

STUDENT QUESTIONNAIRE FOR PISA 2006

Main Study

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Project Consortium:

Australian Council for Educational
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Netherlands National Institute for
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Educational Testing Service (ETS)

National Institute for Educational Policy
Research (NIER, Japan)

Westat

In this booklet you will find questions about:

- You and your family
- Your views on various issues related to science
- The environment
- Careers and <broad 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 ticking a box. For a few questions you will need to write a short answer.

If you make a mistake when ticking 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 Which one of the following <programmes> are you in?

(Please tick only one box)

<Programme 1> ₁

<Programme 2> ₂

<Programme 3> ₃

<Programme 4> ₄

<Programme 5> ₅

<Programme 6> ₆

Q3 On what date were you born?

(Please write the day, month and year you were born)

_____ 19_____
Day Month Year

Q4 Are you female or male?

Female Male

₁

₂

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's main job?

(e.g. school teacher, kitchen-hand, sales manager)

(If she is not working now, please tell us her last main job)

Please write in the job title. _____

Q5b What does your mother do in her main job?

(e.g. teaches high school students, helps the cook 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> completed by your mother?

If you are not sure which box to choose, please ask the <test administrator> for help.

(Please tick only one box)

- | | | |
|--------------------------------------|--------------------------|---|
| <ISCED level 3A> | <input type="checkbox"/> | 1 |
| <ISCED level 3B, 3C> | <input type="checkbox"/> | 2 |
| <ISCED level 2> | <input type="checkbox"/> | 3 |
| <ISCED level 1> | <input type="checkbox"/> | 4 |
| She did not complete <ISCED level 1> | <input type="checkbox"/> | 5 |

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 tick one box in each row)

- | | <i>Yes</i> | <i>No</i> |
|------------------------|--------------------------|--------------------------|
| a) <ISCED level 5A, 6> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) <ISCED level 5B> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) <ISCED level 4> | <input type="checkbox"/> | <input type="checkbox"/> |

Q8a What is your father's main job?

(e.g. school teacher, kitchen-hand, sales manager)

(If he is not working now, please tell us his last main job)

Please write in the job title. _____

Q8b What does your father do in his main job?

(e.g. teaches high school students, helps the cook 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> completed by your father?

If you are not sure how to answer this question, please ask the <test administrator> for help.

(Please tick only one box)

<ISCED level 3A> ₁

<ISCED level 3B, 3C> ₂

<ISCED level 2> ₃

<ISCED level 1> ₄

He did not complete <ISCED level 1> ₅

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 tick one box in each row)

	<i>Yes</i>	<i>No</i>
a) <ISCED level 5A, 6>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
b) <ISCED level 5B>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
c) <ISCED level 4>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂

Q11a In what country were you and your parents born?

(Please tick one answer in each column)

	<i>You</i>	<i>Mother</i>	<i>Father</i>
<Country A>	<input type="checkbox"/> ₀₁	<input type="checkbox"/> ₀₁	<input type="checkbox"/> ₀₁
<Country B>	<input type="checkbox"/> ₀₂	<input type="checkbox"/> ₀₂	<input type="checkbox"/> ₀₂
<Country C>	<input type="checkbox"/> ₀₃	<input type="checkbox"/> ₀₃	<input type="checkbox"/> ₀₃
<Country D>	<input type="checkbox"/> ₀₄	<input type="checkbox"/> ₀₄	<input type="checkbox"/> ₀₄
<...etc.>	<input type="checkbox"/> _{<xx>}	<input type="checkbox"/> _{<xx>}	<input type="checkbox"/> _{<xx>}
Other country	<input type="checkbox"/> _{<xx>}	<input type="checkbox"/> _{<xx>}	<input type="checkbox"/> _{<xx>}

Q11b If you were NOT born in <country of test>, how old were you when you arrived in <country of test>?

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

_____ years

Q12 What language do you speak at home most of the time?

(Please tick only one box)

<Language 1> <xxx>

<Language 2> <xxx>

<Language 3> <xxx>

< ...etc. > <xxx>

Other language <xxx>

Q13 Which of the following are in your home?

(Please tick one box in each row)

	<i>Yes</i>	<i>No</i>
a) A desk to study at	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
b) A room of your own	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
c) A quiet place to study	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
d) A computer you can use for school work	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
e) Educational software	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
f) A link to the Internet	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
g) Your own calculator	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
h) Classic literature (e.g. <Shakespeare>)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
i) Books of poetry	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
j) Works of art (e.g. paintings)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
k) Books to help with your school work	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
l) A dictionary	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
m) A dishwasher	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
n) A <DVD or VCR> player	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
o) <Country-specific wealth item 1>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
p) <Country-specific wealth item 2>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
q) <Country-specific wealth item 3>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂

Q14 How many of these are there at your home?

(Please tick only one box in each row)

	<i>None</i>	<i>One</i>	<i>Two</i>	<i>Three or more</i>
a) Cellular phones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ₄
b) Televisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ₄
c) Computers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ₄
d) Cars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ₄
e) Rooms with a bath or shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ₄

Q15 How many books are there in your home?

There are usually about 40 books per metre of shelving. Do not include magazines, newspapers, or your schoolbooks.

(Please tick only one box)

0-10 books	<input type="checkbox"/> ₁
11-25 books	<input type="checkbox"/> ₂
26-100 books	<input type="checkbox"/> ₃
101-200 books	<input type="checkbox"/> ₄
201-500 books	<input type="checkbox"/> ₅
More than 500 books	<input type="checkbox"/> ₆

SECTION 3: YOUR VIEWS ON <BROAD SCIENCE>

This section asks about your views on various issues relating to <broad science>. <Broad 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 tick only one box in each row)

	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
a) I generally have fun when I am learning <broad science> topics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) I like reading about <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) I am happy doing <broad science> problems	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) I enjoy acquiring new knowledge in <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) I am interested in learning about <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

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

(Please tick only one box in each row)

	<i>I could do this easily</i>	<i>I could do this with a bit of effort</i>	<i>I would struggle to do this on my own</i>	<i>I couldn't do this</i>
a) Recognise the science question that underlies a newspaper report on a health issue	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Explain why earthquakes occur more frequently in some areas than in others	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) Describe the role of antibiotics in the treatment of disease	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Identify the science question associated with the disposal of garbage	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) Predict how changes to an environment will affect the survival of certain species	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) Interpret the scientific information provided on the labelling of food items	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
g) Discuss how new evidence can lead you to change your understanding about the possibility of life on Mars	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
h) Identify the better of two explanations for the formation of acid rain	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q18 How much do you agree with the statements below?

(Please tick only one box in each row)

	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
a) Advances in <broad science and technology> usually improve people's living conditions	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) <Broad science> is important for helping us to understand the natural world	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) Some concepts in <broad science> help me see how I relate to other people	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Advances in <broad science and technology> usually help improve the economy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) I will use <broad science> in many ways when I am an adult	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) <Broad science> is valuable to society	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
g) <Broad science> is very relevant to me	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
h) I find that <broad science> helps me to understand the things around me	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
i) Advances in <broad science and technology> usually bring social benefits	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
j) When I leave school there will be many opportunities for me to use <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q19 How often do you do these things?

(Please tick only one box in each row)

	<i>Very Often</i>	<i>Regularly</i>	<i>Sometimes</i>	<i>Never or hardly ever</i>
a) Watch TV programmes about <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Borrow or buy books on <broad science> topics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) Visit web sites about <broad science> topics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Listen to radio programmes about advances in <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) Read <broad science> magazines or science articles in newspapers	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) Attend a <science club>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q20 Here is a list of <broad science> topics. From which source(s) did you mainly learn about each of these topics?

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

	<i>None of these, I am not sure what this is</i>	<i>My school</i>	<i>The TV, radio, newspaper or magazines</i>	<i>My friends</i>	<i>My family</i>	<i>The Internet or books</i>
a) Photosynthesis	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
b) Formation of the continents	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
c) Genes and chromosomes	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
d) Soundproofing	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
e) Climate change	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
f) Evolution	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
g) Nuclear energy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
h) Health and nutrition	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁

Q21 How much interest do you have in learning about the following <broad science> topics?

(Please tick only one box in each row)

	<i>High Interest</i>	<i>Medium Interest</i>	<i>Low Interest</i>	<i>No Interest</i>
a) Topics in physics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Topics in chemistry	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) The biology of plants	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Human biology	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) Topics in astronomy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) Topics in geology	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
g) Ways scientists design experiments	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
h) What is required for scientific explanations	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

SECTION 4: THE ENVIRONMENT

Q22 How informed are you about the following environmental issues?

(Please tick only one box in each row)

	<i>I have never heard of this</i>	<i>I have heard about this but I would not be able to explain what it is really about</i>	<i>I know something about this and could explain the general issue</i>	<i>I am familiar with this and I would be able to explain this well</i>
a) The increase of greenhouse gases in the atmosphere	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Use of genetically modified organisms (<GMO>)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) Acid rain	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Nuclear waste	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) The consequences of clearing forests for other land use	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

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

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

	<i>None of these, I am not sure what this is</i>	<i>My school</i>	<i>The TV, radio, newspaper or magazines</i>	<i>My friends</i>	<i>My family</i>	<i>The Internet or books</i>
a) Air pollution	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
b) Energy shortages	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
c) Extinction of plants and animals	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
d) Clearing of forests for other land use	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
e) Water shortages	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
f) Nuclear waste	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁

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

(Please tick only one box in each row)

	<i>This is a serious concern for me personally as well as others</i>	<i>This is a serious concern for other people in my country but not me personally</i>	<i>This is a serious concern only for people in other countries</i>	<i>This is not a serious concern to anyone</i>
a) Air pollution	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Energy shortages	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) Extinction of plants and animals	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Clearing of forests for other land use	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) Water shortages	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) Nuclear waste	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

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

(Please tick only one box in each row)

	<i>Improve</i>	<i>Stay about the same</i>	<i>Get worse</i>
a) Air pollution	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
b) Energy shortages	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
c) Extinction of plants and animals	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
d) Clearing of forests for other land use	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
e) Water shortages	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
f) Nuclear waste	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

Q26 How much do you agree with the statements below?

(Please tick only one box in each row)

	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
a) It is important to carry out regular checks on the emissions from cars as a condition of their use	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) It disturbs me when energy is wasted through the unnecessary use of electrical appliances	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) I am in favour of having laws that regulate factory emissions even if this would increase the price of products	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) To reduce waste, the use of plastic packaging should be kept to a minimum	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) Industries should be required to prove that they safely dispose of dangerous waste materials	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) I am in favour of having laws that protect the habitats of endangered species	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
g) Electricity should be produced from renewable sources as much as possible, even if this increases the cost	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

SECTION 5: CAREERS AND <BROAD 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 tick only one box in each row)

	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
a) The subjects <u>available</u> at my school provide students with the basic skills and knowledge for a <science-related career>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) The <school science> subjects at my school provide students with the basic skills and knowledge for many different careers.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) The subjects <u>I study</u> provide me with the basic skills and knowledge for a <science-related career>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) My teachers equip me with the basic skills and knowledge I need for a <science-related career>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q28 How informed are you about these topics?

(Please tick only one box in each row)

	<i>Very well informed</i>	<i>Fairly informed</i>	<i>Not well informed</i>	<i>Not informed at all</i>
a) <Science-related careers> that are available in the job market	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Where to find information about <science-related careers>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) The steps students need to take if they want a <science-related career>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Employers or companies that hire people to work in <science-related careers>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q29 How much do you agree with the statements below?

(Please tick only one box in each row)

	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
a) I would like to work in a career involving <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) I would like to study <broad science> after <secondary school>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) I would like to spend my life doing advanced <broad science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) I would like to work on <broad science> projects as an adult	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q30 What kind of job do you expect to have when you are about 30 years old?

Write the job title _____

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 lessons 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.*

<An hour here refers to 60 minutes, not to a class period>

(Please tick only one box in each row)

		<i>Less than 2 hours a week</i>	<i>2 or more but less than 4 hours a week</i>	<i>4 or more but less than 6 hours a week</i>	<i>6 or more hours a week</i>
<School science>					
a) Regular lessons in <school science> at my school	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
b) Out-of school-time lessons in <school science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
c) Study or homework in <school science> by myself	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
Mathematics					
d) Regular lessons in mathematics at my school	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
e) Out-of school-time lessons in mathematics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
f) Study or homework in mathematics by myself	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
<Test Language>					
g) Regular lessons in <test language> at my school	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
h) Out-of school-time lessons in <test Language>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
i) Study or homework in <test Language> by myself	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

Q31 (continued)

Other subjects	<i>No time</i>	<i>Less than 2 hours a week</i>	<i>2 or more but less than 4 hours a week</i>	<i>4 or more but less than 6 hours a week</i>	<i>6 or more hours a week</i>
j) Regular lessons in other subjects at my school	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
k) Out-of-school-time lessons in other subjects	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
l) Study or homework in other subjects by myself	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

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 tick only one box in each row)

- | | Yes | No |
|---|---------------------------------------|---------------------------------------|
| a) <One to one> lessons with a <teacher> who is also a teacher at your school | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |
| b) <One to one> lessons with a <teacher> who is <u>not</u> a teacher at your school | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |
| c) Lessons in small groups (less than 8 students) with a <teacher> who is also a teacher at your school | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |
| d) Lessons in small groups (less than 8 students) with a <teacher> who is <u>not</u> a teacher at your school | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |
| e) Lessons in larger groups (8 students or more) with a <teacher> who is also a teacher at your school | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |
| f) Lessons in larger groups (8 students or more) with a <teacher> who is <u>not</u> a teacher at your school | <input type="checkbox"/> ₁ | <input type="checkbox"/> ₂ |

SECTION 7: TEACHING AND LEARNING SCIENCE

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

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

	<i>Last year</i>		<i>This year</i>	
	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>
a) A compulsory <general science course>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
b) An optional <general science course>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
c) A compulsory biology course	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
d) An optional biology course	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
e) A compulsory physics course	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
f) An optional physics course	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
g) A compulsory chemistry course	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
h) An optional chemistry course	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂

<Instructions for students who do not study science>

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

(Please tick only one box in each row)

	<i>In all lessons</i>	<i>In most lessons</i>	<i>In some lessons</i>	<i>Never or hardly ever</i>
a) Students are given opportunities to explain their ideas	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Students spend time in the laboratory doing practical experiments	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) Students are required to design how a <school science> question could be investigated in the laboratory	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) The students are asked to apply a <school science> concept to everyday problems	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) The lessons involve students' opinions about the topics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) Students are asked to draw conclusions from an experiment they have conducted	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
g) The teacher explains how a <school science> idea can be applied to a number of different phenomena (e.g. the movement of objects, substances with similar properties)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
h) Students are allowed to design their own experiments	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q34 (continued)

	<i>In all lessons</i>	<i>In most lessons</i>	<i>In some lessons</i>	<i>Never or hardly ever</i>
i) There is a class debate or discussion	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
j) Experiments are done by the teacher as demonstrations	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
k) Students are given the chance to choose their own investigations	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
l) The teacher uses <school science> to help students understand the world outside school	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
m) Students have discussions about the topics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
n) Students do experiments by following the instructions of the teacher	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
o) The teacher clearly explains the relevance of <broad science> concepts to our lives	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
p) Students are asked to do an investigation to test out their own ideas	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
q) The teacher uses examples of technological application to show how <school science> is relevant to society	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q35 How much do you agree with the statements below?

(Please tick only one box in each row)

	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
a) Making an effort in my <school science> subject(s) is worth it because this will help me in the work I want to do later on	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) What I learn in my <school science> subject(s) is important for me because I need this for what I want to study later on	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) I study <school science> because I know it is useful for me	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) Studying my <school science> subject(s) is worthwhile for me because what I learn will improve my career prospects	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) I will learn many things in my <school science> subject(s) that will help me get a job	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q36 In general, how important do you think it is for you to do well in the subjects below?

(Please tick only one box in each row)

	<i>Very important</i>	<i>Important</i>	<i>Of little importance</i>	<i>Not important at all</i>
a) <School science> subjects	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) Mathematics subjects	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) <test language> subjects	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q37 The following question asks about your experience in learning <school science> topics.

How much do you agree with the statements below?

(Please tick only one box in each row)

	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
a) Learning advanced <school science> topics would be easy for me	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
b) I can usually give good answers to <test questions> on <school science> topics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
c) I learn <school science> topics quickly	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
d) <School science> topics are easy for me	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
e) When I am being taught <school science>, I can understand the concepts very well	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
f) I can easily understand new ideas in <school science>	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

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