



Identification Label

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Student Questionnaire

Physics

<TIMSS National Research Center Name>

<Address>



TIMSS & PIRLS
International Study Center
Lynch School of Education, Boston College

© IEA, 2014

Directions

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

Each question is followed by a number of answers. Shade in the circle next to or under the answer of your choice as shown in the example below.

Example

How often do you do these things?

*Fill **one** circle for each line.*

	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never
a) I talk with my friends	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I play sports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I listen to music	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

- Read each question carefully, and pick the answer you think is best.
- Fill in the circle next to or under your answer.
- If you decide to change your answer, draw an **X** through your first answer, like this: ~~⊙~~. Then, fill in the circle next to or under your new answer.
- Ask for help if you do not understand something or are not sure how to answer.

About you

1

Are you female or male?

Fill one circle only.

Female --

Male --

2

When were you born?

Fill the circles next to the month and year you were born.

a) Month

January --

February --

March --

April --

May --

June --

July --

August --

September --

October --

November --

December --

b) Year

1993 --

1994 --

1995 --

1996 --

1997 --

1998 --

1999 --

2000 --

2001 --

Other --

3

How often do you speak <language of test> at home?

Fill one circle only.

Always --

Almost always --

Sometimes --

Never --

4

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

Fill one circle only.

None or very few
(0–10 books) --

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

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

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

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

5

How many digital information devices are there in your home? Count computers, tablets, smartphones, smart TVs, and e-readers. (Do not count other devices.)

Fill **one** circle only.

None --

1-3 devices --

4-6 devices --

7-10 devices --

More than 10 devices --

6

Do you have any of these things?

Fill **one** circle for each line.

- | | Yes | No |
|---|-----------------------|-----------------------|
| a) Your own computer | <input type="radio"/> | <input type="radio"/> |
| b) Your own tablet | <input type="radio"/> | <input type="radio"/> |
| c) Your own smartphone | <input type="radio"/> | <input type="radio"/> |
| d) Your own graphing calculator..... | <input type="radio"/> | <input type="radio"/> |
| e) A gaming system
(e.g., PlayStation®, Wii®, Xbox®)-- | <input type="radio"/> | <input type="radio"/> |
| f) Study desk/table for your use | <input type="radio"/> | <input type="radio"/> |
| g) Your own room..... | <input type="radio"/> | <input type="radio"/> |
| h) <country-specific indicator of
wealth> | <input type="radio"/> | <input type="radio"/> |
| i) <country-specific indicator of
wealth> | <input type="radio"/> | <input type="radio"/> |
| j) <country-specific indicator of
wealth> | <input type="radio"/> | <input type="radio"/> |

7

A. What is the highest level of education completed by your mother (or stepmother or female guardian)?

Fill one circle only.

- Some <Primary education—ISCED Level 1 or
Lower secondary education—ISCED Level 2>
or did not go to school --
- <Lower secondary education—ISCED Level 2> --
- <Upper secondary education—ISCED Level 3> --
- <Post-secondary, non-tertiary
education—ISCED Level 4> --
- <Short-cycle tertiary education—ISCED Level 5> --
- <Bachelor's or equivalent level—ISCED Level 6> --
- <Master's or equivalent level—ISCED Level 7> --
- <Doctor or equivalent level—ISCED Level 8> --
- I don't know --

B. What is the highest level of education completed by your father (or stepfather or male guardian)?

Fill one circle only.

- Some <Primary education—ISCED Level 1 or
Lower secondary education—ISCED Level 2>
or did not go to school --
- <Lower secondary education—ISCED Level 2> --
- <Upper secondary education—ISCED Level 3> --
- <Post-secondary, non-tertiary
education—ISCED Level 4> --
- <Short-cycle tertiary education—ISCED Level 5> --
- <Bachelor's or equivalent level—ISCED Level 6> --
- <Master's or equivalent level—ISCED Level 7> --
- <Doctor or equivalent level—ISCED Level 8> --
- I don't know --

8

What kind of work do your father (or stepfather or male guardian) and mother (or stepmother or female guardian) do for their main jobs?

For each, fill the circle for the job category that best describes what he/she does. Each category has a few examples to help you decide the correct category. If your father or mother is not working now, think about the last job he/she had.

*Fill **one** circle in each column.*

	Your father	Your mother
a) Has never worked for pay -----	<input type="radio"/>	<input type="radio"/>
b) Small Business Owner ----- Includes owners of small businesses (fewer than 25 employees) such as retail shops, services, restaurants	<input type="radio"/>	<input type="radio"/>
c) Clerk ----- Includes office clerks; secretaries; typists; data entry operators; customer service clerks	<input type="radio"/>	<input type="radio"/>
d) Service or Sales Worker ----- Includes travel attendants; restaurant service workers; personal care workers; protective service workers; junior military and police; salespersons; street vendors	<input type="radio"/>	<input type="radio"/>
e) Skilled Agricultural or Fishery Worker ----- Includes farmers; forestry workers; fishery workers; hunters and trappers	<input type="radio"/>	<input type="radio"/>
f) Craft or Trade Worker ----- Includes builders, carpenters, plumbers, electricians, metal workers; machine mechanics; handicraft workers	<input type="radio"/>	<input type="radio"/>

Continued on next page →

8 (continued)

	Your father	Your mother
g) Plant or Machine Operator ----- Includes plant and machine operators; assembly-line operators; motor-vehicle drivers	<input type="radio"/>	<input type="radio"/>
h) General Laborers ----- Includes domestic helpers and cleaners; building caretakers; messengers, porters, and doorkeepers; farm, fishery, agricultural, and construction workers	<input type="radio"/>	<input type="radio"/>
i) Corporate Manager or Senior Official ----- Includes corporate managers such as managers of large companies (25 or more employees) or managers of departments within large companies; legislators or senior government officials; senior officials of special-interest organizations; military officers	<input type="radio"/>	<input type="radio"/>
j) Professional ----- Includes scientists; mathematicians; computer scientists; architects; engineers; life science and health professionals; teachers; legal professionals; social scientists; writers and artists; religious professionals	<input type="radio"/>	<input type="radio"/>
k) Technician or Associate Professional ----- Includes science, engineering, and computer associates and technicians; life science and health technicians and assistants; teacher aides; finance and sales associate professionals; business service agents; administrative assistants	<input type="radio"/>	<input type="radio"/>
l) I don't know -----	<input type="radio"/>	<input type="radio"/>

9

How far in your education do you expect to go?

Fill one circle only.

<Upper secondary
education—ISCED Level 3> --

<Post-secondary, non-tertiary
education—ISCED Level 4> --

<Short-cycle tertiary
education—ISCED Level 5> --

<Bachelor's or equivalent
level—ISCED Level 6> --

<Master's or equivalent
level—ISCED Level 7> --

<Doctor or equivalent
level—ISCED Level 8> --

10

If you plan to continue your education, which area(s) do you intend to study?

Fill the circle(s) that apply.

Mathematics or Statistics -----○

Physics -----○

Chemistry -----○

Biological and Biomedical Sciences
(e.g., dentistry, medicine, nursing,
pharmacology, veterinary medicine) -----○

Engineering and Engineering Technologies
(e.g., aerospace engineering, chemical
engineering, civil engineering, electrical
engineering, mechanical engineering) -----○

Computer and Information Sciences -----○

Education -----○

Business (e.g., accounting, marketing,
administration, finance, management) -----○

Law -----○

Social Sciences (e.g., sociology, political science,
economics, psychology) -----○

Arts and Humanities (e.g., art, language,
literature, history, philosophy) -----○

Other Science Fields of Study -----○

Other Non-science Fields of Study -----○

11

In the future, do you want to work in any of the following professional fields?

*Fill **one** circle for each line.*

	Yes	Maybe	No
a) Education (e.g., teacher, university professor)---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Engineering and Engineering Technologies (e.g., aerospace engineer, chemical engineer, civil engineer, electrical engineer, mechanical engineer) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Computer and Information Sciences (e.g., database administrator, network administrator, software or application developer, systems analyst) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Finance/Banking -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Biological and Biomedical Sciences (e.g., biomedical engineer, biochemist, biophysicist, dentist, medical doctor, nurse, veterinarian) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Environmental Sciences -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Agriculture and Agricultural Sciences -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Actuarial Sciences -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Other Fields -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12

A. Was your mother (or stepmother or female guardian) born in <country>?

Fill one circle only.

Yes --

No --

I don't know --

B. Was your father (or stepfather or male guardian) born in <country>?

Fill one circle only.

Yes --

No --

I don't know --

13

A. Were you born in <country>?

Fill one circle only.

Yes -- 

(If Yes, go to #14)

No --

If No,

B. If you were not born in <country>, how old were you when you came to <country>?

Fill one circle only.

Older than 15 years old --

11 to 15 years old --

5 to 10 years old --

Younger than 5 years old --

Studying Physics

14

How much time do you spend in physics class each week?

_____ minutes per week

Write in the number of **minutes** per week.

Please convert the number of classes/periods into minutes.

15

How much time do you spend on physics outside of class each week?

_____ minutes per week

Write in the number of **minutes** per week.

Please convert the number of hours into minutes.

16

A. During the school year, do you work at a paid job on a regular basis?

Fill **one** circle only.

Yes --

No -- 

(If No, go to #17)

If Yes,

B. How much time do you spend working at the paid job each week?

_____ minutes per week

Write in the number of **minutes** per week.

Please convert the number of hours into minutes.

17

A. During the last 12 months, have you attended extra lessons or tutoring not provided by the school in physics?

*Fill **one** circle only.*

Yes --

No -- 

(If No, go to #18)

If Yes,

B. Why did you attend these extra lessons or tutoring?

*Fill **one** circle for each line.*

- | | Yes | No |
|---------------------------------------|----------------------------------|-----------------------|
| a) To excel in class | <input checked="" type="radio"/> | <input type="radio"/> |
| b) To keep up in class | <input type="radio"/> | <input type="radio"/> |
| c) To do well on an examination | <input type="radio"/> | <input type="radio"/> |

C. For how many of the last 12 months have you attended extra lessons or tutoring in physics?

*Fill **one** circle only.*

Less than 4 months --

4-8 months --

More than 8 months --

18

How much do you agree with these statements about your physics lessons?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) The teacher clearly communicates the purpose of each physics lesson	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I know what my teacher expects me to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) My teacher is easy to understand ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I am interested in what my teacher says	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) My teacher gives me interesting things to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) My teacher asks me thought provoking questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) My teacher has clear answers to my questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) My teacher links new content to what I already know	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18 (continued)

How much do you agree with these statements about your physics lessons?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
i) My teacher is good at explaining physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) My teacher provides the opportunity for me to show what I have learned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) My teacher encourages me to keep working on physics problems until I solve them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l) My teacher provides helpful feedback on my schoolwork (including homework)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m) My teacher uses a variety of teaching methods, tasks, and activities to help us learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n) My teacher believes that I can learn difficult physics material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o) I like the way my teacher teaches physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19

Do you use the Internet to do any of the following tasks for physics schoolwork (including classroom tasks, homework, and studying outside of class)?

*Fill **one** circle for each line.*

- | | Yes | No |
|--|-----------------------|-----------------------|
| a) Access the textbook or other course materials | <input type="radio"/> | <input type="radio"/> |
| b) Access assignments posted online by my teacher | <input type="radio"/> | <input type="radio"/> |
| c) Collaborate with classmates on physics assignments or projects | <input type="radio"/> | <input type="radio"/> |
| d) Communicate with the teacher | <input type="radio"/> | <input type="radio"/> |
| e) Discuss physics topics with other students | <input type="radio"/> | <input type="radio"/> |
| f) Find information, articles, or tutorials to aid in understanding physics concepts | <input type="radio"/> | <input type="radio"/> |
| g) Find information, articles, or tutorials to aid in solving physics problems | <input type="radio"/> | <input type="radio"/> |

20

How much do you agree with these statements about the physics you are studying?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I enjoy conducting experiments or investigations in physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I get a sense of satisfaction when I solve physics problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I feel bored when I do my physics schoolwork	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I like studying for my physics class outside of school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) It is interesting to learn physics laws and principles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I dread my physics class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) I am studying physics because I like to learn new things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) I enjoy figuring out challenging physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Physics is one of my favorite subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j) Jobs that require physics skills seem interesting to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k) I wish I did not have to study physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l) I enjoy thinking about the world in terms of laws of physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21

How much do you agree with these statements about the physics you are studying?

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) Learning physics will help me get ahead in the world	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) It is important to do well in my physics class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) The physics I am studying is not useful for my future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) My parents are pleased that I am taking physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Doing well in physics will help me get into the <university> of my choice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Learning physics does not seem to be a worthwhile exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) My parents think that it is important that I do well in my physics class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) I like telling people I am studying physics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) Learning physics will give me more job opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22

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

Fill **one** circle for each line.

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
a) I enjoy school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) I feel safe when I am at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) I feel like I belong at this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) I like to see my classmates at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Teachers at my school are fair to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) I am proud to go to this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) I learn a lot in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) My classmates respect students who excel in school subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i) My classmates respect students who struggle learning school subjects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23

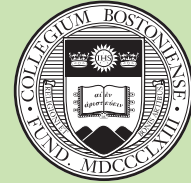
During this school year, how often have other students from your school done any of the following things to you (including through texting or the Internet)?

Fill **one** circle for each line.

	At least once a week	Once or twice a month	A few times a year	Never
a) Made fun of me or called me names	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Excluded me from their activities ..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c) Spread lies about me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d) Stole something from me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e) Hit or hurt me (e.g., shoving, hitting, kicking)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f) Made me do things I didn't want to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g) Posted embarrassing things about me online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h) Threatened me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank You!

Thank you for filling out the questionnaire!



BOSTON
COLLEGE

TIMSS
Advanced
2015

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

Student Questionnaire

Physics



© IEA, 2014
International Association
for the Evaluation of
Educational Achievement

timss.bc.edu