

Julia Kinniburgh  
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Dear Julia,

We were recently invited to respond to the consultation on implementing the English Baccalaureate (EBacc). Because the structure and questions within the consultation are aimed primarily at schools and teachers, we do not intend to respond to the consultation in full. However, there are two areas of concern for teaching and learning of the sciences that we need to highlight and which may have implications for the system as a whole.

### **1. Teacher Recruitment in Biology, Chemistry and Physics**

There is a severe shortage of specialist physics teachers, a shortage of chemistry teachers and an under-recruitment of biology teachers, a situation which is widely acknowledged. We expanded on the reasons for this together with recommended actions for the Government in our recent response to the Education Select Committee, attached. With an insufficient number of specialist teachers in post, many schools are unlikely to be able to offer all three sciences in the manner required for the EBacc, and consequently achieving high levels of participation in the EBacc is untenable at this point in time.

### **2. Restriction of Science Options**

As currently defined, success in the EBacc requires grade A\*-C in core and additional science GCSEs; or grade A\*-C in GCSE double science award; or that pupils should enter three single sciences and achieve grade A\*-C in at least two of them (the single sciences being defined as biology, chemistry, computer science and physics). We are concerned that the inclusion of a computer science option combined with the shortage of teachers in the sciences could lead to some pupils' being restricted to studying just two of biology, chemistry and physics. These pupils would not only be missing out on the balanced science experience defined in the National Curriculum, but also their options for future study and employment would be constrained in a way which would be damaging for the individual students and also for the country, considering the huge need for STEM skills within the UK workforce. For example, not studying chemistry could prevent progression to further study/employment in the biomedical sciences and not studying physics could prevent progression to further study/employment in engineering.

We hope that further consideration will be given to both the reality of implementation and the consequential validity of provision for further learning in the sciences when reviewing the implications of implementing the English Baccalaureate and planning future actions.

Yours sincerely,



Corinne Stevenson  
Chair Elect  
Association for Science Education



Philip Britton FInstP  
Vice President (Education)  
Institute of Physics



Professor Tom McLeish FRS  
Chair, Education Committee  
Royal Society



Dr Jeremy Pritchard  
Chair, Education Training and Policy Committee  
Royal Society of Biology



Professor Gareth Price FRSC  
President, Education Division  
Royal Society of Chemistry

Cc:

Stephen Stanton

Footnote

The Association for Science Education, Institute of Physics, Royal Society, Royal Society of Biology and Royal Society of Chemistry work in partnership to ensure that policy supports and promotes high-quality science education in schools. We use our combined expertise and united voice to advocate evidence-based and informed science education policy.