





## General Directions

The TIMSS Advanced 2008 Curriculum Questionnaire for physics is designed to collect information about the organization, content, and implementation of the intended physics curriculum in each country. The questionnaire should be completed by the National Research Coordinator, drawing on the expertise of curriculum specialists and educators.

Your responses are very important for us in interpreting the student achievement and background information collected in other parts of the study. Thank you very much for the time and effort you have put into responding to this questionnaire.

### Contact Information

Country: \_\_\_\_\_

Name of Person  
Completing this  
Questionnaire: \_\_\_\_\_

Position: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Email: \_\_\_\_\_

Phone: \_\_\_\_\_

FaxFax

## Physics Curriculum and Instruction

1. a) In what year was the current curriculum implemented? (i.e., the curriculum that covers the physics track or course being assessed in TIMSS Advanced)

Comments:

- b) Is that curriculum currently being revised?

*Check **one** circle only.*

Yes---

No---

*If Yes...*

Please explain:

*If No...*

Comments:

2. a) Are there any prerequisite courses for students taking the physics track or course being assessed in TIMSS Advanced?

*Check **one** circle only.*

Yes---

No---

*If Yes...*

3. a) Does the national curriculum contain statements/policies about the use of calculators by students in the physics track or course being assessed in TIMSS Advanced?

*Check **one** circle only.*

Yes---

No---

*If Yes...*

What are the statements/policies?

*If No...*

Comments:

b) *If Yes...*

Does the policy address requirements for the types of calculators that may be used?

*Check **one** circle only.*

Yes---

No---

*If Yes...*

Describe the types of calculators (e.g., graphing, symbolic):

*If No...*

Comments:

c) Are students permitted to use calculators in national examinations?

*Check **one** circle only.*

Yes---

No---

*If Yes...*

Describe the policy and the types of calculator(s) allowed (e.g., graphing, symbolic):

d) Who pays for the calculators?

4. Does the national curriculum contain statements/policies about the use of computers by students in the physics track or course being assessed in TIMSS Advanced?

*Check one of the following:*



5. According to the curriculum, should the students in the physics track or course being assessed in TIMSS Advanced have been taught each of the following topics by the end of the year (in the current course or before)?

*If part of a topic does not apply (e.g., refraction in topic (c) below), please cross out that part and answer for the major part of the topic.*

*Check **one** circle for each line.*

**Yes**

**No**

**A. Mechanics**

- a) The conditions for equilibrium and the

	Yes	No
c) Charged particles in a magnetic field, relationship between magnetism and electricity; Faraday's and Lenz' laws of induction-----	<input type="radio"/>	<input type="radio"/>
d) Electromagnetic radiation; wavelength and frequency of various types of waves (e.g., radio, infrared, x-rays, light)-----	<input type="radio"/>	<input type="radio"/>
<b>C. Heat and Temperature</b>		
a) Difference between heat and temperature; heat transfer and specific heat capacities; evaporation and condensation-----	<input type="radio"/>	<input type="radio"/>
b) Expansion of solids and liquids in relation to temperature change; the law of ideal gas; the first law of thermodynamics-----		

6. In what form is the physics curriculum made available?

*Check **one** circle for each line.*

	Yes	No
a) Official publication containing the curriculum-----	<input type="radio"/>	<input checked="" type="radio"/>
b) Ministry notes and directives-----	<input type="radio"/>	<input checked="" type="radio"/>
c) Mandated or recommended textbooks-----	<input type="radio"/>	<input checked="" type="radio"/>
d) Instructional or pedagogical guide-----	<input type="radio"/>	<input checked="" type="radio"/>
e) Specifically developed or recommended instructional activities----	<input type="radio"/>	<input checked="" type="radio"/>
f) Prescribed syllabus for public examination-----	<input type="radio"/>	<input checked="" type="radio"/>
g) Other-----	<input type="radio"/>	<input checked="" type="radio"/>
Please specify: _____		

Comments:

7. a) Are textbooks that are used in the physics track or course being assessed in TIMSS Advanced certified by an education authority?

*Check **one** circle only.*

Yes---

No---

Comments:

- b) Who pays for the textbooks?

Please describe:

8. a) Does your country have a nationally mandated number of school days per year for the students in the physics track or course being assessed in TIMSS Advanced?

*Check **one** circle only.*

Yes---

No---

Please describe:

- b) What is the total amount of class time in physics prescribed by the curriculum  
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9. Is there an official policy on encouraging students to choose physics courses?

*Check **one** circle only.*

Yes---

No---

*If Yes...*

Please explain:

10. Describe the national requirements for being a teacher of the physics track or course being assessed in TIMSS Advanced.

Comments:

A large, empty rectangular box with a thin black border, intended for the respondent to provide comments on the national requirements for being a teacher of the physics track or course.

11. If changes were made to the physics curriculum, how would a teacher be informed about them?

Check **one** circle for each line.

	Yes	No
a) Special conferences/seminars on curriculum-----	<input type="radio"/>	<input type="radio"/>
b) Ministry (department of education, government, board of education) website-----	<input type="radio"/>	<input type="radio"/>
c) Printed copies of curriculum distributed to schools-----	<input type="radio"/>	<input type="radio"/>
d) Teachers receive own printed copy-----	<input type="radio"/>	<input type="radio"/>
e) Professional development/in-service education-----	<input type="radio"/>	<input type="radio"/>
f) Ministry notes-----	<input type="radio"/>	<input type="radio"/>
g) Professional association newsletter-----	<input type="radio"/>	<input type="radio"/>
h) Education journals-----	<input type="radio"/>	<input type="radio"/>
i) Other educational authorities-----	<input type="radio"/>	<input type="radio"/>
j) Other-----	<input type="radio"/>	<input type="radio"/>

Please specify:

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Comments:



12. How is the physics curriculum implementation evaluated?

*Check **one** circle for each line.*

	<b>Yes</b>	<b>No</b>
a) Visits by inspectors-----	<input checked="" type="radio"/>	<input type="radio"/>
b) Research programs-----	<input type="radio"/>	<input checked="" type="radio"/>

13. Does an education authority in your country (e.g., national ministry of education) administer examinations in physics that have consequences for individual students, such as determining grade promotion, entry to a higher school system, entry to a university, and/or exiting or graduating from upper secondary school?

Check **one** circle only.

Yes---

No---

*If Yes...*

Please describe the authority which administers examinations in physics, and list the grades at which they are given:

*If No...*

Comments:

**Thank You**  
**for completing**  
**this questionnaire**

