# OECD Program for International Student Assessment 2006 

Main Study PISA 2006

Date of Test

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| Mon $\quad$ Day |  |

## STUDENT QUESTIONNAIRE



Project Consortium:
Australian Council for Educational Research (ACER)
Netherlands National Institute for Educational Measurement (CITO)

In this booklet you will find questions about:

- You and your family
- Your views on various issues related to science
- The environment
- Careers and science
- Learning time
- Teaching and learning science

Please read each question carefully and answer as accurately as you can. In the test you usually circled your answers. For this questionnaire, you will normally answer by checking a box. For a few questions you will need to write a short answer.

If you make a mistake when checking a box, cross out or erase your mistake and mark the correct box. If you make an error when writing an answer, simply cross it out and write the correct answer next to it.

In this questionnaire, there are no right or wrong answers. Your answers should be the ones that are right for you.

You may ask for help if you do not understand something or are not sure how to answer a question.

Your answers will be combined with others to make totals and averages in which no individual can be identified. All your answers will be kept confidential.

## SECTION 1: ABOUT YOU

Q1 What grade are you in?
grade

## Q2 On what date were you born?

(Please write the month, day and year you were born)
Month Day $\quad 19$ Year

## Q3a Which best describes you?

(Please check only one box)

I am Hispanic or Latino


I am not Hispanic or Latino

Q3b Which of these categories best indicates your race?
(Please check all that apply)
White $\qquad$

Black or African American

Asian

American Indian or Alaska Native


Pacific Islander $\square$

## Q4 Are you female or male?

$\begin{array}{cc}\text { Female } & \text { Male } \\ \square_{1} & \square_{2}\end{array}$

## SECTION 2: YOUR FAMILY AND YOUR HOME

In this section you will be asked some questions about your family and your home.
Some of the following questions are about your mother and father or those persons who are like a mother or father to you - for example, guardians, step-parents, foster parents, etc.
If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians you spend the most time with.

## Q5a What is your mother currently doing?

(Please check only one box)
Working full-time for pay

Working part-time for pay

Not working, but looking for a job

Other (e.g., home duties, retired)
Q5b What is your mother's main job?
(e.g., school teacher, food worker, sales manager)
(If she is not working now, please tell us her last main job)
Please write in the job title. $\qquad$

Q5c What does your mother do in her main job?
(e.g., teaches high school students, helps prepare meals in a restaurant, manages a sales team)

Please use a sentence to describe the kind of work she does or did in that job.

Q6 What is the highest level of schooling (not including college) completed by your mother?

If you are not sure which box to choose, please ask the test administrator for help.
(Please check only one box)
Completed grade 12 (high school diploma or GED)

Completed grade 9


Completed grade 6 $\square \square_{4}$

She completed grade 5 or less $\square$

## Q7 Does your mother have any of the following qualifications?

If you are not sure how to answer this question, please ask the test administrator for help.
(Please check one box in each row)

Yes No
Bachelor's (4-year college degree),
a) master's, doctoral, or professional degree such as medicine or law
b) Associate’s degree (2-year degree from a community college)


Vocational or technical certificate/diploma
c) after high school (such as cosmetology or auto mechanics)

## Q8a What is your father currently doing?

 (Please check only one box)Working full-time for pay

Working part-time for pay

Not working, but looking for a job

Other (e.g., home duties, retired)



## Q8b What is your father's main job?

(e.g., school teacher, food worker, sales manager)
(If he is not working now, please tell us his last main job)
Please write in the job title.

## Q8c What does your father do in his main job?

(e.g., teaches high school students, helps prepare meals in a restaurant, manages a sales team)
Please use a sentence to describe the kind of work he does or did in that job.

## Q9 What is the highest level of schooling (not including college)

 completed by your father?If you are not sure how to answer this question, please ask the test administrator for help.
(Please check only one box)

Completed grade 12 (high school diploma or GED)


Completed grade 9

Completed grade 6

He completed grade 5 or less $\square$

## Q10 Does your father have any of the following qualifications?

If you are not sure which box to choose, please ask the test administrator for help.
(Please check one box in each row)

> Yes No

Bachelor's (4-year college degree),
a) master's, doctoral, or professional degree such as medicine or law
b) Associate’s degree (2-year degree from
b) community college)


Vocational or technical certificate/diploma
c) after high school (such as cosmetology or auto mechanics)

Q11a In what country were you and your parents born?
(Please check one answer in each column)
You Mother Father

United States*
*For this question, "United States" refers to the 50 states, District of Columbia, and U.S. military bases abroad.

Other country




$\square$


Q11b If you were NOT born in the United States, how old were you when you arrived in the United States?

If you were less than 12 months old, please write zero (0)


Q12 What language do you speak at home most of the time? (Please check only one box)

English

Spanish $\square$
Other language $\square$

## Q13 Which of the following are in your home? (Please check one box in each row)

Yes
No
a) A desk to study at
$\square$
b) A room of your own

c) A quiet place to study


d) A computer you can use for school work


e) Educational software

f) A link to the Internet

g) Your own calculator


h) Classic literature (e.g., Shakespeare)


i) Books of poetry

j) Works of art (e.g., paintings)


k) Books to help with your school work


l) A dictionary

m) A dishwasher

n) A DVD or VCR player


o) A guest room

p) A high-speed internet connection$\square{ }_{2}$
q) An iPod or MP3 player

## Q14 How many of these are there at your home?

(Please check only one box in each row)

Three or
b) Televisions
c) Computers
d) Cars
e) Rooms with a bath or shower
more
Two





None







One
















## Q15 How many books are there in your home?

There are usually about 40 books per yard of shelving. Do not include magazines, newspapers, or your schoolbooks.
(Please check only one box)

0-10 books


11-25 books $\square$

26-100 books


101-200 books


201-500 books


More than 500 books


## SECTION 3: YOUR VIEWS ON SCIENCE

This section asks about your views on various issues relating to science. Science refers to any topics that you might encounter in school, or outside of school (for example on television) that relate to space science, biology, chemistry, earth science or physics.

## Q16 How much do you agree with the statements below?

(Please check only one box in each row)

|  | Strongly <br> agree | Agree | Disagree | Strongly <br> disagree |
| :--- | :--- | :--- | :--- | :--- |
| a) I generally have fun when I am learning |  |  |  |  |
| science topics | $\square_{1}$ | $\square_{2}$ | $\square_{3}$ | $\square_{4}$ |
| b) I like reading about science | $\square_{1}$ | $\square_{2}$ | $\square_{3}$ | $\square_{4}$ |
| c) I am happy doing science problems | $\square_{1}$ | $\square_{2}$ | $\square_{3}$ | $\square_{4}$ |
| d) I enjoy acquiring new knowledge in science | $\square_{1}$ | $\square_{2}$ | $\square_{3}$ | $\square_{4}$ |
| e) I am interested in learning about science | $\square_{1}$ | $\square_{2}$ | $\square$ | $\square_{4}$ |

## Q17 How easy do you think it would be for you to perform the following tasks on your own?

(Please check only one box in each row)
a) Recognize the science question that underlies a newspaper report on a health issue
b) Explain why earthquakes occur more frequently in some areas than in others




c) Describe the role of antibiotics in the treatment of disease




d) Identify the science question associated with the disposal of garbage




e) Predict how changes to an environment will affect the survival of certain species




f) Interpret the scientific information provided on the labels of food items




g) Discuss how new evidence can lead you to change your understanding about the possibility of life on Mars
h) Identify the better of two explanations for the formation of acid rain





## Q18 How much do you agree with the statements below?

(Please check only one box in each row)
Strongly
agree
Agree
Disagree disagree
a) Advances in science and technology usually improve people's living conditions
b) Science is important for helping us to understand the natural world




c) Some concepts in science help me see how I relate to other people




d) Advances in science and technology usually help improve the economy




e) I will use science in many ways when I am an adult
f) Science is valuable to society
g) Science is very relevant to me
h) I find that science helps me to understand the things around me



i) Advances in science and technology usually bring social benefits




j) When I leave school there will be many opportunities for me to use science





## Q19 How often do you do these things?

(Please check only one box in each row)
a) Watch TV programs about science
b) Borrow or buy books on science topics
c) Visit web sites about science topics
d) Listen to radio programs about advances in science
e) Read science magazines or science articles in newspapers
f) Attend a science club

Never or hardly ever





| Very Often | Regularly | Sometimes | Never or <br> hardly <br> ever |
| :---: | :---: | :---: | :---: |
| $\square_{1}$ | $\square_{2}$ | $\square_{3}$ | $\square_{4}$ |












Q20 Here is a list of science topics. From which source(s) did you mainly learn about each of these topics?
(Please check as many boxes as apply in each row)

a) Photosynthesis

b) Formation of the continents






c) Genes and chromosomes





d) Soundproofing






e) Climate change






f) Evolution






g) Nuclear energy





h) Health and nutrition





$\square$

## Q21 How much interest do you have in learning about the following science topics?

(Please check only one box in each row)
a) Topics in physics
b) Topics in chemistry
c) The biology of plants
d) Human biology
e) Topics in astronomy
f) Topics in geology
g) Ways scientists design experiments
h) What is required for scientific explanations $\square$

 $\square_{4}$

## SECTION 4: THE ENVIRONMENT

## Q22 How informed are you about the following environmental issues?

(Please check only one box in each row)

|  | I have |  |  |
| :---: | :---: | :---: | :---: |
|  | heard about | I know | I am |
| this but I | something | familiar |  |
|  | would not | about this | with this |
| an able to | and could | and I would |  |
| I have never | explain | explain the | be able to |
| heard of | what it is | general | explain this |
| this | really about | issue | well |

a) The increase of greenhouse gases in the atmosphere




b) Use of genetically modified organisms




c) Acid rain




d) Nuclear waste




e) The consequences of clearing forests for other land use

$\square$

$\square$

## Q23 From which source(s) did you mainly learn about each of these environmental issues?

(Please check as many boxes as apply in each row)

|  | None of these, I am not sure what this is | My school | The TV, radio, newspaper or magazines | My friends | My family | The Internet or books |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a) Air pollution | $\square_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square_{1}$ |
| b) Energy shortages | $\square_{1}$ | $\square_{1}$ | $\square{ }_{1}$ | $\square_{1}$ | $\square{ }_{1}$ | $\square_{1}$ |
| c) Extinction of plants and animals | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ |
| d) Clearing of forests for other land use | $\square_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square_{1}$ | $\square_{1}$ |
| e) Water shortages | $\square_{1}$ | $\square_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square{ }_{1}$ | $\square_{1}$ |
| f) Nuclear waste | $\square_{1}$ | $\square_{1}$ | $\square_{1}$ | $\square_{1}$ | $\square_{1}$ | $\square 1$ |

## Q24 Do you see the environmental issues below as a serious concern for yourself and/or others?

(Please check only one box in each row)

|  | This is a <br> serious <br> concern for <br> me personally <br> as well as <br> others | This is <br> serious <br> concern for <br> other people <br> in my country <br> but not me <br> personally | This is a <br> serious <br> concern only <br> for people in <br> other <br> countries |
| :--- | :---: | :---: | :---: | | This is not $a$ |
| :---: |
| serious |
| concern to |
| anyone |

## Q25 Do you think problems associated with the environmental issues below will improve or get worse over the next 20 years?

(Please check only one box in each row)

Stay about
a) Air pollution
b) Energy shortages
c) Extinction of plants and animals
d) Clearing of forests for other land use
e) Water shortages
f) Nuclear waste

Improve the same












$\square$


## Q26 How much do you agree with the statements below?

(Please check only one box in each row)
Strongly
agree

Agree
Strongly agree
a) It is important to carry out regular checks on the emissions from cars as a condition of their use




b) It disturbs me when energy is wasted through the unnecessary use of electrical appliances
c) I am in favor of having laws that regulate factory emissions even if this would increase the price of products
d) To reduce waste, the use of plastic packaging should be kept to a minimum




e) Industries should be required to prove that they safely dispose of dangerous waste materials
f) I am in favor of having laws that protect the habitats of endangered species




g) Electricity should be produced from renewable sources as much as possible, even


if this increases the cost

## SECTION 5: CAREERS AND SCIENCE

In this section we ask you questions about science-related careers. When thinking about what a science-related career might be, think of the many jobs that involve science-not just the traditional "scientist." Careers like engineer (involving physics), weather forecaster (involving earth science), optician (involving biology and physics), and medical doctors (involving the medical sciences) are all examples of science-related careers.

## Q27 How much do you agree with the statements below?

(Please check only one box in each row)
Strongly

agree Agree Disagree | Strongly |
| :---: |
| disagree |

a) The subjects available at my school provide students with the basic skills and knowledge for a science-related career
b) The science subjects at my school provide students with the basic skills and knowledge for many different careers.
c) The subjects I study provide me with the basic skills and knowledge for a sciencerelated career
d) My teachers equip me with the basic skills and knowledge I need for a science-related career


$\square$

## Q28 How informed are you about these topics?

(Please check only one box in each row)

| Very |  |  | Not |
| :---: | :---: | :---: | :---: |
| well | Fairly | Not well | informed |
| informed | informed | informed | at all |

a) Science-related careers that are available in the job market


b) Where to find information about sciencerelated careers




c) The steps students need to take if they want a science-related career




d) Employers or companies that hire people to work in science-related careers





## Q29 How much do you agree with the statements below?

(Please check only one box in each row)
Strongly
agree

Agree
Disagree

Strongly disagree
a) I would like to work in a career involving science




b) I would like to study science after high school




c) I would like to spend my life doing advanced science




d) I would like to work on science projects as an adult




Q30a What kind of job do you expect to have when you are about 30 years old?

Write the job title $\qquad$

## Q30b What is the highest grade or level of school you expect to complete?

(Please check only one box)
Less than high school


High school


Vocational or technical certificate (such as cosmetology or auto mechanics)


Associate's degree (2-year degree from a community college)


Bachelor’s degree (4-year college degree) $\square$

Master’s degree

Doctoral or professional degree such as medicine or law


## SECTION 6: LEARNING TIME

## Q31 How much time do you typically spend per week studying the following subjects?

For each subject, please indicate separately:

- the time spent attending regular classes at your school;
- the time spent attending out-of-school-time lessons (at school, at home or somewhere else);
- the time spent studying or doing homework by yourself.
(Please check only one box in each row)


## Science

a) Regular classes in science at my school
b) Out-of school-time lessons in science
c) Study or homework in science by myself

## Mathematics

d) Regular classes in mathematics at my school
e) Out-of school-time lessons in mathematics
f) Study or homework in mathematics by myself

|  | 2 or |  |  |  |  | 4 or |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Less | more but | more but | 6 or |  |  |  |
| than 2 | less than | less than | more |  |  |  |
| No time | hours a | 4hours | 6 hours |  |  |  |
| hours a |  |  |  |  |  |  |


$\square$


















## Q31 (continued)

| English Language and | No time | 2 or <br> Less <br> than 2 <br> hours a <br> week | 4 or <br> more but <br> less than <br> 4 hours <br> a week | more but <br> less than <br> 6 hours <br> a week | more <br> mours $a$ <br> week |
| :--- | :--- | :---: | :---: | :---: | :---: |
| Regular classes in English at my <br> school | $\square_{1}$ | $\square_{2}$ | $\square_{3}$ | $\square_{4}$ | $\square_{5}$ |
| Out-of school-time lessons in <br> English <br> Study or homework in English by <br> myself | $\square_{1}$ | $\square_{1}$ | $\square_{2}$ | $\square_{3}$ | $\square_{4}$ |

## Other subjects

j) Regular classes in other subjects at my school





k) Out-of-school-time lessons in other subjects




l) Study or homework in other subjects by myself






## Q32 What type of out-of-school-time lessons do you attend currently (if any)?

These are lessons in subjects that you are learning at school, that you spend extra time learning outside of normal school hours. The lessons might be held at your school, at your home or somewhere else. These are only lessons in subjects that you also learn at school.
(Please check only one box in each row)

Yes No
a) One to one lessons with a teacher who is also a teacher at your school

b) One to one lessons with a teacher who is not a teacher at your school


c) Lessons in small groups (less than 8 students) with a teacher who is also a teacher at your school

d) Lessons in small groups (less than 8 students) with a teacher who is not a teacher at your school

e) Lessons in larger groups (8 students or more) with a teacher who is also a teacher at your school

f) Lessons in larger groups (8 students or more) with a teacher who is not a teacher at your school


## SECTION 7: TEACHING AND LEARNING SCIENCE

## Q33 Did you or do you take any of the courses listed below?

(Please check as many boxes as apply in each row)

|  | Last year |  | This year |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Yes | No | Yes | No |
| a) A required general or integrated science course | $\square_{1}$ | $\square_{2}$ | $\square_{1}$ | $\square{ }_{2}$ |
| b) An optional general or integrated science course | $\square_{1}$ | $\square_{2}$ | $\square_{1}$ | $\square{ }_{2}$ |
| c) A required biology course | $\square \square_{1}$ | $\square \square_{2}$ | $\square_{1}$ | $\square \square_{2}$ |
| d) An optional biology course | $\square \square_{1}$ | $\square{ }_{2}$ | $\square \square_{1}$ | $\square \square_{2}$ |
| e) A required physics course | $\square \square_{1}$ | $\square \square_{2}$ | $\square \square_{1}$ | $\square \square_{2}$ |
| f) An optional physics course | $\square \square_{1}$ | $\square \square_{2}$ | $\square \square_{1}$ | $\square \square_{2}$ |
| g) A required chemistry course | $\square 1$ | $\square{ }_{2}$ | $\square \square_{1}$ | $\square{ }_{2}$ |
| h) An optional chemistry course | $\square \square_{1}$ | $\square{ }_{2}$ | $\square \square_{1}$ | $\square{ }_{2}$ |

## Q34 When learning science topics at school, how often do the following activities occur?

(Please check only one box in each row)

|  |  |  | Never |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | or |
| In all | In most | In some | hardly |
| lessons | lessons | lessons | ever |

a) Students are given opportunities to explain their ideas
b) Students spend time in the laboratory doing practical experiments




c) Students are required to design how a science question could be investigated in the laboratory
d) The students are asked to apply a science concept to everyday problems




e) The lessons involve students' opinions about the topics




f) Students are asked to draw conclusions from an experiment they have conducted




g) 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)




h) Students are allowed to design their own experiments


## Q34 (continued)

i) There is a class debate or discussion
j) Experiments are done by the teacher as demonstrations
k) Students are given the chance to choose their own investigations
l) The teacher uses science to help students understand the world outside school
m) Students have discussions about the topics
n) Students do experiments by following the instructions of the teacher
o) The teacher clearly explains the relevance of science concepts to students' lives
p) Students are asked to do an investigation to test out their own ideas
q) The teacher uses examples of technological application to show how science is relevant to society

|  |  |  | Never <br> or |
| :---: | :---: | :---: | :---: |
| In all | In most | In some | hardly <br> ever |
| lessons | lessons | lessons |  |






































## Q35 How much do you agree with the statements below?

(Please check only one box in each row)
Strongly

agree Agree Disagree | Strongly |
| :---: |
| disagree |

a) Making an effort in my science class(es) is worth it because this will help me in the work I want to do later on




b) What I learn in my science class(es) is important for me because I need this for what I want to study later on
c) I study science because I know it is useful for me




d) Studying science is worthwhile for me because what I learn will improve my career prospects
e) I will learn many things in my science class(es) that will help me get a job





Q36 In general, how important do you think it is for you to do well in the subjects below?
(Please check only one box in each row)
Not
Very important Important
a) Science




b) Mathematics
c) English

Q37 The following question asks about your experience in learning science.

How much do you agree with the statements below?
(Please check only one box in each row)
Strongly

agree $\quad$ Agree $\quad$ Disagree | Strongly |
| :---: |
| disagree |

a) Learning advanced science would be easy for me




b) I can usually give good answers to test questions in science
c) I learn science quickly
d) Science is easy for me
e) When I am being taught science, I can understand the concepts very well




f) I can easily understand new ideas in science


$\square$
$\square$

## Thank you very much for your co-operation in completing this questionnaire!

