

# **APPENDIX D**

## **Field Staff Training Materials**



**TIMSS 2007**  
**Assessment Supervisor**  
**Training**  
**March 23-24**

**Day One**

**Time**

9:00-9:30	Welcome/Introductions
9:30-9:40	Introduction to TIMSS
9:40-10:00	TIMSS 2007 Privacy and Security Issues
10:00-10:15	Your Role as a TIMSS Assessment Supervisor
10:15-10:30	Assessment Supervisor Materials
10:30-11:00	<b>Break</b> ( <i>Last names A-D obtain security badge</i> )
11:00-12:00	Assessment Supervisor Materials (cont.)
12:00-12:30	Item Security and Participant Privacy
12:30-2:00	<b>Lunch Break</b> ( <i>Last names E-O obtain security badge</i> ) (Assessment Supervisors receive per diem)
2:00-2:30	Pre-Assessment Activities
2:30-3:30	Assessment Day Activities (Including Booklet Assignment Activity)
3:30-4:00	<b>Break</b> ( <i>Last names P-Z obtain security badge</i> )
4:00-4:30	Conducting the Assessment According to TIMSS Guidelines
4:30-5:00	Supervising the TIMSS Session



**TIMSS 2007**  
**Assessment Supervisor**  
**Training**  
**March 23-24**

**Day Two**

**Time**

9:00-9:15	Welcome Back (Review/Answer questions from Day 1)
9:15-10:30	Concluding the TIMSS Session (Including Student Response Rate Activity)
10:30-11:00	<b>Break</b>
11:00-11:30	Administrative Responsibilities
11:30-12:30	Supervising and Training Assessment Administrators
12:30-1:30	<b>Lunch</b> (Field Management System – Laptop set up)
1:30-2:30	Field Management System
2:30-3:30	Meet with Field Manager (Receive Assignment Log and Calendar)
3:30-4:00	<b>Break</b>
4:00-5:00	Closing comments/discussion

*Thank you!*

Exhibit D-2. Pre-assessment call checklist

### Pre-Assessment Call Checklist

<b>School Name:</b>	<b>School ID:</b>
<b>SC Name:</b>	<b>Phone:</b>
<b>Session Date:</b>	<b>Time:</b>

**Number of classes to be assessed:**    **1**    **2**    **3**    **4**    **5**

- Verify the date and time of the assessment.
- (NATIONAL) Verify School address for shipping All-in-One (via FedEx – no PO boxes. Update FMS as needed)

<b>School Coordinator Name</b>	Street Address	City	State	Zip
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- (8<sup>th</sup>-grade TIMSS) Will the school allow students to use calculators for TIMSS?    **Yes**    **No**
- Make arrangements for the SC to meet you upon arrival.
- If student IDs (rather than student names) were used on the Student Tracking Form, remind the SC that you will need the school's list that links student names to student IDs
- Make arrangements for the SC, school principal, or classroom teacher be available in each session to introduce you to the class.
- Discuss the timing of the session and determine appropriate session location(s). If there are any excluded students in the classroom consult with the SC about placing them elsewhere.
- Review the handling of emergencies, problem situations, bathroom breaks and procedures for dismissing students at the end of the session.
- Review the Student Tracking Form (STF) to confirm demographic data for each sampled student, as well as to confirm any student exclusion or new enrollee information. Update the form as necessary. If major changes, check whether you have enough supplies, and inform your Field Manager.
- Review parent notification procedures and receipt of consent forms if applicable. If consent is needed in the school, discuss with the SC what has been done to obtain consent, the success of this effort, and whether any further action is needed.
- Confirm the receipt and distribution of the Teacher and School Questionnaires.
- Obtain/Confirm directions to the school and inquire about parking.
- Review procedures for entering the school and any special security requirements the school may have.

## The Fourth-Grade Administration Script

Record the current time in box [9a] of the Test Administration Form.

**☒ This school has been chosen to take part in an important international project to study what young children around the world know about mathematics and science. Different countries from all over the world are taking part in this study. You will be taking a mathematics and science test, and answer a short questionnaire. While I talk to you about today's test, I would like you all to be quiet, stay at your desks, and listen carefully.**

**☒ Now I will pass out the test booklets. Do not open them until I tell you to do so.**

**☒ If you have any schoolbooks or papers on your desk, put them away.**

**☒ Please do not remove the name label on the booklet until you are told to do so at the end of the session.**

As you hand out the test booklets, make sure that each student receives the one specially assigned to him or her. You can do that by making sure the Student ID recorded in column 2 of the Student Tracking Form matches the Student ID on the permanent and removable labels. Record the student's participation status in column (8). If you are administering a makeup session, then use column (9). If a student is absent, put that test booklet aside. Do not give it to anyone else since each test booklet is marked for a specific student. Do not allow students to open the test booklets until you tell them to.

If there is a student in the classroom who is not listed on the Student Tracking Form, please give one of the extra test booklets to this student. Match the codes on the booklet and the Student Tracking Form, enter the name, date of birth, and sex of the additional student in columns (1), (5), and (6) on the Student Tracking Form. Then, record the student's name (or ID) on the test booklet.

After the test booklets are passed out and the Student Tracking Form has been completed, say the following to the students:

**☒ Some of you will have a question in your booklets that requires a cardboard with geometrical shapes to answer it. Please use the cardboard provided with your booklet. Please ask for assistance if you cannot find it or it is damaged.**

**☒ Some of you will have a question in your booklets that requires a ruler to answer it. Please use the paper ruler provided with your booklet. Please ask for assistance if you cannot find it or it is damaged.**

- ⓧ Turn to the first page in the booklet that says “Directions”. Please read along as I read the directions aloud.

**GENERAL DIRECTIONS**

- ⓧ In this test, you will answer questions in mathematics and science. You may find some questions easy, and may find some questions difficult. Try to answer all questions, the difficult ones as well as the easy ones.
- ⓧ For some questions, you choose the answer you think is correct, and fill in the oval next to it. Example 1 shows this kind of question with the oval next to the correct answer filled in.

Example 1

How many minutes are there in 1 hour?

- A 12
- B 24
- C 60
- D 120

- ⓧ *The oval with the letter “C” has been filled in because there are 60 minutes in one hour.*
- ⓧ *If you are not sure about the answer to a question, fill in the oval next to the answer you think is best, and move on to the next question.*
- ⓧ *If you decide to change an answer to a question, completely erase your first choice, and then fill in the oval next to your new choice.*

Exhibit D-3. Fourth-grade assessment administration script—Continued

- ⓧ *For some questions, you must write your answer in the space below the question. Words, drawings, or numbers are used in answers to these questions. Example 2 shows a question like this.*

Write down one thing your heart does to help other parts of the body.

It pumps blood to all parts of the body.

Example 2

- ⓧ *Sometimes, to get full points, you will need to explain your answers for science questions, or show your work for mathematics questions. Keep your writing and calculations as neat as possible, and give mathematics answers in their simplest form. For problems in the test involving money, suppose you are in a country where the “Zed” is used as the unit of money, like dollars.*
- ⓧ *When you are asked to write an answer, be sure that your handwriting is clear. Think carefully about each question, and answer as completely as possible. If you are not sure about the answer, give the answer you think is best, and move on to the next question.*
- ⓧ *You will have 36 minutes to work in the first part of your test booklet. You will then have a short break. After the break, you will work for another 36 minutes in the second part.*
- ⓧ *You may not use a calculator during the test.*
- ⓧ *Do your best to answer all the questions. If you cannot answer a question, move on to the next one.*

## ***Instructions for Part 1***

### ***Testing Session 1 – Test Booklet Part 1***

- ⊗ Read each question carefully and answer it as well as you can. If you are not sure about the answer to a question, choose or write the answer you think is best, and continue with the next question on the test.***
- ⊗ You will have 36 minutes to complete this part of the test.***
- ⊗ Do not start working until you are told to do so.***
- ⊗ At the end of the first part of your booklet, you will see a STOP message. Do not continue with the rest of the booklet until you are told to do so. If you have completed Part 1 before the time is up, you can review your answers until the time is up, or read something quietly at your desk.***
- ⊗ Do you have any questions?***
- ⊗ Turn the page to the beginning of Part 1, and start working immediately. You have 36 minutes to complete the first part of the booklet.***

Record the current time in boxes [9b] and [10a] of the Test Administration Form and begin timing the 36 minutes allocated for Part 1.

If a student arrives after you have read the instructions, give the student his/her booklet but annotate the Student Tracking Form against the student's name with the words 'Student Late for Part 1'.

Throughout the testing session, move around the room, and make sure students are working on the correct part of the booklets.

Remember, you are not allowed to help the students with the test.

Ten minutes before the testing session ends, say the following:

- ⊗ You have 10 minutes left before the break. Make sure you try to finish answering all of the questions in the first part of your booklet before the break.***

After the last 10 minutes have passed, say:

- ⊗ Your time is up. Please close your booklets, and put your pencils down. Do not write anything more. We will now take a short break.***

Record the current time in box [10b] of the Test Administration Form.

***BREAK (up to 15 minutes)***

**Exhibit D-3. Fourth-grade assessment administration script—Continued**

If the room will be left unattended during the break, collect the booklets from the students one by one. Keep the booklets secure during the break time. You will then redistribute the booklets one at a time after the break, making sure each student receives the same test booklet he or she was working on during the first half of the testing session.

## **Instructions for Part 2**

### ***Testing Session 2 – Test Booklet Part 2***

Record the current time in box [11a] of the Test Administration Form.

Make sure all the students are seated. When the students are seated and quiet, redistribute the test booklets. Make sure each student receives the same test booklet he or she was working on during the first half of the testing session. Then, say the following:

**⊗ *Does everyone have his or her test booklet?***

When all problems are resolved and you have the students' attention again, proceed with repeating the directions.

**⊗ *In Part 2, you will answer more questions in mathematics and science. You will have 36 minutes to work on this part of the test.***

**⊗ *Read each question carefully and answer it as well as you can. If you are not sure about the answer to a question, choose or write the answer you think is best, and move on to the next question.***

**⊗ *Do not start working until you are told to do so.***

**⊗ *At the end of the second part of your booklet, you will see a STOP message. If you have completed Part 2 before the time is up, you can review your answers until the time is up, or read something quietly at your desk.***

**⊗ *Do you have any questions?***

**⊗ *Turn the page to the beginning of Part 2, and start working immediately. You have 36 minutes to complete this part of the booklet.***

Record the current time in boxes [11b] and [12a] of the Test Administration Form and begin timing the 36 minutes allocated for Part 2.

If a student does not return to the room after the break collect the student's booklet and annotate the Student Tracking Form against the student's name with the words 'Absent for Part 2'.

Throughout the testing session, move around the room, making sure students are working on the correct part of the booklets.

Remember, you are not allowed to help the students with the test.

Exhibit D-3. Fourth-grade assessment administration script—Continued

Ten minutes before the testing session ends, say the following:

- ⊗ ***You have 10 minutes left to work on the second part of the booklet. Make sure you try to finish answering all of the questions in the second part of your booklet.***

After the last 10 minutes have passed, say:

- ⊗ ***Your time is up. Please close your booklets, and put your pencils down. Do not write anything more. We will now take a short break.***
- ⊗ ***Afterwards, I will ask you to answer a short questionnaire. Please be back on time.***

Record the current time in box [12b] of the Test Administration Form.

If the room will be left unattended during the break, collect the booklets from the students one by one. Keep the booklets secure during the break time. You will then redistribute the booklets one at a time after the break, making sure each student receives the same test booklet he or she was working on during the first half of the testing session.

### Instructions for Part 3

Make sure all the students are seated. When the students are seated and quiet, redistribute the test booklets. Make sure each student receives the same test booklet he or she was working on during the first half of the testing session. Then, say the following:

- ⊗ ***Does everyone have his or her test booklet?***

When all problems are resolved and you have the students' attention again, proceed with the directions for completing the questionnaire.

- ⊗ ***The questionnaire is in part 3 of your booklet. Do not open the questionnaire until I tell you to do so.***

Do not allow students to open the questionnaires until you tell them to. In the right part of column (8) in the Student Tracking Form under BG, you must record whether or not a student is participating in the administration of the Student Questionnaire. If you are administering a makeup session, use column (9) instead.

If a student does not return to the room after the break collect the student's booklet and mark an 'A' against the student's name in column 8 under BG.

After the booklets are passed out and the Student Tracking Form has been completed, say the following to the students:

**Exhibit D-3. Fourth-grade assessment administration script—Continued**

- ☒ **Please turn to part 3 of the booklet. Can everybody find part 3?** Hold a booklet up to indicate where part 3 begins.

If yes, then continue. If not, resolve any problems before proceeding.

- ☒ **The directions are printed in your questionnaire. I will also read them to you. It is important that you follow the directions very carefully so that you understand how to mark your answers. Now turn to the first page titled “General Directions”.**

Make sure that the students have their booklets open to the Directions page before proceeding.

- ☒ **Please follow in your questionnaire as I read the instructions aloud.**

**GENERAL DIRECTIONS**

- ☒ *In this questionnaire, you will find questions about yourself. Some questions ask for facts while other questions ask for your opinions.*
- ☒ *Read each question carefully and answer as accurately as possible. You may ask for help if you do not understand something or are not sure how to respond.*
- ☒ *Each question is followed by a number of answers. Shade in the oval next to the answer of your choice as shown in Examples 1, 2, and 3.*

Make sure that all students are following along and are looking at Example 1 in their questionnaires.

**Example 1**

Do you go to school?

*Fill in one circle only*

Yes ----- ●

No ----- ⊙

- ☒ In Example 1, the question asks, “Do you go to school?”.
- ☒ Below this question are “Yes” and “No”.
- ☒ Since you all go to school, you should all fill in the circle next to “Yes”.

Exhibit D-3. Fourth-grade assessment administration script—Continued

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

Make sure that all students are following along and are looking at Example 2 in their questionnaires.

**Example 2**

How often do you do these things?

*Fill in one circle for each line*

	Every day	At least once a week	Once or twice a month	A few times a year	Never
a) I listen to music -----	①	②	●	④	⑤
b) I talk with my friends -----	●	②	③	④	⑤
c) I play sports -----	①	●	③	④	⑤

- ☒ **This question asks “How often do you do these things?”**
- ☒ **You are given five categories for how often you do this: “Every day”, “At least once a week”, “Once or twice a month”, “A few times a year”, “Never”. Look at the five choices of categories for how often you do this, and fill in the circle.**
- ☒ **Option (a) says, “I listen to music”. For example, if you listen to music every day, fill in the first circle “Every day”. If you listen to music once or twice a month, fill in the third circle under “Once or twice a month”.**
- ☒ **Option (b) says, “I talk with my friends”. For example, if you talk with your friends every day fill in the first circle “Every day”. If you talk to your friends at least once a week, fill in the second circle “At least once a week”.**
- ☒ **Option (c) says “I play sports”. For example, if you never play sports, fill in the fifth circle “Never”. If you play sports a few times a year, fill in the fourth circle “A few times a year”.**
- ☒ **Example 3 is another kind of question you will find in this questionnaire.**

**Example 3**

Indicate how much you agree with each of these statements.

*Fill in one circle for each line*

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
	↓	↓	↓	↓
a) Watching movies is fun -----	①	●	③	④
b) I like eating ice cream -----	●	②	③	④

- ⊗ This question wants to know what you think. It is asking how much you agree or disagree with each of these statements?
- ⊗ You are given four categories for how much you agree: “Agree a lot”, “Agree a little”, “Disagree a little” or “Disagree a lot”. Look at the four choices of categories for how much you agree, and fill in the circle.
- ⊗ Option (a) says, “Watching movies is fun.” For example, if you agree a lot with that, fill in the first circle under “Agree a lot”. If you disagree a lot with that, fill in the fourth circle under “Disagree a lot”.
- ⊗ Option (b) says, “I like eating ice cream”. For example, if you agree a little with that, fill in the second circle under “Agree a little”. If you disagree a little, fill in the third circle under “Disagree a little”.
- ⊗ Read each question carefully, and pick the answer you think is best. Fill in the circle next to or below your answer. If you decide to change an answer to a question, completely erase your first choice, and then fill in the oval next to your new choice.
- ⊗ Ask for help if you do not understand something or are not sure how to answer.
- ⊗ Are there any questions before we start?

If there are questions, try to answer them the best you can. If there are no more questions, record the current time in box [13a] of the Test Administration Form, and proceed with the administration of the questionnaire.

- ⊗ Turn the page to the first question, and begin answering this questionnaire. You will have 30 minutes to answer these questions.

After 30 minutes are up, say:

Exhibit D-3. Fourth-grade assessment administration script—Continued

- ⊗ **Please stop working and raise your hand if you have finished answering the questions.**

If not all of the students raise their hands, allow for additional time and say:

- ⊗ **You will have more time to continue answering this questionnaire. If you have already finished all the questions, then you can use this time to review your answers in this section only. Once you have finished, please close your questionnaire, and sit quietly at your desk.**

When all students have completed the questionnaire, say:

- ⊗ **Please stay seated. We have two more things to do.**
- ⊗ **First, take the separate label that was given to you, peel it off its backing and seal your booklet with it like this.** Demonstrate how to seal the booklet.
- ⊗ **Second, turn to the front cover of the booklet and peel off the label with your name on it.**
- ⊗ **Please bring me your booklets and labels as I call your name.** Record the current time in box [13b] in the Test Administration Form and call the students in Student Tracking Form order. Collect the booklets face down and have students discard the labels in a waste basket by the desk. Check the Student Tracking Form to make sure that you have received all Student Questionnaires.

# **APPENDIX E**

## **Student, School and Teacher Questionnaires**

Exhibit E--1. Fourth-grade student questionnaire



**STOP**

**PLEASE DO NOT TURN THE PAGE  
UNTIL INSTRUCTED TO DO SO.**

*Trends in International Mathematics and Science Study*

**TIMSS** 2007



**Student Questionnaire**

**Grade 4**

**National Center for Education Statistics**

Institute of Education Sciences  
U.S. Department of Education  
1990 K St., N.W.  
Washington, D.C. 20006-5650

## General Directions

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

Read each question carefully and answer as accurately as possible. You may ask for help if you do not understand something or are not sure how to respond.

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

### Example 1

Do you go to school?

Fill in **one** oval only

Yes -----

No -----

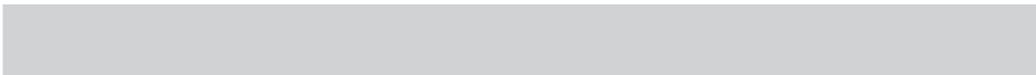
### Example 2

How often do you do these things?

Fill in **one** oval for each line

	Every day ↓	At least once a week ↓	Once or twice a month ↓	A few times a year ↓	Never ↓
a) I listen to music -----	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I talk with my friends -----	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I play sports -----	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Exhibit E--1. Fourth-grade student questionnaire—Continued



**Example 3**

How much do you agree with each of these statements?

Fill in **one** oval for each line

	Agree a lot ↓	Agree a little ↓	Disagree a little ↓	Disagree a lot ↓
a) Watching movies is fun -----	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I like eating ice cream -----	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Read each question carefully, and pick the answer you think is best. Fill in the oval next to or below your answer. If you decide to change an answer to a question, completely erase your first choice, and then fill in the oval for your new choice. Ask for help if you do not understand something or are not sure how to answer.

Thank you for your time, effort, and thought in completing this questionnaire.

# About You

1

## When were you born?

A. Fill in the oval next to the year you were born

- | Year  |                           |
|-------|---------------------------|
| 1994  | - <input type="radio"/> A |
| 1995  | - <input type="radio"/> B |
| 1996  | - <input type="radio"/> C |
| 1997  | - <input type="radio"/> D |
| 1998  | - <input type="radio"/> E |
| 1999  | - <input type="radio"/> F |
| 2000  | - <input type="radio"/> G |
| Other | - <input type="radio"/> H |

B. Fill in the oval next to the month you were born

- | Month     |                           |
|-----------|---------------------------|
| January   | - <input type="radio"/> A |
| February  | - <input type="radio"/> B |
| March     | - <input type="radio"/> C |
| April     | - <input type="radio"/> D |
| May       | - <input type="radio"/> E |
| June      | - <input type="radio"/> F |
| July      | - <input type="radio"/> G |
| August    | - <input type="radio"/> H |
| September | - <input type="radio"/> I |
| October   | - <input type="radio"/> J |
| November  | - <input type="radio"/> K |
| December  | - <input type="radio"/> L |



Exhibit E--1. Fourth-grade student questionnaire—Continued



**2** \_\_\_\_\_

**A. Are you a girl or a boy?**

*Fill in **one** oval only*

Girl ----- ①

Boy ----- ②

**B. Are you Hispanic or Latino?**

*Fill in **one** oval only*

Yes, I am Hispanic or Latino. ----- ①

No, I am not Hispanic or Latino. ----- ②

**C. Which of the following best describes you?**

*Fill in **one or more** ovals*

White ----- ①

Black or African American ----- ②

Asian ----- ③

American Indian or Alaska Native ----- ④

Native Hawaiian or other Pacific Islander -- ⑤

Exhibit E--1. Fourth-grade student questionnaire—Continued



**3** \_\_\_\_\_

A. How often do you speak English at home?

Fill in **one** oval only

- Always ----- ① *If **Always**, please go to question 4* →
- Almost always ----- ②
- Sometimes ----- ③
- Never ----- ④

*If **Almost always, Sometimes, Never**, please go to question 3B* ↓

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

Fill in **one** oval only

- Spanish ----- ①
- Other ----- ②
- Please specify \_\_\_\_\_





## About You (Continued)

### 4

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

*Fill in one oval only*

None or very few  
(0-10 books) -----

This shows 10 books



Enough to fill one shelf  
(11-25 books) -----

This shows 25 books



Enough to fill one bookcase  
(26-100 books) -----

This shows 100 books



Enough to fill two bookcases  
(101-200 books) -----

This shows 200 books



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

This shows more than 200 books



Exhibit E-1. Fourth-grade student questionnaire —Continued

5

Do you have any of these things at your home?

Fill in **one** oval for each line

- |   | Yes<br>↓              | No<br>↓               |
|---|-----------------------|-----------------------|
| a) Calculator -----   | <input type="radio"/> | <input type="radio"/> |
| b) Computer (do not include PlayStation®, GameCube®, Xbox®, or other TV/video game systems) ----- | <input type="radio"/> | <input type="radio"/> |
| c) Study desk/table for your use -----  | <input type="radio"/> | <input type="radio"/> |
| d) Dictionary -----   | <input type="radio"/> | <input type="radio"/> |
| e) Internet connection -----  | <input type="radio"/> | <input type="radio"/> |
| f) Encyclopedia (as a book or CD) -----   | <input type="radio"/> | <input type="radio"/> |
| g) PlayStation®, GameCube®, Xbox®, or other TV/video game systems -----                           | <input type="radio"/> | <input type="radio"/> |
| h) VCR or DVD player -----  | <input type="radio"/> | <input type="radio"/> |
| i) Three or more cars, small trucks, or sport utility vehicles -----                              | <input type="radio"/> | <input type="radio"/> |



## Mathematics in School

6

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

Fill in **one** oval for each line

- |   | Agree<br>a lot<br>↓   | Agree<br>a little<br>↓ | Disagree<br>a little<br>↓ | Disagree<br>a lot<br>↓ |
|---|-----------------------|------------------------|---------------------------|------------------------|
| a) I usually do well in mathematics -----                               | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |
| b) I would like to do more mathematics<br>in school -----               | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |
| c) I enjoy learning mathematics -----                                   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |
| d) I learn things quickly in mathematics --                             | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |
| e) I like mathematics -----   | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |
| f) Mathematics is harder for me than<br>for many of my classmates ----- | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |
| g) I am just not good at mathematics -----                              | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |
| h) Mathematics is boring -----  | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/>     | <input type="radio"/>  |

Exhibit E-1. Fourth-grade student questionnaire —Continued

7

How often do you do these things in your mathematics lessons?

Fill in **one** oval for each line

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

- |   |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I practice adding, subtracting,<br>multiplying, and dividing without<br>using a calculator ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) I work on fractions and decimals -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) I measure things in the classroom<br>and around the school -----                                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I make tables, charts, or graphs -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I learn about shapes such as circles,<br>triangles, rectangles, and cubes -----                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) I memorize how to work problems-----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) I work with other students<br>in small groups-----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) I explain my mathematics answers-----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) I work mathematics problems<br>on my own -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j) I use a calculator-----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k) I use a computer -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



## Science in School

8

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

Fill in **one** oval for each line

- |   | Agree<br>a lot<br>↓ | Agree<br>a little<br>↓ | Disagree<br>a little<br>↓ | Disagree<br>a lot<br>↓ |
|---|---------------------|------------------------|---------------------------|------------------------|
| a) I usually do well in science -----                               | ①                   | ②                      | ③                         | ④                      |
| b) I would like to do more science<br>in school -----               | ①                   | ②                      | ③                         | ④                      |
| c) I enjoy learning science -----                                   | ①                   | ②                      | ③                         | ④                      |
| d) I learn things quickly in science -----                          | ①                   | ②                      | ③                         | ④                      |
| e) I like science -----   | ①                   | ②                      | ③                         | ④                      |
| f) Science is harder for me than for<br>many of my classmates ----- | ①                   | ②                      | ③                         | ④                      |
| g) I am just not good at science -----                              | ①                   | ②                      | ③                         | ④                      |
| h) Science is boring -----  | ①                   | ②                      | ③                         | ④                      |

Exhibit E-1. Fourth-grade student questionnaire —Continued

9

In school, how often do you do these things?

Fill in **one** oval for each line

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

- |  |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| a) I look at something like the weather or a plant growing and write down what I see ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b) I watch the teacher do a science experiment -----                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c) I design or plan a science experiment or project -----                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| d) I do a science experiment or project -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| e) I work with other students in a small group on a science experiment or project -----    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| f) I read books about science -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| g) I memorize science facts -----  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| h) I write or give an explanation for something I am studying in science -----             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| i) I work science problems on my own -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| j) I use a computer in science lessons -----   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



## Computers

**10**

A. Do you ever use a computer? (Do **not** include PlayStation®, GameCube®, Xbox®, or other TV/video game systems.)

Yes      No  
↓        ↓

Fill in **one** oval only: .....      

If **No**, please go to question **11**

B. Where do you use a computer?

Fill in **one** oval for each line

Yes      No  
↓        ↓

a) At home .....      

b) At school .....      

c) Elsewhere (e.g., public library, friend's home, Internet café) .....      

C. How often do you use a computer for your schoolwork (in and out of school)?

Fill in **one** oval for each line

Every day      At least once a week      Once or twice a month      A few times a year      Never  
↓                    ↓                    ↓                    ↓                    ↓

a) In mathematics .....                        

b) In science .....