



The **Association**  
for **Science Education**

*Promoting Excellence in Science Teaching and Learning*

Sir Jim Rose  
Qualifications & Curriculum Authority  
83 Piccadilly  
London  
W1J 8QA

WH/KS

30 January 2009

Dear Sir Jim,

**A response to the Interim Report of the Independent Review of the Primary Curriculum from the Association for Science Education (ASE).**

The Association is part of the SCORE Partnership and is a signatory to the response sent to you by the Partnership. At the annual conference of the Association in early January the Interim Report was widely discussed both formally and informally, lending the Association's support in welcoming the intention of the Interim Report to 'develop a strong, coherent curriculum with reduced prescription and greater flexibility to provide all pupils with a broad and balanced entitlement to learning through personalised teaching and learning to meet pupils' individual needs and strengths.'

The Association would also like to emphasise the points made in the Appendix to the Paper 'Science Education in the Primary School Curriculum' which was sent to you as part of the SCORE Partnership's response, viz:

The 'importance statement' to accompany each area of the curriculum (2.31). This will provide the rationale and a statement of the overall purpose and aims... and will communicate not only to teachers, but to all concerned with children's education the reason for study in each area.

The determination to begin the curriculum revision from what is needed rather than by adding or subtracting from what is currently there (1.13).

The balance between subject-based and cross-curricular studies (Recommendation 4).

The reiteration of the three aims (1.33), which are well served by enquiry-based science education.

The importance of teaching that 'deepens and widens children's understanding by firing their imagination and interest in learning' (1.51). There is evidence from the evaluation of implementation of enquiry-based teaching that fits this description.

The need for teachers to 'be aware of the long-term goals, as well as the immediate experiences, opportunities and small steps which children will need to reach them' (2.4). This concurs with the importance of identifying 'big' ideas and skills which are the aims of science education across the whole school experience.



There are, however, points which the Association suggests should receive further consideration. The Association remains concerned that the omission of science enquiry skills from the list of skills does not signal the use of such skills in developing the area of scientific and technological understanding. Whilst paragraph 2.23 suggests that, although core status no longer applies, 'the essential skills and understanding that characterises these subjects will still be prioritised', the following paragraph (2.24) however, refers only to literacy and numeracy. The Association strongly urges that in your further careful consideration of the curriculum design, the position of science enquiry skills be reviewed underlining the key messages set out in the SCORE response in relation to goals, *viz*:

Science education has an important place in the primary curriculum because it provides pupils with understanding that they need to care for themselves and the environment and to make responsible decisions in an increasingly scientific and technological world. By the same reasoning it benefits society by contributing to a scientifically literate population.

There are sound research-based reasons for beginning science education in the primary school; children develop ideas at the primary stage which may conflict with scientific understanding unless they are involved in scientific activity and reasoning about evidence.

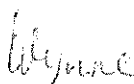
Knowledge of how children learn also indicates that development of inquiry skills and of understanding of key science concept are essential and inseparable goals of primary science.

Many of our members question the discrete teaching of ICT, preferring to see this as a tool to develop skills rather than a set of skills in its own right.

The Association is heartened to note that you and QCA are actively engaging the science education community in the process of developing the programmes of study. We look forward to working alongside you on further developments resulting from the public consultation next month so that the curriculum achieves the balance, progression and continuity to inspire confidence and ownership in the members of the profession who will implement it.

The Association offers this response in the spirit of supporting your challenging task and in commitment to help the production of a curriculum that provides a firm foundation for scientific literacy and lifelong learning.

Yours sincerely,



Professor Wynne Harlen  
President, The Association for Science Education