



Date: School name: Post code:

UPMAP 2008 School Physics Questionnaire

Dear Head of Physics/Science,

To further assist us in looking at possible relationships between school-related factors and post-16 participation in physics, please complete this questionnaire at a convenient time and return it with the student questionnaires.

Contact telephone number: and/or email address:	<input type="text"/>
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A. About you

1. Your name:

2. Your position:

3. How many years' teaching experience do you have?

4. For how many of these years have you taught physics?

5. To which year groups? **7** **8** **9** **10** **11** **12** **13**

6. What was your undergraduate degree subject?

7. Which teaching qualification(s) do you have?

8. Do you have any other postgraduate physics-based qualification(s)?
 No Yes Please specify:

9. Do you enjoy teaching physics?
 Almost always Usually Rarely Almost never

B. Opportunities for progression

1a. Has your school taken part in any enrichment activities with a view to increasing AS and/or A2 participation in physics? No please say why Yes please specify

1b.

2. How often would students in your school have the opportunity to participate in enrichment activities in physics of the following kinds?	Very frequently	Frequently	Occasionally	Rarely	Very Rarely	Almost
a. Physics clubs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Physics fairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Physics competitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Extra-curricular physics projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. External physics experts coming into the school, engaging with students about physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Students going out of school to external physics organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Research in physics education conducted by teachers in the school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Research in physics education led by external organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. Is your school's capacity to teach physics hindered by any of the following?

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
1. A shortage of qualified physics teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. A lack of science/physics technicians	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. A lack of other support personnel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Shortage or inadequacy of teaching equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Shortage or inadequacy of library materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Shortage or inadequacy of audio-visual resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Shortage or inadequacy of computers for teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Shortage or inadequacy of computer software for teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Lack or inadequacy of Internet connectivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Limited time for professional development for physics staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Lack of appropriate supply cover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Shortage or inadequacy of textbooks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Other:

D. In your opinion, what are the factors that contribute to the professional satisfaction of teachers of physics in your school?

E. Participation

1. What do you think are the **main** reasons for students choosing to study physics at AS and/or A2?

a.
b.
c.

2. What do you think are the main reasons for students choosing **not** to study physics after the age of 16?

a.
b.
c.

3. What do you think could be done to encourage students to take AS and/or A2 physics?

a.
b.
c.

4. Do you, as a leader of your department, encourage students to take AS and/or A2 physics? No Yes

If so, what do you actually do to encourage them? If not, please give reasons.

a.
b.
c.

5. What would you say are the main benefits of studying AS and/or A2 physics?

a.
b.
c.

6. Which of the following factors do you believe contribute to AS and/or A2 participation in physics?

a. A student's natural predispositions for physics

b. How highly valued among students it is to be good at physics

c. How good the student **is** at physics

d. How good the student **thinks** s/he is at physics

e. The way physics is taught

f. Whether the student's parents/carers promote physics

g. How relevant the student feels physics is to his/her life and career

h. The content of the school physics curriculum

i. The school's involvement in physics education research projects, e.g. through collaboration with universities

j. The student's psychological and personality traits

k. The student's involvement in extra-curricular activities in physics

l. The student's enthusiasm for and enjoyment of physics

m. The importance attached by the school to physics

n. The physics teachers' personalities

	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
a. A student's natural predispositions for physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. How highly valued among students it is to be good at physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. How good the student is at physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. How good the student thinks s/he is at physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. The way physics is taught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Whether the student's parents/carers promote physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. How relevant the student feels physics is to his/her life and career	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. The content of the school physics curriculum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. The school's involvement in physics education research projects, e.g. through collaboration with universities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. The student's psychological and personality traits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. The student's involvement in extra-curricular activities in physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. The student's enthusiasm for and enjoyment of physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. The importance attached by the school to physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. The physics teachers' personalities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F. About your school's science department

1. How many of the following are in your science department?

Science staff	Full-time (FT)	Part-time (PT)
Teachers (non-ASTs)	a.	b.
Teaching assistants	c.	d.
ASTs	e.	f.

2. What are the roles of any ASTs that may exist in your department?

<p>a.</p> <p>b.</p> <p>c.</p>

3. How many of the **FT** science teachers would describe themselves as physics specialists?
4. How many of the **PT** science teachers would describe themselves as physics specialists?
5. Outside of the science department, how many other teachers teach physics?

Total	How many teach at:		
	KS3	KS4	KS5

6. How many of your science staff who teach physics are registered members of the National Network of Science Learning Centres (NNSLC)?

7. How many of your science staff are members of subject associations, such as the Association for Science Education (ASE) or Institute of Physics (IoP)?

	<25%	25-49%	50-74%	75-100%
8. What proportion of KS3 physics classes are taught by specialist physics teachers?				
9. What proportion of KS4 physics classes are taught by specialist physics teachers?				
10. What is your headteacher's subject specialism?				
11. Which course(s) does your school use for GCSE physics (or science if you don't do GCSE physics)?				

12. What are the criteria by which you allocate your physics teachers to different sets and year groups (e.g. specialists, part-timers, experience)?

a.

b.

c.

13. In teaching KS3 physics, which of the following does your department work from?

Departmental schemes of work Textbooks National Strategy guidance

Other:

14. On average, how many times per month do you get together in your department **formally** to discuss issues regarding the teaching and learning of physics?

_____ per month

Please give recent examples of issues discussed:

- a.
- b.
- c.

a.

b.

c.

15. In your department meetings, do you discuss the following?

	Very frequently	Frequently	Occasionally	Rarely	Very Rarely	Almost
a. Movements of students between sets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Problems students have learning physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Revision sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Exam booster sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Extra-curricular activities for physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Liaising with outside organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Professional development for staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Teaching and learning physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Assessment and monitoring students' progress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Progression to AS and A2 physics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

l. Other (please list):

- i.
- ii.
- iii.

16. On average, how many times per month do members of the department meet **informally** to discuss issues regarding the teaching and learning of physics?

per month

17. How many teachers

- a. **left** the science department during the school year September **2007** - July **2008**?
- b. **joined** the science department during the school year September **2007** - July **2008**?
- c. **have so far joined** the science department during the school year September **2008** - July **2009**?

Number	FTE

18. What are the strategic priorities of your physics department?

a.
b.
c.
d. How do you seek to implement them?

19. To what extent do the mathematics and the physics departments in your school communicate and/or collaborate, whether formally or informally? e.g. cross-departmental teaching, choice of Awarding Bodies, talking together in the staff room about common curricular or pedagogical issues, approaches or policies, etc.

a.
b.
c.

19. What form of academic selection does your school operate?

No selection Some selection Full selection

20. What do you consider your school's progression rate to AS / A2 physics to be?

Above average Average Below average

21. If you offer physics post-16, what would your advice be if the following categories of students expressed an interest in studying AS and/or A2 physics?

GCSE physics/science grade		Advice / Policy		
Predicted	Actual	Recommended	Not recommended	Not allowed
C	C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A*/A	C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A*/A	B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Please comment on the above advice or policy.

a.	
b.	

23. If you offer physics post-16, please indicate the approximate number of students taking post-16 physics and physics-related courses

Subject	Year 12	Year 13
Physics AS/A2		
IB Physics		
BTEC Engineering Level 3		
Others (please specify)

24. In 2008, how many students did you enter for the following science-related GCSEs:

Science Core		Single subject Physics		Additional science		Add. applied science		Other Yr. 10	Other Yr. 11
Yr 10	Yr 11	Yr 10	Yr 11	Yr 10	Yr 11	Yr 10	Yr 11		

25. How does the science department divide students into physics classes?

	Mixed ability	Banding (how many bands?)	Setting (how many sets?)	Other (please specify)
Year 7	<input type="checkbox"/>	<input type="checkbox"/> - bands	<input type="checkbox"/> - sets	
Year 8	<input type="checkbox"/>	<input type="checkbox"/> - bands	<input type="checkbox"/> - sets	
Year 9	<input type="checkbox"/>	<input type="checkbox"/> - bands	<input type="checkbox"/> - sets	
Year 10	<input type="checkbox"/>	<input type="checkbox"/> - bands	<input type="checkbox"/> - sets	
Year 11	<input type="checkbox"/>	<input type="checkbox"/> - bands	<input type="checkbox"/> - sets	
Year 12	<input type="checkbox"/>	<input type="checkbox"/> - bands	<input type="checkbox"/> - sets	
Year 13	<input type="checkbox"/>	<input type="checkbox"/> - bands	<input type="checkbox"/> - sets	

26. If you split your year 8 physics or science students into sets, what criteria do you use?

27. If you split your year 10 physics or science students into sets, what criteria do you use?

28. If you split your year 12 physics students into sets, what criteria do you use?

29. If you split your year 13 physics students into sets, what criteria do you use?

30. Are any of the **Year 8** students on accelerated learning plans so as to take physics or science GCSEs early? No Yes

30a. If yes, which students are in these plans? If no, please give reasons for this.

31. Are any of the **Year 10** students on accelerated learning plans so as to take physics or science GCSEs early? No Yes

31a. If yes, which students are in these plans? If no, please give reasons for this.

G. Your department's links with outside establishments

1. Does your department have links with physics departments in other schools? No Yes
2. Does your department have links with any 16-19 institutions (e.g. FE or Sixth Form Colleges)? No Yes

2a. If yes, describe these links briefly:

3. Does your department have links with any higher education institutions? No Yes

3a. If yes, describe these links briefly:

4. How much is your department involved with external projects in physics education?
Very often **Sometimes** **Occasionally** **Almost never**

5. Has anybody in the department conducted their own studies on teaching physics?

No Yes please specify:

H. Physics-related careers

In your opinion to what extent do teachers in your school concentrate on developing in students the skills and knowledge that will help them progress towards physics-related careers?

- | | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree | Strongly Disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. These skills and knowledge are incidental to the teaching of physics | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. These skills and knowledge occur within the teaching of physics but are not emphasised | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. These skills and knowledge are important aspects of the teaching of physics in our school | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

I. Continuing Professional Development (CPD)

How satisfied are the teachers of physics in your school with:

	Completely satisfied	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	Completely dissatisfied
1. Their overall physics-specific CPD opportunities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Time to engage with CPD?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Funds to support specific CPD?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The overall quality of the physics-specific CPD available?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The availability of a variety of professional development opportunities for teachers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The overall focus of the physics CPD?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The time and opportunity teachers have to learn with colleagues within the physics department?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The time teachers have to engage in school-based research to improve the way they teach physics?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The time and opportunity teachers have to participate in networking with physics teachers in other schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

J. Further Comments

We would welcome any other comments that you feel may help with this study.

Thank You