# Student Questionnaire
# Population 3

NCSD: TMS3SQ

**IEA Third International Mathematics and Science Study**

School # | Sub. Pop ID # | Student ID # | Grade | Status

Grade: 12

Status: 1 2 3 4 5 6 7 8 9

Assessment Booklet ID #

Log # | Math Status | Physics Status

Log #: 1 2 3 4

Math Status: 0 = 0, 1 = M, 2 = M+

Physics Status: 0 = 0, 1 = P, 2 = P+


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# GENERAL DIRECTIONS

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

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

Some of the questions will be followed by a few possible choices indicated with a letter next to or below it. For these questions, circle the letter next to or below your choice as shown in Example 1.

**Example 1**

| | | *Yes* | *No* |
|---|---|---|---|
| **1.** | **I attend school** ..... | (A) | B |

The letter "A" has been circled because you attend school.

If you decide to change your response to a question, put an "X" over your first choice and then put a circle around your new choice as shown in Example 2.

**Example 2**

| | | *strongly agree* | *agree* | *disagree* | *strongly disagree* |
|---|---|---|---|---|---|
| **2.** | **I like rock music.** ..... | (A) | (B) | C | D |

For other questions you will be asked to write a number or date in the space provided in your booklet. For these questions, you may use words and numbers in your answers. When you write, please be sure that your handwriting is clear.

**1. On what date were you born?**

*Write in the month, day and year.*

_____month _____ day _____year

---

**2a. Are you a female or a male?**

*Circle either A or B.*

female ..... A

male ..... B

---

**2b. Which best describes you?**

*Circle one letter, A, B, C, D, E, or F.*

White (not Hispanic) ..... A

Black (not Hispanic) ..... B

Hispanic ("Hispanic" means someone who is Mexican, Mexican American, Chicano, Puerto Rican, Cuban, or from some other Spanish or Hispanic background.) ..... C

Asian or Pacific Islander ("Asian or Pacific Islander" means someone who is Chinese, Japanese, Korean, Filipino, Vietnamese, Asian American, or from some other Asian or Pacific Island background.) ..... D

American Indian or Alaskan Native ("American Indian or Alaskan Native" means someone who is from one of the American Indian tribes, or one of the original people of Alaska.) ..... E

Other (specify) _____ ..... F

**3a. Were you born in the United States?**

*Circle either A or B.*

Yes ..... A

No ..... B

**3b. If you were not born in the United States, how old were you when you came to the United States?**

*Write in your age at the time.*

I was _____ years old when I came to the United States.

---

*Circle either A or B for each line.*

| | | *Yes* | *No* |
|---|---|---|---|
| **4a.** | **Was your mother born in the United States?** ..... | A | B |
| **4b.** | **Was your father born in the United States?** ..... | A | B |

**5. How often do you speak English at home?**

*Circle ONE letter, A , B, or C.*

| | |
|---|---|
| always or almost always | A |
| sometimes | B |
| never | C |

**6. Does each of these people live at home with you most or all of the time?**

*Circle either A or B for each line.*

| | *Yes* | *No* |
|---|---|---|
| a) mother | A | B |
| b) father | A | B |
| c) one or more brothers | A | B |
| d) one or more sisters | A | B |
| e) stepmother | A | B |
| f) stepfather | A | B |
| g) one or more grandparents | A | B |
| h) another relative or relatives (uncle, aunt, cousin, son, daughter, spouse, etc.) | A | B |
| i) another person or persons (not relatives) | A | B |

**7. Altogether, how many people live in your home?**

*Write in the total number of people.*

_____(Don't forget to include yourself.)

**8. About how many books are there in your home?**

(Do not count magazines, newspapers, or your school books.)

*Circle ONE letter, A, B, C, D, or E.*

| | |
|---|---|
| none or very few (0 - 10 books) | A |
| enough to fill one shelf (11-25 books) | B |
| enough to fill one bookcase (26-100 books) | C |
| enough to fill two bookcases (101 - 200 books) | D |
| enough to fill three or more bookcases (more than 200) | E |

**9. Do you have any of these items at your home?**

*Circle either A or B for each line.*

| | *Yes* | *No* |
|---|---|---|
| a) calculator | A | B |
| b) computer | A | B |
| c) study desk/table for your use | A | B |
| d) dictionary | A | B |
| e) atlas | A | B |
| f) encyclopedia set | A | B |
| g) portable compact disk (CD) player | A | B |
| h) recreational vehicle (e.g., camper, motor home, etc.) | A | B |
| i) stereo system with a compact disk (CD ) player | A | B |
| j) telephone answering machine | A | B |
| k) 3 or more cars, vans, small trucks | A | B |
| l) video camera | A | B |
| m) video game system | A | B |
| n) video recorder (VCR) | A | B |
| o) "Walkman" (small portable tape player with stereo headphones) | A | B |
| p) laptop or notebook computer | A | B |

**10. Where do you live while attending school?**

*Circle ONE letter, A, B, C, or D.*

| | |
|---|---|
| at home | A |
| with relatives away from home | B |
| in a student residence | C |
| in an apartment or house away from my family | D |

**11. How far in school did your mother and father go?**

*Circle ONE letter in each column.*

| | *Mother* | *Father* |
|---|---|---|
| finished elementary school | A | A |
| some high school | B | B |
| finished high school | C | C |
| some vocational/technical education after high school | D | D |
| some community college, college, or university courses | E | E |
| completed a bachelor's degree at a college or university | F | F |
| I don't know | G | G |

**12. What does each of the following people think you ought to do immediately after you finish high school?**

*Circle ONE letter, A, B, C, D, or E, in each column.*

| | *Father* | *Mother* | *Teachers* | *Friends* |
|---|---|---|---|---|
| a) go to university full time | A | A | A | A |
| b) get a full-time job | B | B | B | B |
| c) enter trade school or apprenticeship | C | C | C | C |
| d) enter military service | D | D | D | D |
| e) other | E | E | E | E |

**13. Does each of the following people think it is important for you to...**

*Circle Y for "Yes", or N for "No", in every column in each line.*

| | *Father* | *Mother* | *Friends* | *Yourself* |
|---|---|---|---|---|
| a) do well in science at school? ..... | Y N | Y N | Y N | Y N |
| b) do well in mathematics at school? ..... | Y N | Y N | Y N | Y N |
| c) do well in English at school? ..... | Y N | Y N | Y N | Y N |
| d) be good at sports? ..... | Y N | Y N | Y N | Y N |

**14a. After high school, do you intend to continue your education?**

*Circle either A or B.*

Yes ..... A

No ..... B

**If No, skip the rest of this question and go to question number 15.**

**If Yes, what form of further education do you intend to take?**

*Circle either A or B for each line.*

| | | **Yes** | **No** |
|---|---|---|---|
| a) | vocational or technical courses at a trade or business school ..... | A | B |
| b) | academic courses at a junior or community college ..... | A | B |
| c) | vocational or technical subjects at a junior or community college ..... | A | B |
| d) | attend a four-year college or university ..... | A | B |
| e) | other ..... | A | B |

**14b. Which of the following comes closest to the area which you intend to study most?**

*Circle only ONE letter.*

| | |
|---|---|
| BIOLOGICAL SCIENCES (e.g., botany, ecology, zoology) ..... | A |
| BUSINESS (e.g., accounting, marketing, finance, administration, management) ..... | B |
| CHEMISTRY (e.g., chemistry, biochemistry) ..... | C |
| COMPUTER and INFORMATION SCIENCES (e.g., systems analyst) ..... | D |
| EARTH SCIENCES (e.g., geology, oceanography) ..... | E |
| ENGINEERING (e.g., chemical engineering, civil engineering, electrical engineering, mechanical engineering) ..... | F |
| HEALTH OCCUPATIONS (e.g., dental assistant, practical nursing, veterinary assistant, X-ray technology) ..... | G |
| HEALTH SCIENCES (e.g., dentistry, medical doctor, optometry, pharmacy, physical therapy, registered nursing, veterinary medicine) ..... | H |
| MATHEMATICS (e.g., calculus, statistics) ..... | I |
| PHYSICS (e.g., astronomy, physics) ..... | J |
| OTHER FIELD OF STUDY ..... | K |

**15. During the week, how much time before or after school do you usually spend...**

*Circle ONE letter, A, B, C, D, or E, for each line.*

| | *no time* | *less than 1 hour* | *1-2 hours* | *3-5 hours* | *more than 5 hours* |
|---|---|---|---|---|---|
| a) taking extra lessons in mathematics? | A | B | C | D | E |
| b) taking extra lessons in a science subject? | A | B | C | D | E |
| c) participating in science or mathematics clubs? | A | B | C | D | E |
| d) working at a paid job? | A | B | C | D | E |

**16. On a normal school day, how much time do you spend before or after school doing each of these things?**

*Circle ONE letter, A, B, C, D, or E, for each line.*

| | *no time* | *less than 1 hour* | *1-2 hours* | *3-5 hours* | *more than 5 hours* |
|---|---|---|---|---|---|
| a) watching television and videos | A | B | C | D | E |
| b) playing computer games | A | B | C | D | E |
| c) spending time with friends outside of school | A | B | C | D | E |
| d) doing jobs at home | A | B | C | D | E |
| e) working at a paid job | A | B | C | D | E |
| f) playing sports | A | B | C | D | E |
| g) reading a book for enjoyment | A | B | C | D | E |
| h) studying mathematics or doing mathematics homework | A | B | C | D | E |
| i) studying science or doing science homework | A | B | C | D | E |
| j) studying or doing homework in school subjects other than mathematics and science | A | B | C | D | E |

**17. How often did any of these things happen last month in school?**

*Circle ONE letter, A, B, C, or D, for each line.*

| | | *never* | *once or twice* | *3-4 times* | *5 times or more* |
|---|---|---|---|---|---|
| a) | I skipped a class. | A | B | C | D |
| b) | Something of mine was stolen. | A | B | C | D |
| c) | I was threatened by another student. | A | B | C | D |
| d) | Some of my friends skipped classes. | A | B | C | D |
| e) | Some of my friends had things stolen. | A | B | C | D |
| f) | Some of my friends were threatened by other students. | A | B | C | D |

**18. What do you think about mathematics?**

*Circle ONE letter, A, B, C, or D, for each line.*

| | | *strongly agree* | *agree* | *disagree* | *strongly disagree* |
|---|---|---|---|---|---|
| a) | I enjoy learning mathematics. | A | B | C | D |
| b) | Mathematics is boring. | A | B | C | D |
| c) | Mathematics is an easy subject. | A | B | C | D |
| d) | Mathematics is important to everyone's life. | A | B | C | D |
| e) | I would like a job that involved using mathematics | A | B | C | D |

**19. How much do you like...**

*Circle ONE letter, A, B, C, D, or E, for each line.*

| | *dislike a lot* | *dislike* | *like* | *like a lot* | *have not studied* |
|---|---|---|---|---|---|
| a) mathematics? | A | B | C | D | E |
| b) biological science? | A | B | C | D | E |
| c) chemistry? | A | B | C | D | E |
| d) earth science? | A | B | C | D | E |
| e) physics? | A | B | C | D | E |

**20. To do well in mathematics at school a person needs...**

*Circle ONE letter, A, B, C, or D, for each line.*

| | *strongly agree* | *agree* | *disagree* | *strongly disagree* |
|---|---|---|---|---|
| a) lots of natural talent | A | B | C | D |
| b) good luck. | A | B | C | D |
| c) lots of hard work studying at home. | A | B | C | D |
| d) to memorize the textbook or notes. | A | B | C | D |

**21. To do well in the sciences at school a person needs...**

*Circle ONE letter, A, B, C, or D, for each line.*

| | *strongly agree* | *agree* | *disagree* | *strongly disagree* |
|---|---|---|---|---|
| a) lots of natural talent | A | B | C | D |
| b) good luck. | A | B | C | D |
| c) lots of hard work studying at home. | A | B | C | D |
| d) to memorize the textbook or notes. | A | B | C | D |

**22. How well have you usually done in mathematics and the sciences at school?**

*Circle ONE letter, A, B, C, or D, for each line.*

| | | *strongly agree* | *agree* | *disagree* | *strongly disagree* |
|---|---|---|---|---|---|
| a) | I have usually done well in mathematics. ..... | A | B | C | D |
| b) | I have usually done well in the sciences. ..... | A | B | C | D |

**23. How often do you use any of the following at school, home or any other place?**

*Circle ONE letter, A, B, C, or D, for each line.*

| | | *daily* | *weekly* | *monthly* | *rarely or never* |
|---|---|---|---|---|---|
| a) | calculator. ..... | A | B | C | D |
| b) | desktop computer ..... | A | B | C | D |
| c) | computer terminal ..... | A | B | C | D |
| d) | video tapes or video disc machine ..... | A | B | C | D |
| e) | electronic mail ..... | A | B | C | D |

**24. Which of the following best describes the program you are in at school?**

*Circle ONE letter, A, B, or C.*

| | |
|---|---|
| college preparatory program ..... | A |
| vocational/technical program ..... | B |
| general academic program ..... | C |

**25. What is the most advanced course that you have taken in Mathematics?**

*Circle only ONE letter.*

| | |
|---|---|
| General mathematics | A |
| Business/consumer math | B |
| Algebra I | C |
| Algebra II | D |
| Geometry | E |
| Analytic Geometry | F |
| Trigonometry | G |
| Statistics | H |
| Math Analysis | I |
| Pre-Calculus | J |
| Calculus | K |
| AP Calculus | L |

**26. What is the most advanced course that you have taken in Physics?**

*Circle only ONE letter.*

| | |
|---|---|
| I never studied Physics | A |
| Conceptual Physics | B |
| Physics I | C |
| Physics II | D |
| AP Physics | E |

**27. What is the most advanced course that you have taken in Chemistry?**

*Circle only ONE letter.*

| | |
|---|---|
| I never studied Chemistry | A |
| Chemistry I | B |
| Chemistry II | C |
| AP Chemistry | D |

**28. What is the most advanced course that you have taken in Biology?**

*Circle only ONE letter.*

| | |
|---|---|
| I never studied Biology | A |
| Biology | B |
| Biology, 2nd Year (including botany, zoology, etc) | C |
| Human Health and Nutrition | D |
| Human Anatomy and/or Physiology | E |

**29. What is the most advanced course that you have taken in Earth Science?**

*Circle only ONE letter.*

| | |
|---|---|
| I never studied Earth science | A |
| General science | B |
| Earth science | C |
| Physical science | D |
| Environmental science | E |
| Astronomy | F |

**30a. Are you currently taking a mathematics course?**

*Circle either A or B.*

| | |
|---|---|
| Yes | A |
| No | B |

**30b. If so, how many mathematics periods do you usually have each week?**

*Write in the number of periods.*

_____

**30c. How many minutes are there in each mathematics period?**

*Write in the number of minutes.*

_____

***Complete items 31 and 32 with respect to the mathematics course you are currently taking. If you are not currently taking a mathematics course, complete these items with respect to the most recent mathematics course you have taken.***

**31. In your mathematics lessons, how often are you asked to do the following?**

*Circle ONE letter, A, B, C, or D, for each line.*

| | | *never or almost never* | *some lessons* | *most lessons* | *every lesson* |
|---|---|---|---|---|---|
| a) | Explain the reasoning behind an idea. | A | B | C | D |
| b) | Represent and analyze relationships using tables, charts, or graphs. | A | B | C | D |
| c) | Work on problems for which there is no immediately obvious method of solution. | A | B | C | D |
| d) | Write equations to represent relationships. | A | B | C | D |
| e) | Solve equations. | A | B | C | D |
| f) | Practice computational skills. | A | B | C | D |
| g) | Apply models to data. | A | B | C | D |
| h) | Memorize rules and procedures. | A | B | C | D |
| i) | Apply mathematics to everyday problems. | A | B | C | D |
| j) | Copy notes from the board. | A | B | C | D |
| k) | Use computers to solve exercises or problems | A | B | C | D |
| l) | Watch the teacher demonstrate how do do mathematical problems or procedures. | A | B | C | D |
| m) | Begin your homework before the class ends. | A | B | C | D |

**32. Do you use a textbook in your mathematics class?**

*Circle either A or B.*

YES ..... A

NO ..... B

**If yes, do you use the following textbooks?**

*Circle either A or B for each line.*

| | | *Yes* | *No* |
|---|---|---|---|
| a) | *Calculus: A Graphing Approach;* Addison-Wesley, 1993 ..... | A | B |
| b) | *Calculus with Analytic Geometry;* John Wiley & Sons, 1992 ..... | A | B |
| c) | Some other textbook (*write in the title*)_____ | A | B |

_____

_____

**33. How often is mathematics homework assigned to you?**

*Circle one letter, A, B, C, D or E.*

never ..... A

less than once a week ..... B

once or twice a week ..... C

3 or 4 times a week ..... D

every day ..... E

**33a. Think of the last time you studied mathematics before or after school.**

**Where did you study?**

*Circle either A or B for each line.*

| | | *Yes* | *No* |
|---|---|---|---|
| a) | at your home | A | B |
| b) | at a friend's home | A | B |
| c) | at school (for example, in study hall) | A | B |
| d) | in a special class paid for by your parents | A | B |
| e) | in a local library | A | B |
| f) | on the way to or from school (for example, on the bus or train) | A | B |
| g) | other | A | B |

**With whom did you study?**

*Circle either A or B for each line.*

| | | *Yes* | *No* |
|---|---|---|---|
| a) | by myself | A | B |
| b) | with a friend | A | B |
| c) | with several friends | A | B |
| d) | with a class | A | B |
| e) | with a special teacher (for example, a tutor) | A | B |

**Did you have:**

*Circle either A or B for each line.*

| | | *Yes* | *No* |
|---|---|---|---|
| a) | a quiet area/room in which to work? | A | B |
| b) | your own reference books, workbooks, etc. | A | B |
| c) | your own study desk/table? | A | B |

**34. Are you currently taking any of the following science courses?**

*Circle A or B for each line.*

| | | *Yes* | *No* |
|---|---|---|---|
| a) | Physics | A | B |
| b) | Chemistry | A | B |
| c) | Biology | A | B |
| d) | Earth Science | A | B |
| e) | Other Science Course | A | B |

***Please answer Questions 35a through 38 for ONLY ONE science course. Follow the steps below to decide what science course to choose.***

- **If you marked 'yes' for ONLY ONE science course in Q. 34, circle the SAME course in Q. 35a and answer Questions 35b through 38 for the science course you are currently taking.**

- **If you marked 'yes' for MORE THAN ONE science course in Q. 34, choose the FIRST one with a 'yes' and circle that course in Q. 35a. Then answer Questions 35b through 38 for the ONE science course that you circle in Q. 35a.**

- **If you are NOT currently taking ANY science course AND all your answers in Q. 34 are 'no,' please think of the MOST RECENT SCIENCE COURSE you have taken and circle that course in Q. 35a. Then answer Questions 35b - 38 for your most recent science course.**

**35a. For which science subject are you completing Questions 35b through 38?**

*Circle ONE letter, A, B, C, D, or E.*

| | |
|---|---|
| Physics | A |
| Chemistry | B |
| Biology | C |
| Earth Science | D |
| Other Science Course | E |

**35b. If this is a course you are currently taking, how many class periods do you usually have each week for this course, including laboratory work?**

*Write in the number of periods.*
*Write 0 if you are not currently taking this course.*

_____

**35c. How many minutes are there in each class period for this course?**

*Write in the number of minutes.*
*Write 0 if you are not currently taking this course.*

_____

**36. In your Physics (or science) lessons, how often are you asked to do the following?**

*Circle ONE letter, A, B, C, or D, for each line.*

| | | *never or almost never* | *some lessons* | *most lessons* | *every lesson* |
|---|---|---|---|---|---|
| a) | Explain the reasoning behind an idea. | A | B | C | D |
| b) | Represent and analyze relationships using tables, charts, or graphs. | A | B | C | D |
| c) | Work on problems for which there is no immediately obvious method of solution. | A | B | C | D |
| d) | Write explanations about what was observed and why it happened. | A | B | C | D |
| e) | Put events or objects in order and give a reason for the organization. | A | B | C | D |
| f) | Apply models to data. | A | B | C | D |
| g) | Apply science to everyday problems. | A | B | C | D |
| h) | Conduct laboratory experiments. | A | B | C | D |
| i) | Collect and organize data in the classroom or laboratory. | A | B | C | D |
| j) | Go on a field trip to collect data. | A | B | C | D |
| k) | Copy notes from the board. | A | B | C | D |
| l) | Use computer to solve exercises or problems | A | B | C | D |
| m) | Watch the teacher demonstrate scientific concepts. | A | B | C | D |
| n) | Begin your homework before the class ends. | A | B | C | D |
| o) | Watch the teacher demonstrate laboratory experiments to the class | A | B | C | D |
| p) | Watch a film/video of experiments | A | B | C | D |
| q) | Design your own experiments | A | B | C | D |
| r) | Conduct projects lasting a week or more | A | B | C | D |

**37. Do you use a textbook in your physics (or science) class?**

*Circle either A or B.*

YES ..... A

NO ..... B

*Circle A or B for each line.*

**If yes, do you use the following textbooks?**

| | | *Yes* | *No* |
|---|---|---|---|
| a) | *Modern Physics*; Holt, Rinehart, Winston, 1992 ..... | A | B |
| b) | *University Physics*; Addison Wesley, 1992 ..... | A | B |
| c) | Some other textbook (*write in title*) _____ | A | B |

_____

_____

**38. How often is Physics (or science) homework assigned to you?**

*Circle ONE letter, A, B, C, D, or E.*

never ..... A

less than once a week ..... B

once or twice a week ..... C

3 or 4 times a week ..... D

every day ..... E

**39. Are you currently repeating grade 12?**

*Circle either A or B.*

YES ..... A

NO ..... B

**40. Think of the last time you studied science before or after school.**

**Where did you study?**

| | *Circle either A or B for each line.* | |
|---|---|---|
| | *Yes* | *No* |
| a) at your home | A | B |
| b) at a friend's home | A | B |
| c) at school (e.g., in study hall) | A | B |
| d) in a special class paid for by your parents | A | B |
| e) in a local library | A | B |
| f) on the way to or from school (e.g., on the bus or train) | A | B |
| g) other | A | B |

**With whom did you study?**

| | *Circle either A or B for each line.* | |
|---|---|---|
| | *Yes* | *No* |
| a) by myself | A | B |
| b) with a friend | A | B |
| c) with several friends | A | B |
| d) with a class | A | B |
| e) with a special teacher (e.g., a tutor) | A | B |

**Did you have:**

| | *Circle either A or B for each line.* | |
|---|---|---|
| | *Yes* | *No* |
| a) a quiet area/room in which to work? | A | B |
| b) your own reference books, workbooks, etc. | A | B |
| c) your own study desk/table? | A | B |

**41a. About how much time do you usually spend *each day* on mathematics homework?**

*Circle one letter only.*

I am not taking math this year ..... A

None ..... B

15 minutes ..... C

30 minutes ..... D

45 minutes ..... E

1 hour ..... F

More than 1 hour ..... G

**41b. About how much time do you spend doing science homework *each week*?**

*Circle one letter only.*

I am not taking science this year ..... A

None ..... B

30 minutes ..... C

1 hour ..... D

2 hours ..... E

3 hours ..... F

More than 3 hours ..... G

# STOP

**There are no more questions in this booklet**

If you have finished answering this booklet before the time is over then you may go back and review your answers. Thank you for taking the time to answer these questions carefully.