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Ref:

Response to Teacher Training Agency (TTA) consultation on proposals for Initial Teacher Training National Curricula

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The Royal Society welcomes the opportunity to respond to the consultation on the proposed initial teacher training national curricula for secondary mathematics and science. We have restricted our comments to a few major points of concern.

The Society commends the TTA's commitment to raising standards within initial teacher training. However, the Society considers the extreme level of detail and prescription of the documents to be unhelpful and has concerns that, if introduced, the curricula could not be delivered in practice by many teacher training institutions within a 36 week PGCE course. Rather than trying to impose such rigid prescription within a short initial teacher training course, the Society considers that many of the objectives of the proposals would be more successfully enabled *via* the induction and continuing professional development of teachers in the early years of their careers. The Society supports the Association for Science Education's view that any national curriculum for initial teacher training must not constrict student teachers' experiences and that it must be able to be interpreted to reflect students' backgrounds and prior expertise and the range of school experience which is available to the students.

With reference to the proposed science curriculum, the Society questions the feasibility of training students to teach all science subjects to Key Stage 3 and *two* subjects to Key Stage 4 within a nine month PGCE course. In addition to subject knowledge, ITT courses must provide training in how to teach at a given level and we consider it unlikely that this 'pedagogic content knowledge' and subject knowledge could be taught to students with almost no academic background in a second science subject to a standard high enough to allow them to teach that science to Key Stage 4. To require ITT courses to prepare students in this way would therefore encourage teacher training institutions to recruit only those students who have an A level or equivalent in a science subject outside the discipline of their degree. This would mean that many prospective teachers who under the current regulations would be accepted to initial teacher training courses would be rejected. With science teachers already in extremely short supply this could only serve to worsen the situation and with the increasing number of A level students taking mixed combinations of science and non-science subjects, the future supply of science teachers would be put under even greater pressure. Desirable though it may be for teachers to be equipped to teach two subjects to Key Stage 4, the Society considers that this should be properly addressed through the continuing professional development of teachers in the first few years of their careers rather than through a PGCE course. Such in-service training might be statutory but could perhaps also have associated with it a level of financial reward for the teacher upon its successful completion. The Society therefore strongly recommends that the requirement to

teach two science subjects to Key Stage 4 be removed from the initial teacher training national curriculum for secondary science.

The Society would welcome criteria within the ITT mathematics and science national curricula which encourage teachers to co-ordinate their teaching with that of each other and with that of other subjects such as design & technology.

The Society considers the proposed time-scale for implementation of the ITT national curricula to be wholly inappropriate. Many teacher training institutions have already recruited students for the September 1998 intake who will be unaware of the proposed regulations and indeed may have inappropriate subject matter backgrounds for the new curricula. We urge the introduction of any curricula to be delayed by at least twelve months, that is until September 1999, to allow further research to be carried out on the suitability of the proposals, including their potential effects on teacher supply. Such a delay would also permit teacher training institutions to prepare for the changes and substantially increase the chances of successful implementation of the curricula.

For questions regarding this response, please contact *nigel.thomas@royalsoc.ac.uk*