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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:	

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** ☐

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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	☐	☐	☐	☐	☐	☐
b. Physics fairs	☐	☐	☐	☐	☐	☐
c. Physics competitions	☐	☐	☐	☐	☐	☐
d. Extra-curricular physics projects	☐	☐	☐	☐	☐	☐
e. External physics experts coming into the school, engaging with students about physics	☐	☐	☐	☐	☐	☐
f. Students going out of school to external physics organisations	☐	☐	☐	☐	☐	☐
g. Research in physics education conducted by teachers in the school	☐	☐	☐	☐	☐	☐
h. Research in physics education led by external organisations	☐	☐	☐	☐	☐	☐

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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	☐	☐	☐	☐	☐	☐
2. A lack of science/physics technicians	☐	☐	☐	☐	☐	☐
3. A lack of other support personnel	☐	☐	☐	☐	☐	☐
4. Shortage or inadequacy of teaching equipment	☐	☐	☐	☐	☐	☐
5. Shortage or inadequacy of library materials	☐	☐	☐	☐	☐	☐
6. Shortage or inadequacy of audio-visual resources	☐	☐	☐	☐	☐	☐
7. Shortage or inadequacy of computers for teaching	☐	☐	☐	☐	☐	☐
8. Shortage or inadequacy of computer software for teaching	☐	☐	☐	☐	☐	☐
9. Lack or inadequacy of Internet connectivity	☐	☐	☐	☐	☐	☐
10. Limited time for professional development for physics staff	☐	☐	☐	☐	☐	☐
11. Lack of appropriate supply cover	☐	☐	☐	☐	☐	☐
12. Shortage or inadequacy of textbooks	☐	☐	☐	☐	☐	☐

13. Other:

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

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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.

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6. Which of the following factors do you believe contribute to AS and/or A2 participation in physics?	*Strongly Agree*	*Agree*	*Slightly Agree*	*Slightly Disagree*	*Disagree*	*Strongly Disagree*
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	☐	☐	☐	☐	☐	☐

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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?

a.

b.

c.

		How many teach at:		
	Total	**KS3**	**KS4**	**KS5**
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?				

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)? ☐

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	<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.

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15. In your department meetings, do you discuss the following?	Very frequently	Frequently	Occasionally	Rarely	Very Rarely	Almost
a. Movements of students between sets	☐	☐	☐	☐	☐	☐
b. Resources	☐	☐	☐	☐	☐	☐
c. Problems students have learning physics	☐	☐	☐	☐	☐	☐
d. Revision sessions	☐	☐	☐	☐	☐	☐
e. Exam booster sessions	☐	☐	☐	☐	☐	☐
f. Extra-curricular activities for physics	☐	☐	☐	☐	☐	☐
g. Liaising with outside organisations	☐	☐	☐	☐	☐	☐
h. Professional development for staff	☐	☐	☐	☐	☐	☐
i. Teaching and learning physics	☐	☐	☐	☐	☐	☐
j. Assessment and monitoring students' progress	☐	☐	☐	☐	☐	☐
k. Progression to AS and A2 physics	☐	☐	☐	☐	☐	☐

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

	Number	FTE
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**?		

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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 ☐

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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	☐	☐	☐
C	B	☐	☐	☐
B	C	☐	☐	☐
B	B	☐	☐	☐
A*/A	C	☐	☐	☐
A*/A	B	☐	☐	☐

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	☐	☐ - bands	☐ - sets	
Year 8	☐	☐ - bands	☐ - sets	
Year 9	☐	☐ - bands	☐ - sets	
Year 10	☐	☐ - bands	☐ - sets	
Year 11	☐	☐ - bands	☐ - sets	
Year 12	☐	☐ - bands	☐ - sets	
Year 13	☐	☐ - bands	☐ - 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.

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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	☐	☐	☐	☐	☐	☐
2. These skills and knowledge occur within the teaching of physics but are not emphasised	☐	☐	☐	☐	☐	☐
3. These skills and knowledge are important aspects of the teaching of physics in our school	☐	☐	☐	☐	☐	☐

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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?	☐	☐	☐	☐	☐	☐
2. Time to engage with CPD?	☐	☐	☐	☐	☐	☐
3. Funds to support specific CPD?	☐	☐	☐	☐	☐	☐
4. The overall quality of the physics-specific CPD available?	☐	☐	☐	☐	☐	☐
5. The availability of a variety of professional development opportunities for teachers?	☐	☐	☐	☐	☐	☐
6. The overall focus of the physics CPD?	☐	☐	☐	☐	☐	☐
7. The time and opportunity teachers have to learn with colleagues within the physics department?	☐	☐	☐	☐	☐	☐
8. The time teachers have to engage in school-based research to improve the way they teach physics?	☐	☐	☐	☐	☐	☐
9. The time and opportunity teachers have to participate in networking with physics teachers in other schools?	☐	☐	☐	☐	☐	☐

J. Further Comments

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

Thank You

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