



## Response to Conservative Party's STEM Taskforce consultation on STEM and Society

1. Campaign for Science & Engineering is pleased to submit this response to the Taskforce consultation. CaSE is a voluntary organisation campaigning for the health of science and technology throughout UK society, and is supported by over 1,500 individual members, and some 70 institutional members, including universities, learned societies, venture capitalists, financiers, industrial companies and publishers. The views of the membership are represented by an elected Executive Committee.

### Schools

2. There are two big problems with the schools system at present, and together they amount to the root of the challenge tackled in this consultation. The first is the lack of well-qualified specialist teachers and the second is the shockingly poor state of careers advice given to young people about the options available to them if they choose to study science.

3. On the both of these subjects, CaSE has recently held *Opinion Forum* meetings, the results of which are published at:

<http://www.sciencecampaign.org.uk/documents/2007/CaSE0704.pdf>  
<http://www.sciencecampaign.org.uk/documents/2007/CaSE0710.pdf>

### Higher education

#### Foundation year

4. While a foundation year to enable non-STEM students to take up science is attractive in principle, the fact is that the demand for foundation degrees has been low. Probably a better route would be to encourage young people to keep more options open for longer in their educational careers. CaSE has some serious concerns about the new GCSE curriculum, which (whatever the intention) appears in practice to be forcing children to decide at the age of 14 or 15 either that science is not for them or that they want to end up as professional scientists. This approach will only serve to make the situation worse.

#### League tables

5. League tables are a crude but inevitable way of presenting information, although it is worth bearing in mind that there are no official Higher Education league tables. More effective might to build science results into the official secondary school league tables. If head teachers were measured on how many of their pupils obtained good grades in physics GCSE, they would use the existing flexibility in remuneration scales

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more effectively to pay more market-oriented rates to attract good physics graduates into teaching.

6. CaSE would certainly support measures to demonstrate the importance of STEM subjects to young people by weighting them more heavily in the UCAS points system for A-levels. Cambridge University has already published a list of subjects it considers suitable preparation for higher education study, and it requires that potential undergraduates have studied at least some of them at A-level or equivalent. This approach could be entrenched in the system by weighting the UCAS points for subjects according to the genuine value of qualification – the sciences and other 'hard' disciplines (such as languages, which also have a problem of declining interest among youngsters) would benefit.

#### One-year placements

7. It rarely turns out to be effective to make things compulsory, and forcing youngsters to do a placement would discourage some of them. But building real-world experience into degree courses is important and should be encouraged. Unfortunately, it seems to be generally assumed that there is little or no cost involved for the university involved, and this is yet one more activity that they have been expected to expand in recent years without the commensurate funding stream. Until, as a nation, we stop pretending we can have an ever expanding Higher Education system on the cheap, and decide what we really want and who is going to pay for it, this kind of area will never receive proper priority.

#### Media/communications

8. Again, CaSE doubts whether merely making something compulsory is the answer. But we have to recognise that the massive expansion of Higher Education has caused some things that used to be taken for granted to fall by the wayside. In the days when a few percent of the population studied at university, tutorial groups offered an opportunity for individuals to present their work to a small audience and obtain feedback, but this kind of activity is now relatively rare. But as with other activities, to replace it with adequate training in communications would cost money the sector simply does not have.

#### Alumni

9. Alumni are possibly the biggest underused resource of the universities, but this is changing, especially as many institutions realise that building endowments from their old students is one of the few ways of generating significant long-term income streams that do not come with Government strings attached. Anything that can be done to encourage this to develop further would be very welcome.

#### STEM in Society week

10. The problem with special weeks is that they tend to give the impression that a subject is interesting but not of general importance. They lead people to think that they can forget about the subject for the other 51 weeks of the year. While CaSE would certainly not actively oppose raising the profile of STEM in society in this way, we are not yet convinced that the resources involved might not be better used in other ways.

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