that I didn't try enough Q09JA) If I did poorly in the subject, I would worry that my parents would not be proud of me	International Consortium decision based on FT result
ST445	In the last 12 months, was your school building ever closed for more than a week because of the following reasons? Q01JA) COVID-19 Q02JA) A health related emergency, other than COVID-19 Q03JA) Extreme weather (e.g. floods, heatwave, extreme cold, snowstorm, wildfires) Q04JA) Seismic activity (e.g. earthquake) Q05JA) Political conflict (e.g. social unrest) Q06JA) Another reason (e.g., strikes or demonstrations, air pollution)	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
ST470	During the time when your school building had an unplanned closure, how often did someone from your school do the	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority

	following things? Q01JA) Send you learning materials to study on your own Q02JA) Send you assignments Q03JA) Upload material on a learning management system or school learning platform (e.g., Edmodo®, Moodle®, Google Classroom™, Canvas™) Q04JA) Check in with you to ensure that you were completing your assignments Q05JA) Offer live virtual classes on a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams) Q06JA) Ask you to submit completed school assignments Q07JA) Give you helpful tips about how to study on your own Q08JA) Check in with you to ask how you were feeling	and FT items received few responses.
ST471	During the time when your school building had an unplanned closure, how much did you learn each week compared to a typical week when you go to school in person? Q01JA) Paper textbooks, workbooks, or worksheets Q02JA) Digital textbooks, workbooks, or worksheets Q03JA) Real time lessons by a teacher from my school on a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams) Q04JA) Real time lessons by a private tutor on a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams) Q05JA) Learning material my teachers sent via SMS text or WhatsApp™ Q06JA) Recorded lessons or other digital material provided by teachers from my school Q07JA) Recorded lessons or other digital material from other sources (e.g., Khan Academy®, Coursera®) Q08JA) Lessons broadcast over television or radio Q09JA) Materials developed by friends or family members	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
ST472	During the time when your school building had an unplanned closure, how much did you learn each week compared to a typical week when you go to school in person? Q01JA) Paper textbooks, workbooks, or worksheets Q02JA) Digital textbooks, workbooks, or worksheets Q03JA) Real time lessons by a teacher from my school on a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams) Q04JA) Real time lessons by a private tutor on a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams) Q05JA) Learning material my teachers sent via SMS text or	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.

	WhatsApp™ Q06JA) Recorded lessons or other digital material provided by teachers from my school Q07JA) Recorded lessons or other digital material from other sources (e.g., Khan Academy®, Coursera®) Q08JA) Lessons broadcast over television or radio Q09JA) Materials developed by friends or family members	
ST473	During the time when your school building was closed because of an unplanned closure, how often did you have the following problems when completing your school work? Q01JA) Problems with access to a digital device when I needed it Q02JA) Problems with Internet access Q03JA) Problems with access to school supplies (e.g. paper, pencil) Q04JA) Problems with finding a quiet place to study Q05JA) Problems finding time to study because I had household responsibilities Q06JA) Problems with motivating myself to do school work Q07JA) Problems with understanding my school assignments Q08JA) Problems with finding someone who could help me with my school work	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
ST474	During the time when your school building had an unplanned closure, how often did someone in your family do the following things with you? Q01JA) Help you with your school work Q02JA) Ask you what you were learning Q03JA) Help you create a learning schedule Q04JA) Help you access learning materials online Q05JA) Check whether you were completing your school assignments Q06JA) Explain new content to you Q07JA) Help you find additional learning resources Q08JA) Teach you additional topics not part of your school assignments	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
ST475	To what extent do you agree or disagree with the following statements about the time when your school building had an unplanned closure? Q01JA) I felt lonely. Q02JA) I enjoyed learning by myself. Q03JA) My teachers were available when I needed help (e.g. through virtual office hours, email, chat). Q04JA) I felt anxious about school work. Q05JA) I was motivated to learn.	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.

	Q06JA) I fell behind in my school work. Q07JA) I improved my skills in using digital devices for learning purposes. Q08JA) My teachers were well prepared to teach remotely. Q09JA) I was well prepared to learn on my own. Q10JA) I missed sports and other physical activities organized by my school.	
ST476	How confident do you feel about doing the following things if your school building closes again in the future? Q01JA) Using a learning management system or school learning platform (e.g., Edmodo®, Moodle®, Google® Classroom™, Canvas) Q02JA) Using a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams) Q03JA) Finding learning resources online on my own Q04JA) Planning when to do school work on my own Q05JA) Motivating myself to do school work Q06JA) Focusing on school work without reminders Q07JA) Completing school work independently Q08JA) Assessing my progress with learning	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
ST477	Overall, how prepared do you feel for learning on your own if your school building closed for an extended period in the future? Q01JA01) Not prepared at all Q01JA02) Not very prepared Q01JA03) Well prepared Q01JA04) Very well prepared	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
LDW07	To what extent are you able to do the following tasks when using digital resources? 1) Write or edit text for a school assignment (e.g., using Google® Docs™, Microsoft® Word) 2) Create a multi-media presentation (with sound, pictures, or video) 3) Create and edit videos (e.g., iMovie, Final Cut Pro, InShot, Adobe Premiere) 4) Create and edit music (e.g., Audacity, GarageBand) 5) Create a computer program, macro or app (e.g., in Scratch, Logo, VBA, Java) 6) Collect and record data (e.g., using data loggers, Microsoft® Access™, Google® Form, spreadsheets) 7) Build or edit a webpage (e.g., using WordPress, Wix, SquareSpace, HTML5up)	International Consortium decision based on FT result
St464	On a scale from 1-10, how would you rate the quality of your science instruction this school year? 01) Worst science instruction possible 1	International Consortium decision based on FT result

	02) 2 03) 3 04) 4 05) 5 06) 6 07) 7 08) 8 09) 9 10) Best science instruction possible 10 Q01JA) Quality of science instruction:	
LDW08	To what extent have you been taught at school how to do the following tasks? 1. Assess the quality of information I find online 2. Break a complex process into smaller parts 3. Plan tasks by setting out the steps needed to complete them 4. Build models (a simplified representation of how something works) like annotated drawings or maps 5. Solve problems by focusing on the most important parts 6. Make flow diagrams to represent the different parts of a process 7. Use simulations (e.g., virtual science labs) to study scientific phenomena. 8. Collect and analyze data to understand a problem or phenomenon 9. Recognize patterns in data 10. Identify common elements and differences across problems 11. Test programs and correct errors in them	International Consortium decision based on FT result
LDW15	To what extent do you agree or disagree with the following statements about your science teacher? 1. My science teacher clearly explains the learning goals for every lesson. 2. My science teacher checks what we already know before teaching a new topic. 3. My science teacher explains her/his thinking when carrying out tasks with us (e.g., analyzing a text, designing an experiment). 4. My science teacher gives us advice on learning techniques. 5. My science teacher asks us to identify what resources we will need to complete a task before we get started. 6. My science teacher provides us with materials (e.g., prompts, rubrics, checklists) to monitor our learning progress. 7. My science teacher gives us advice on how to manage negative emotions related to learning (e.g., frustration, anxiety, boredom). 8. My science teacher asks us to teach a topic to one another.	International Consortium decision based on FT result

	9. My science teacher asks us to evaluate our own work. 10. My science teacher asks us to evaluate the work of our classmates. 11. My science teacher asks us to carry out challenging learning tasks on our own.	
LDW16	To what extent do you agree or disagree with the following statements about your English/Language Arts teacher? 1. My English/Language Arts teacher clearly explains the learning goals for every lesson. 2. My English/Language Arts teacher checks what we already know before teaching a new topic. 3. My English/Language Arts teacher explains her/his thinking when carrying out tasks with us (e.g., analysing a text, designing an experiment). 4. My English/Language Arts teacher gives us advice on learning techniques. 5. My English/Language Arts teacher asks us to identify what resources we will need to complete a task before we get started. 6. My English/Language Arts teacher provides us with materials (e.g., prompts, rubrics, checklists) to monitor our learning progress. 7. My English/Language Arts teacher gives us advice on how to manage negative emotions related to learning (e.g., frustration, anxiety, boredom). 8. My English/Language Arts teacher asks us to teach a topic to one another. 9. My English/Language Arts teacher asks us to evaluate our own work. 10. My English/Language Arts teacher asks us to evaluate the work of our classmates. 11. My English/Language Arts teacher asks us to carry out challenging learning tasks on our own.	International Consortium decision based on FT result
LDW18	Please rate your level of experience with the following programming languages. 1. C++ or Java 2. Scratch, Blockly, or other block-based languages 3. Python, Javascript or other web-based languages 4. HTML, XML, or other markup languages 5. Another programming language not listed above	International Consortium decision based on FT result
LDW22	Where did you learn this knowledge and skills? 1. In a school club 2. In science class at school 3. In an Information Communication Technology (ICT) class at school. In other subjects at school 4. In a club outside of school	International Consortium decision based on FT result

	5. Through my friends 6. Through my siblings 7. Through my parents 8. Through other relatives 9. By myself, e.g., using the internet	
LDW10	This school year, how often did you do the following tasks using digital resources outside of school? 1. Search for and find relevant information online 2. Assess the quality of information you found online 3. Write or edit text for a school assignment (e.g., using Google® Docs™, Microsoft® Word) 4. Create a multi-media presentation (with sound, pictures, or video) 5. Create and edit videos (e.g., iMovie, Final Cut Pro, InShot, Adobe Premiere) 6. Create and edit music (e.g., Audacity, GarageBand) 7. Create a computer program, macro or app (e.g., in Scratch, Logo, VBA, Java) 8. Collect and record data (e.g., using data loggers, Microsoft® Access™, Google® Form, spreadsheets) 9. Build or edit a webpage (e.g., using WordPress, Wix, SquareSpace, HTML5up) 10. Play digital learning games (e.g., Atlantis Remixed, Duolingo®) 11. Create shared documents online for collaboration with others (e.g., using Google Docs, Dropbox) 12. Do science exercises online 13. Program robots 14. Use virtual or augmented reality 15. Manage and share your work on school assignments or projects online	International Consortium decision based on FT result
LDW12	In the current school year, how often has your science teacher used digital resources in the following ways in your classroom? 1. To teach the subject to the whole class 2. For our individual work 3. For our group work 4. To test what we have learned 5. To communicate with students	International Consortium decision based on FT result
LDW13	To what extent do you agree or disagree with the following statements about how your science teacher uses digital resources? 1. My science teacher uses digital resources to make the class more interesting. 2. My science teacher uses digital resources to help us understand difficult concepts. 3. My science teacher uses digital resources to give us more	International Consortium decision based on FT result

	freedom in how we do our work. 4. My science teacher uses digital resources because s/he is interested in new technologies. 5. My science teacher uses digital resources to give us personalized assignments.	
LDW14	To what extent is your science teacher able to do the following tasks with digital resources? 1. Use multimedia (e.g., PPT, animations) for teaching 2. Use web technologies (websites, blogs) for teaching 3. Use digital resources to enhance our learning 4. Use different technologies to make lessons more engaging 5. Solve technical problems when they occur 6. Conduct experiments in virtual labs (e.g. Lybster, Phet).	International Consortium decision based on FT result
IC184	How often do you use digital resources for the following in your science lessons or when completing homework? Q05) I use digital resources to collect data for experiments. Q06) I use digital resources to interpret and analyze datagraph data. Q07) I use digital resources to produce data visualizations (e.g. graphs, charts, diagrams) Q08) I use digital resources to report the findings of experiments. Q03JA) I use digital resources for simulations and modelling (e.g. GeoGebra, NetLogo), virtual laboratories (e.g. Labster). Q04JA) I use digital resources for coding or algorithm activities (e.g., using Scratch©, Python® and Java®).	International Consortium decision based on FT result

Table 2. Student Questionnaire – Individual Item deletions

Item ID	Question stem and item text	Reason deleted
ST251	How many of these items are there at your home? Q01JA) Cars, vans, or trucks Q02JA) Mopeds or motorcycles Q03JA) Rooms with a bath or shower Q04JA) Rooms with a toilet Q06JA) Musical instruments (e.g. guitar, piano, violin)	International Consortium decision based on FT result
ST254	How many of the following digital devices are in your home? Q01JA) Televisions Q02JA) Desktop computers Q03JA) Laptop computers or notebooks Q04JA) Tablets (e.g., iPad, Galaxy Book, Surface, Chromebook) Q05JA) E-book readers (e.g., Amazon Kindle) Q06JA) Cell phones with Internet access (i.e. smartphone)	International Consortium decision based on FT result
ST401	Do you do the following activities regularly? Q01DA) Eat fresh fruit and vegetables daily Q02DA) Eat protein (e.g., meat, fish, tofu, beans, lentils)	International Consortium decision based on FT result

	Q03DA) Hold celebrations on special occasions Q04DA) Attend leisure activities that cost money, such as sport events, cinema, or concert, etc. Q05DA) Invite friends to play and eat from time to time Q06DA) Participate in school trips and school events that cost money Q07DA) Spend at least one-week away from home on holiday every year	
ST406/ ST411/ ST412	Can your parent or guardian do the following? Q01DA) My parent or guardian can read in English. Q02DA) My parent or guardian can write in English. Q03DA) My parent or guardian can neither read nor write in English. Q04DA) I don't know whether my parent or guardian can read or write in English. Q05DA) My parent or guardian can read in English. Q06DA) My parent or guardian can write in another language besides English. Q07DA) My parent or guardian can neither read nor write in another language besides English. Q08DA) I don't know whether my parent or guardian can read or write in another language besides English.	International Consortium decision based on FT result
ST038	During the past 12 months, how often have you had the following experiences in school? Q03NA) Other students left me out of things on purpose. Q04NA) Other students made fun of me. Q05NA) I was threatened by other students. Q06NA) Other students took away or destroyed things that belonged to me. Q07NA) I got hit or pushed around by other students. Q08NA) Other students spread nasty rumors about me. Q09NA) Information about me that was upsetting was published online without my consent.	International Consortium decision based on FT result
ST465	How often do these things happen in your science lessons? Q01JA) Students do not listen to what the teacher said. Q02JA) There is noise and disorder. Q03JA) The teacher has to wait a long time for students to quiet down. Q04JA) Students cannot work well. Q05JA) Students do not start working for a long time after the lesson begins. Q06JA) Students get distracted by using digital resources (e.g. smartphones, websites, apps). Q07JA) Students get distracted by other students who are using digital resources (e.g., smartphones, websites, apps).	International Consortium decision based on FT result

ST468	This school year, how often did your teacher do the following things in your science lessons? Q07JA) The teacher asked us to work in small groups to design and carry out scientific experiments. Q09) The teacher asked us to debate scientific topics with other members of the class. Q08JA) The teacher asked us to discuss with each other what we learned. Q10) The teacher asked us to explain a scientific principle to the class. Q11) The teacher asked us to work on a class project in small groups. Q12) The teacher asked us to research a topic in small groups.	International Consortium decision based on FT result
ST531	When learning science topics at school, how often do the following activities occur? Q01NA) The teacher clearly explains the relevance of science concepts to our lives. Q01JA) The teacher asked us to think of problems from everyday life that could be solved with new scientific knowledge we learned. Q02JA) The teacher showed us how science can be useful in our everyday lives. Q03JA) The teacher encouraged us to "think scientifically". Q07JA) The teacher asked us how different topics are connected to a bigger scientific idea. Q08JA) The teacher encouraged us to think about how a problem from everyday life could be solved using science. Q09JA) The teacher explained how different scientific ideas connect to a larger context. Q10) The teacher describes career pathways which relate to the topics taught in science. Q11) The teacher asks us to think of solutions to environmental issues. Q12) The teacher discusses climate change with a positive outlook. Q13) The teacher asks us to research how my home uses resources.	International Consortium decision based on FT result
ST104	How often do these things happen in your classes for this science course? Q01NA) The teacher tells me how I am performing in this course. Q02NA) The teacher gives me feedback on my strengths in this science subject. Q03NA) The teacher tells me in which areas I can still	International Consortium decision based on FT result

	improve. Q04NA) The teacher tells me how I can improve my performance. Q05NA) The teacher advises me on how to reach my learning goals.	
ST094	How much do you disagree or agree with the statements about yourself below? Q01NA) I generally have fun when I am learning science topics. Q02NA) I like reading about science. Q03NA) I am happy working on science topics. Q04NA) I enjoy acquiring new knowledge in science. Q05NA) I am interested in learning about science.	International Consortium decision based on FT result
ST129	How easy do you think it would be for you to perform the following tasks on your own? Q01TA) Recognize the science question that underlies a newspaper report on a health issue. Q02TA) Explain why earthquakes occur more frequently in some areas than in others. Q03TA) Describe the role of antibiotics in the treatment of disease. Q04TA) Identify the science question associated with the disposal of garbage. Q05TA) Predict how changes to an environment will affect the survival of certain species. Q06TA) Interpret the scientific information provided on the labelling of food items. Q07TA) Discuss how new evidence can lead you to change your understanding about the possibility of life on Mars. Q08DA) Identify the better of two explanations for the causes of climate change Q09DA) Conduct a scientific investigation where the dependent and independent variables are identified. Q10DA) Recognize flaws in scientific argument. Q11DA) Identify the trustworthiness of scientific information. Q12DA) Investigate the sustainability of a practice or product. Q13DA) Correctly judge the reliability of different sources of online scientific information. Q14DA) Explain how carbon-dioxide emissions affect global climate change. Q15DA) Explain why some countries suffer from the effects of global climate change more than others.	International Consortium decision based on FT result

ST131	How much do you disagree or agree with the statements below? Q01) A good way to know if something is true is to do an experiment. Q02) Good answers are based on evidence from many different experiments. Q03) It is good to try experiments more than once to make sure of your findings. Q04) One important part of science is doing experiments to come up with ideas about how things work. Q05) It is good to have a hypothesis or question before starting an experiment. Q06) Science uses models to help develop theories about the world Q07) Some ideas in science today are different than what scientists used to think. Q08) Ideas in science sometimes change. Q09) The ideas in science books sometimes change. Q10) Information from one source should be checked from a range of other trustworthy sources before it is accepted. Q11) In science, there can be more than one way for scientists to test their ideas. Q12) There are some questions that scientists cannot answer. Q13) New discoveries can change what scientists think is true. Q14) Sometimes science scientists change their minds about what is true in science. Q15) It is important for scientists to have other scientists in their field of expertise to support the findings of their work Q16) The benefits of science and research are greater than potential damage Q17) We should rely more on common sense and less on scientific studies	International Consortium decision based on FT result
ST501	How much do you agree or disagree with the following statements? Q01) My teachers discuss environmental issues in many classes at school. Q02) In science we learn about environmental issues as a topic. Q03) My teacher takes us on field trips to investigate environmental issues. Q04) My class discusses current environmental issues reported in the news. Q05) My class discusses solutions to environmental issues. Q06) My teacher provides opportunities to research environmental issues. Q07) I am assessed on my environmental knowledge.	International Consortium decision based on FT result

ST495	How often have you been involved with the following activities in the last 12 months? Q01) Exploring a community environmental issue Q02) Working with others to positively impact the environment Q03) Joining a peaceful march or rally related to an environmental issue Q04) Contacting a decision maker to suggest a change about an environmental issue Q05) Posting concerns about an environmental issue on social media Q06) Asking experts for advice about an environmental issue Q07) Turning off lights when nobody is using a room Q08) Walking, riding a bicycle, or using public transportation rather than use a car to travel short distances (approximately 3-mi) Q09) Making purchases based on how sustainable the products are Q10) Conserving household water Q11) Attending meetings or workshops about environmental issues Q12) Raising awareness of a particular environmental issue within the community with others Q13) Stop eating certain foods to minimize the impact on the environment Q14) Not buying products because of a company's environmental practices Q15) Discuss with friends and family how to have a positive impact on the environment Q16) Ask someone to stop doing something harmful to the environment Q17) Invite friends or others at school to take part in activities that positively impact the environment Q18) Participation in environmental community science activities (i.e., activities where members of the community collect data for scientists)	International Consortium decision based on FT result
ST496	How much do you agree or disagree with the following reasons for why you may not have participated in activities that positively impact the environment in the last year? Q01) I do not have enough time Q02) My friends are not interested Q03) I do not know how Q04) I do not think I can Q05) No one I know is participating in activities to benefit the environment Q06) It is not important to me Q07) I do not believe my actions will make a difference	International Consortium decision based on FT result

	Q08) Someone else will take care of the problem Q09) Technological advances will resolve the problems Q10) I do not have the resources	
ST499	How strongly do you agree with the following statements? Q01) In my school and local community there are environmental groups that inspire me to take part in their work. Q02) I believe that my school and local community can contribute to positively impacting global environmental issues (e.g., climate change, habitat restoration). Q03) I believe that by working with my local community we can reduce waste (e.g., plastic, clothing cardboard, glass). Q04) I believe that by working with my local community we can play an important role in positively impacting the environment. Q05) I believe that by working with my local community we can reduce the use of fossil fuels. Q06) I believe that by working with my school we can reduce their energy consumption. Q07) I believe that by working with my parents and grandparents and their friends, we can positively impact global environmental issues. Q08) I can positively impact the environment by working with others.	International Consortium decision based on FT result
ST500	How much do you agree with the following statements about environmental issues? Q01) I believe people are taking important steps to resolve environmental issues. Q02) Science will provide solutions to resolve environmental issues. Q03) I know how to work with others to positively impact the environment. Q04) Improvements in the environment are making me hopeful for the future. Q05) I know that there are things that I can do to positively impact the environment. Q06) If people work together, we can resolve environmental issues. Q07) Even though I take action to positively impact the environment, the issues are too complex for me to make a difference. Q08) The environmental issues caused by humans are too big and complex to be resolved. Q06HA) Looking after the global environment is important to me.	International Consortium decision based on FT result

ST498	In the past 12 months how often have you done the following activities? Q01) Watch science-related documentaries (e.g. about animals, health) Q02) Visit local museums that include science-related displays (e.g. natural history, space) Q03) Visit zoos, aquariums, or other wildlife centers Q04) Discuss new inventions with friends or family Q05) Spend time gardening Q06) Visit a waterway (e.g. beach, river) Q07) Ask more knowledgeable people you live with how things work around the house (e.g. how bread rises, how the house gets its electricity) Q08) Talk to someone close to you about their work in science Q09) Attend science clubs Q10) Use science kits at home Q11) Enter science competitions Q12) Fix things at home Q13) Conduct a science investigation at home	International Consortium decision based on FT result
ST092	How informed are you about the following environmental issues? Q01TA) The increase of greenhouse gases in the atmosphere Q02TA) The use of genetically modified organisms (GMOs) Q10DA) Advantages of renewable Energy Q04TA) Nuclear waste Q05TA) The consequences of clearing forests for other land use Q06NA) Air pollution Q11DA) Energy shortages Q08NA Extinction of plants and animals Q12DA) Loss of Biodiversity Q09NA) Water shortages Q13DA) Water pollution Q14DA) Effects of plastic pollution Q15DA) Causes of food waste Q16DA) The effects of sea levels rise	International Consortium decision based on FT result
ST502	This school year, which types of additional science instruction do you participate in? Q01JA) Individual tutoring with a person in the same room Q05JA) Small group study or practice (2 to 7 students) where the tutor and the students are in the same room Q06JA) Large group study or practice (8 or more students) where the tutor and the students are in the same room Q02JA) Individual real-time lessons given by a tutor on a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams)	International Consortium decision based on FT result

	Q04JA) Group real-time lessons given by a tutor on a video communication program (e.g., Zoom™, Google® Meet™, Microsoft® Teams) Q03JA) Internet, computer program or application or video-recorded lessons Q07JA) Other additional science instruction Q08JA) I do not participate in additional science instruction.	
ST294	During a typical school week, on how many days do you do each of the following before going to school? Q01JA) Eat breakfast Q02JA) Study for school or homework Q06JA) Do household chores Q07JA) Look after younger family members Q08JA) Look after older family members Q09JA) Work as part of the family business (e.g. on a farm, in a shop) Q04JA Work for pay Q05JA Exercise or practice a sport (e.g. running, cycling, aerobics, soccer, skating, football)	International Consortium decision based on FT result
ST295	During a typical school week, on how many days do you do each of the following after leaving school? Q01JA) Eat dinner Q02JA) Study for school or homework Q06JA) Do household chores Q07JA) Look after younger family members Q08JA) Look after older family members Q09JA) Work as part of the family business (e.g. on a farm, in a shop) Q04JA Work for pay Q05JA Exercise or practice a sport (e.g. running, cycling, aerobics, soccer, skating, football)	International Consortium decision based on FT result
ST300	How often do your parents or someone in your family do the following things with you? Q01JA) Discuss how well you are doing at school Q02JA) Eat dinner with you Q03JA) Spend time just talking with you Q04JA) Talk to you about the importance of finishing high school. Q05JA) Talk to you about any problems you might have at school Q06JA) Ask you about how well you are getting along with other students at school Q07JA) Encourage you to get good grades Q08JA) Take an interest in what you are learning at school Q09JA) Talk to you about your future education	International Consortium decision based on FT result

	Q10JA Ask you what you did in school that day Q11JA Help you with your homework Q12JA Talk to you about everyday science-related topics	
ST516	What are the reasons you do not expect to continue with higher education? Q01) Higher education is not required for my chosen career Q02) I do not like formal education Q03) I cannot afford tuition fees Q04) I am not eligible for financial aid Q05) I have physical health issues Q06) I have mental health issues Q07) I need to financially support my family Q08) I need to stay home and look after family members Q09) I am not doing very well at school Q10) I am unsure if higher education will be needed for my career Q11) I plan to start work immediately after finishing school Q12) There are no higher education opportunities located near where I live Q13) I do not think that a higher education degree is necessary to get a good job or to earn a good salary Q14) Other reasons	International Consortium decision based on FT result
ST324	To what extent do you agree or disagree with the following statements? Q02JA) I worry that I am not prepared for life after high school. Q04JA) I feel well informed about possible paths for me after high school. Q05JA) I feel pressure from my family to follow a specific path (e.g. go to college, work in the family business, learn a trade) after high school. Q07JA) I worry that I won't have enough money to do what I'd like to do after high school. Q10JA) School has done little to prepare me for adult life when I leave school. Q11JA) School has been a waste of time. Q12JA) School has helped give me confidence to make decisions. Q13JA) School has taught me things which could be useful in a job. Q14JA) I feel well prepared for my future path after high school.	International Consortium decision based on FT result

ST515	How often do the following things happen to students in your science courses? Q01) Ask scientific questions (e.g., how something works) Q02) Develop models or simulations to help explain natural phenomena (e.g., earthquakes) Q03) Design experiments to investigate a scientific question Q04) Carry out an experiment to investigate a scientific question Q05) Analyze and interpret data Q06) Use mathematics in science (e.g. performing calculations) Q07) Use computer software to investigate data or solve problems (e.g. complex calculations) Q08) Develop explanations of phenomena (e.g. climate change) based on scientific evidence or models Q09) Develop scientific arguments using evidence to support a claim Q10) Identify weaknesses in scientific arguments using evidence Q11) Critically evaluate the credibility and trustworthiness of online information	International Consortium decision based on FT result
ST493	To what extent do you agree or disagree with the following statements? Q01) Your status in society is something that you can't really change very much. Q02) You can do things differently, but you can't really change your status in society. Q03) You can do things to become wealthier and more successful in society.	International Consortium decision based on FT result
ST263	To what extent do you agree or disagree with the following statements? Q02JA) You have a certain amount of intelligence, and you really can't do much to change it. Q04JA) You have a certain amount of science ability, and you really can't do much to change it.	Drops the response category Neither agree nor disagree International Consortium decision based on FT result

Table 3: Modification of the Student Core Questionnaire (Appendix C-2a)

Item ID	Question stem and item text	Modification Reason
ST004	What is your gender sex? (Please select one response.) Female ☐	In compliance with President Donald Trump's executive orders (EO) 14168 titled <i>Defending Women From Gender Ideology Extremism and Restoring Biological Truth to the Federal Government</i>, the US will adapt this item to read "sex" rather than "gender".

	Male ☐	
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Deletions and Modification of the Student ICT Questionnaire (Appendix C-2b):

The following question will be deleted from the Student ICT Questionnaire:

Table 4. Student ICT Questionnaire - Whole Question Deletions

Item ID	Question stem and item text	Reason deleted
IC184	How often do you use digital resources for the following in your science lessons or when completing homework? Q05) I use digital resources to collect data for experiments. Q06) I use digital resources to interpret and analyze datagraph data. Q07) I use digital resources to produce data visualizations (e.g. graphs, charts, diagrams) Q08) I use digital resources to report the findings of experiments. Q03JA) I use digital resources for simulations and modelling (e.g. GeoGebra, NetLogo), virtual laboratories (e.g. Labster). Q04JA) I use digital resources for coding or algorithm activities (e.g., using Scratch©, Python® and Java®).	International Consortium decision based on FT result

Table 5. Modification of Student ICT Questionnaire

Item ID	Question stem and item text	Reason deleted						
IC181	<i>The following question is about your experience when browsing online content or using social media.</i> How upset were you the last time the following situations occurred? (Please select one response in each row.) <table> <tr> <td></td> <td><i>This did not happen to <u>me</u></i></td> <td><i>Not at all upset</i></td> <td><i>A little upset</i></td> <td><i>Quite <u>upset</u></i></td> <td><i>Very upset</i></td> </tr> </table> Encountering discriminatory content online (e.g., about race, gender sex, sexual orientation, or physical appearance)		<i>This did not happen to <u>me</u></i>	<i>Not at all upset</i>	<i>A little upset</i>	<i>Quite <u>upset</u></i>	<i>Very upset</i>	In compliance with President Donald Trump’s executive orders (EO) 14168 titled <i>Defending Women From Gender Ideology Extremism and Restoring Biological Truth to the Federal Government</i>, the US will adapt this item to read “sex” rather than “gender”.
	<i>This did not happen to <u>me</u></i>	<i>Not at all upset</i>	<i>A little upset</i>	<i>Quite <u>upset</u></i>	<i>Very upset</i>			

Deletions and Modification of the School Questionnaire (Appendix C-2c):

Table 6. School Questionnaire - Whole Question Deletions

Item ID	Question stem and item text	Reason deleted
SC263	How often are the following digital resources used for instruction at your school? Q01) Word-processor software (e.g. Microsoft® Word™) Q02) Presentation software (e.g. Microsoft® PowerPoint™) Q03) Video and photo software for capture and editing (e.g. Windows Photo™, iMovie, Adobe Photoshop). Q04) Concept mapping software (e.g. Inspiration, Webspiration) Q05) Data logging and monitoring tools that capture real-world data (e.g., speed, temperature) for analysis (e.g. Logger Pro™) Q06) Simulations and modelling software (e.g. NetLogo) Q07) Digital role-play games where students have to complete quests or inquiries Q08) Practice programs or apps where teachers decide which questions are presented to students (e.g. Quizlet, Kahoot) Q09) Internet-based applications for collaborative work (e.g. Google Docs, OneNote, Padlet) Q10) Graphing or drawing software Q11) Software for using 3D printers at school Q12) Search engines on the internet (e.g. Google) Q13) A learning management system (e.g. Moodle, Blackboard, Schoology, Canvas) Q14) E-portfolios Q15) Social media (e.g. Facebook, Twitter, Instagram) Q16) Repositories of videos (e.g. YouTube)	International Consortium decision based on FT result. Information deemed too indirect for principals.
SC264	During the last academic year, did teachers in your school engage in the following forms of professional development related to teaching with digital resources? Q01) Courses/seminars attended in person Q02) Online courses/seminars (e.g. MOOCs, webinars) Q03) Conferences delivered by researchers, teachers or other professionals Q04) Formal qualification programs (e.g. a degree program) Q05) Observation visits to other schools Q06) Observation visits to business premises, public organizations, or non-governmental organizations	International Consortium decision based on FT result. Information deemed too indirect for principals.

Item ID	Question stem and item text	Reason deleted
	Q07) Coaching as part of a formal school arrangement Q08) Regular discussions with other teachers at school, for example in working groups Q09) Participation in professional networks/communities of practice	
SC027	Which of the following types of in-house professional development exist at your school? Q02NA) Our school invites specialists to conduct in-service training for teachers. Q03NA) Our school organizes in-service workshops which deal with specific issues that our school faces. Q04NA) Our school organizes in-service workshops for specific groups of teachers (e.g. newly appointed teachers).	International Consortium decision based on FT result. Information deemed too indirect for principals.
SC407	Which of the following types of in-house professional development exist for staff who teach science at your school? Q02JA) Our school invites specialists to conduct in-service training for science teachers. Q03JA) Our school organizes in-service workshops, which deal with specific issues that our <school science> teachers face. Q04JA) Our school organizes in-service workshops for specific science teachers (e.g. newly appointed teachers).	International Consortium decision based on FT result. Information deemed too indirect for principals.
SC186	Are the following subjects required or optional for students in national modal grade for 15-year-olds? Q03JA) Science Q01JA) Mathematics Q02JA) English Q05FL) World languages (at least one)	International Consortium decision based on FT result
SC423	Who has the main responsibility for the following decisions at your school? Q01JA) Choosing a student's science course(s) Q02JA) Choosing the level of difficulty of a student's science course(s) Q03JA) Choosing the number of science courses that a student takes	International Consortium decision based on FT result
SC405	Thinking about students' last report card: Approximately what percentage of the students in Grade 10 received the following types of grades in school science? Q01JA) Grade C or above Q02JA) Below grade C	International Consortium decision based on FT result
SC425	In the last 12 months, approximately how many school days was your school building closed to students because	The Global Crisis items added in 2022 have been

Item ID	Question stem and item text	Reason deleted
	of the following reasons? Q01JA) COVID-19 Q02JA) A health related emergency, other than COVID-19 Q03JA) Extreme weather (e.g. floods, heatwave, extreme cold, snowstorm, wildfires) Q04JA) Seismic activity (e.g. earthquake) Q05JA) Political conflict (e.g. social unrest) Q06JA) Another reason (e.g., strikes or demonstrations, air pollution)	dropped for 2025. This was a low priority and FT items received few responses.
SC426	During the time when your school building had an unplanned closure, how was instruction in your school organized? Q01JA) Classes were taught remotely using digital devices. Q02JA) Students were asked to complete classes on their own based on materials distributed to them. Q03JA) Classes were cancelled and not replaced by remote instruction.	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
SC414	During the time when your school building had an unplanned closure, did your school make the following resources available to students to support their learning? Q01JA) Paper textbooks, workbooks, or worksheets Q02JA) Digital textbooks, workbooks, or worksheets Q013A) Real-time lessons by a teacher from my school on a video communication program (e.g. Zoom™, Google® Meet™, Microsoft® Teams) Q04JA) Recorded lessons or other digital material created by teachers from my school Q05JA) Recorded lessons or other digital material created by others outside of school Q06JA) Additional instructional resources for students with special learning needs Q017A) Additional instructional resources for students whose heritage language is not English Q08JA) Lessons broadcast over television or radio	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
SC419	During the time when your school building had an unplanned closure, to what extent was your school's capacity to provide remote instruction hindered by the following issues? Q01JA) Lack of access to digital devices among students Q02JA) Lack of access to digital devices among teachers Q03JA) Lack of access to the Internet among students Q04JA) Lack of access to the Internet among teachers	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.

Item ID	Question stem and item text	Reason deleted
	Q05JA) Lack of learning management systems or school learning platforms (e.g. Edmodo®, Moodle®, Google® Classroom™, Canvas) Q06JA) Lack of educational materials for distance learning (e.g. textbooks, workbooks, worksheets, instructional videos) Q07JA) Difficulty getting in touch with students while school buildings were closed Q08JA) Shortage of teachers available to provide remote instruction Q019A) Lack of experience in providing remote instruction among teachers	
SC416	During the time when your school building had an unplanned closure, were teachers in your school asked to do the following things? Q01JA) Communicate with students through written notes or letters Q02JA) Communicate with students through email Q03JA) Conduct virtual office hours or meetings with students Q04JA) Answer students' questions over the phone Q05JA) Initiate calls to students (e.g. phone, video call) Q06JA) Ask parents or guardians for their help with their child's distance learning Q07JA) Initiate communications (e.g. email, phone, video call) with parents or guardians about their child's progress Q08JA) Provide information to parents or guardians about how to help their child with school work Q10JA) Keep track of students' completion of distance learning assignments	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
SC417	During the time when your school building had an unplanned closure, were the following resources used to support teachers in providing remote instruction? Q01JA) Regular meetings with other teachers and staff Q02JA) Online platforms and tools for self-directed or collaborative learning (e.g. online forums, discussion boards, professional communities) Q03JA) Tools that help teachers develop remote instruction plans (e.g. digital lesson planners, compiled resources and guides offered by organizations) Q04JA) Professional development activities focused on how to provide remote instruction	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
SC415	During the time when your school building had an	The Global Crisis items

Item ID	Question stem and item text	Reason deleted
	unplanned closure, to what extent do you feel your school was supported by the following groups? Q02JA) State Q03JA) District Q04JA) Students' parents or guardians Q05JA) Private donors	added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
SC223	Did your school take any of the following actions to prepare for remote instruction? Q01JA) Training teaching staff on the use of video communication programs (e.g. Zoom™, Google® Meet™, Microsoft® Teams) for remote instruction Q02JA) Training students on the use of video communication programs (e.g. Zoom™, Google® Meet™, Microsoft® Teams) for remote instruction Q03JA) Preparing digital material for remote instruction (e.g., reorganizing existing resources, designing new resources) Q04JA) Preparing paper-based material for remote instruction (e.g., reorganizing existing resources, designing new resources) Q05JA) Adapting existing curriculum plans for remote instruction (e.g., modifying course requirements, sequence of lessons, grading policies) Q06JA) Preparing digital material for assessing student learning via online assessment (e.g., quizzes, tests) Q07JA) Compiling instructional resources for parents or guardians to support their child's learning outside the school Q08JA) Ensuring that students have access to digital devices for remote instruction Q09JA) Ensuring that teaching staff have access to digital resources for remote instruction Q10JA) Preparing a plan for transitioning students and teachers from classroom-based instruction to remote instruction Q11JA) Running workshops for parents and careers to advise on how to support remote instruction'	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.
SC224	Overall, how prepared do you feel your school is for providing remote instruction if your school building is closed to students for an extended period in the future? Q0101) Not prepared at all Q0102) Not very prepared Q0103) Well prepared	The Global Crisis items added in 2022 have been dropped for 2025. This was a low priority and FT items received few responses.

Item ID	Question stem and item text	Reason deleted
	Q0104) Very well prepared	

Table 7. School Questionnaire Deletion – Individual Items Deletions

Item ID	Question stem and item text	Reason deleted
SC211	Approximately what percentage of students in grade 10 in your school have the following characteristics? Q01JA01) Students whose heritage language is different from English Q02JA01) Students with special learning needs Q03JA01) Students from socioeconomically disadvantaged homes Q04JA01) Students who are immigrants (not including refugees) Q05JA01) Students who have parents who have immigrated Q06JA01) Students who are refugees	International Consortium decision based on FT result
SC168	For each type of position listed below, please indicate the number of non-teaching staff currently working in this school. Q01JA) Personnel for pedagogical support, irrespective of the grade levels/ages they support (Including all teacher aides or other non-teaching professionals who provide instruction or support teachers in providing instruction, professional curriculum/instructional specialists, and educational media specialists.) Q05) Personnel focused on student well-being (Including psychologists, nurses, and counsellors) Q02JA) School administrative personnel (Including receptionists, secretaries, and administration assistants) Q03JA) School management personnel (Including principals, assistant principals, and other staff whose main activity is management) Q04JA) Other non-teaching staff	International Consortium decision based on FT result
SC059	Which of the following are true for the science department of your school? Q02NA) If we ever have some extra funding, a big share goes into improvement of our science teaching. Q03NA) Science teachers are among our best educated staff members. Q09NA) Good science teachers are harder to attract compared with other subject teachers. Q04NA) Compared to similar schools, we have a better equipped laboratory or laboratories. Q10NA) The laboratory materials are in good shape. Q06NA) We have enough laboratory material that all courses can regularly use it. Q07NA) We have extra laboratory staff that help support science teaching. Q08NA) Our school spends extra money on up-to-date	International Consortium decision based on FT result

Item ID	Question stem and item text	Reason deleted
	science equipment.	
SC201	During the last 12 months, how often did you or other members of the school management team engage in the following activities? Q01JA) Collaborating with teachers to solve classroom-discipline problems Q02JA) Observing instruction in the classroom Q03JA) Providing feedback to teachers based on observations of instruction in the classroom Q04JA) Taking actions to support cooperation among teachers to develop new teaching practices Q05JA) Taking actions to ensure that teachers take responsibility for improving their teaching skills Q06JA) Taking actions to ensure that teachers feel responsible for their students' learning outcomes Q07JA) Providing parents or guardians with information on the school and student performance Q08JA) Reviewing school administrative procedures and reports Q09JA) Resolving problems with the lesson timetable in this school Q10JA) Collaborating with principals from other schools on difficult work tasks Q11JA) Working on a professional development plan for this school	International Consortium decision based on FT result
SC004	The goal of the following set of questions is to gather information about the student-digital device ratio for students in grade 10 at your school. Q01TA) At your school, what is the total number of students in the grade 10? Q02TA) Approximately, how many desktop or laptop computers are available for these students for educational purposes? Q03TA) Approximately, how many of these desktop, laptop or computers are connected to the Internet? Q08) Approximately, how many tablet devices (e.g. iPad®, Galaxy Book®, Microsoft Surface, Amazon Fire® (updated to reflect common devices) are available for these students for educational purposes? Q09) Approximately, how many e-book readers (i.e. portable device for reading books on screen, (e.g. Amazon® Kindle™, Kobo) are available for these students for educational purposes? Q05NA) Approximately, how many interactive whiteboards	International Consortium decision based on FT result

Item ID	Question stem and item text	Reason deleted
	are available in the school altogether? Q06NA) Approximately, how many data projectors are available in the school altogether? Q07NA) Approximately, how many desktop or laptop computers with internet connection are available for teachers in your school?	
SC251	How strongly do you agree with the following statements? Q01) My school teaches environmental issues in many subjects at school. Q02) In science my school teaches environmental issues as a topic. Q03) In science my school teaches environmental issues within other topics. Q04) My school organizes field trips so that students can investigate environmental issues. Q05) My school encourages teachers to demonstrate or do experiments to explain environmental issues. Q06) My school encourages the use of a range of source materials (e.g., documentaries, articles) to discuss environmental issues in class. Q07) My school promotes solutions to environmental issues. Q08) My school promotes how they conserve energy in the school to the broader school community. Q09) My school formally assesses students' knowledge of environmental issues	International Consortium decision based on FT result
SC250	How often does your school offer students the opportunity to take part in the following activities? Q01) Growing a school garden Q02) Creation of environmental student groups Q03) Whole school or community trash collection Q04) Whole school walk to school/ride a bike to school days Q05) Banning single use plastics in school lunches and/or cafeterias Q06) Recycling programs Q07) Field trips to national, state, or local parks Q08) Field trips to investigate waste management (e.g., sewage works, landfills) Q09) Inviting guest speakers with special interests in the environment (e.g., biologists, environmental scientists environmental advocates) to talk to staff and students Q10) Creation of environmental school groups consisting of staff, students, parents and interested community members	International Consortium decision based on FT result

Item ID	Question stem and item text	Reason deleted
	for whole school sustainability Q11) Monitoring energy usage as a school community Q12) Auditing the biodiversity of school grounds, local parks, and recreation areas Q13) Celebrating school achievement when reaching set environmental goals Q14) Providing teachers access to professional development in environmental issues Q15) Sharing knowledge from indigenous peoples from their own country or from other countries Q16) Environmental community science (i.e., activities where members of the community collect data for scientists) projects (e.g. counting and identifying plants and animals in local area) Q17) Supporting communities who have suffered natural disasters (e.g., storms, wildfires, drought) Q18) Showcasing environmental achievement and policies in school newsletters, on websites and school displays Q19) Engaging with a local environmental organization Q20) Applying for funding for environmental activities	
SC265	During the 2022-2023 school year, how many teachers at your school took part in professional development activities on the following topics? Q01) Identifying, assessing and selecting digital resources for teaching Q02) Creating, modifying and sharing digital resources Q03) Integrating digital resources in teaching Q04) Communicating with students and parents using digital devices Q05) Using digital resources to collaborate with other teachers Q06) Supporting students' autonomous learning with digital resources Q07) Using digital resources for student assessment Q08) Ensuring the inclusion of all students when using digital resources and devices Q09) Using digital resources to personalize learning Q10) Teaching media literacy to students Q11) Teaching students how to create and modify digital content in multiple formats Q12) Teaching students how to use digital technologies safely and ethically	International Consortium decision based on FT result
SC173	To the best of your knowledge, how often have the majority	International Consortium

Item ID	Question stem and item text	Reason deleted
	of school staff done each of the following during the 2022-2023 school year? Q01JA) They helped students of different backgrounds to recognize the similarities that exist between them. Q02JA) They encouraged students of different backgrounds to resolve disagreements by finding common ground. Q03JA) They supported activities or organizations that encourage students' expression of diverse identities. Q04JA) They taught students how to respond to discrimination. Q05JA) They taught students to be inclusive of others with different backgrounds. Q06JA) They provided additional support for students from disadvantaged backgrounds.	decision based on FT result
SC155	To what extent do you agree with the following statements about your school's capacity to enhance learning and teaching using digital devices? Q01HA) The number of digital devices connected to the Internet is sufficient Q02HA) The school's Internet bandwidth or speed is sufficient Q03HA) The number of digital devices for instruction is sufficient Q04HA) Digital devices at the school are sufficiently powerful in terms of computing capacity Q05HA) The availability of adequate software is sufficient Q06HA) Teachers have the necessary technical and pedagogical skills to integrate digital devices in instruction Q07HA) Teachers have sufficient time to prepare lessons integrating digital devices Q08HA) Effective professional resources for teachers to learn how to use digital devices are available Q09HA) An effective online learning support platform is available Q10HA) Teachers are provided with incentives to integrate digital devices in their teaching Q11HA) The school has sufficient qualified technical assistant staff Q12) The curriculum of the school is suited for using digital devices effectively. Q13) The school has sufficient supporting staff to solve technical problems.	International Consortium decision based on FT result

While not an item modification (see item below), the rationale will be adjusted to reflect sex rather than gender as shown in Table 8.

SC182 **How many of the following are on the science staff of your school?**

Include both full-time and part-time teachers. A full-time teacher is employed at least 90% of the time as a teacher for the full school year. All other teachers should be considered part-time.

Please count only those teachers who have taught or will teach science during the current school year.

(Please enter a number in each space provided. Enter “0” (zero) if there are none.)

	<i>Full-time</i>	<i>Part-time</i>
SC182Q01WA Science teachers in TOTAL	_____01	_____02
SC182Q12 Science teachers who are female	_____01	_____02

Table 8. School Questionnaire Modification to Rationale

Year(s) Administered	2003, 2012, 2022
Content Domain Type	Domain-specific
Policy Content Area	School practices, policies, and infrastructure
Framework Cell	A4
Module Label	School type and resources
Construct	Gender Sex composition of science teachers Number of science teachers in school Science teacher qualifications
Routing Information (if applicable)	
Status from PISA 2022 (Unchanged, modified, new)	Modified