

DCSF: Promoting achievement, valuing success: a strategy for 14-19 qualifications**Response by the Wellcome Trust**

June 2008

1. The Wellcome Trust is the largest charity in the UK. It funds innovative biomedical research, in the UK and internationally, spending around £650 million each year to support the brightest scientists with the best ideas. The Wellcome Trust supports public debate about biomedical research and its impact on health and wellbeing.
2. The Wellcome Trust is committed to engaging the public with science and research. As part of this public engagement work, our education programme sets out to stimulate interest and excitement in science amongst young people, increase the quality of young people entering biomedical related careers and support scientific literacy more broadly. Specific activities include: support for continuing professional development, through the National Science Learning Centre, in partnership with DCSF; commissioned research to stimulate wider discussion about science education; and the development of resources to help promote contemporary science in the classroom.
3. The Trust predominantly funds research in the biomedical sciences. However, in order for the UK to maintain a healthy and competitive biomedical research base, it is imperative both that the strength of biology teaching is maintained and that the chemistry, physics and mathematics disciplines are equally strong. In addition to providing initial training for the next generation of scientists, science education is important to help all citizens to understand and make informed decisions about the impacts of scientific and technological developments on their lives.
4. This response includes general comments, and further points focusing on the role of science in the new qualifications framework. The Trust recognises the importance of providing clear progression paths for students into further study or employment, and therefore support the aims of the qualifications system proposed in the strategy.
5. Adequate piloting of any new Diplomas will be crucial, learning the lessons from the introduction of the first Diplomas, recent changes to GCSEs and building on the extensive GNVQ experience. This summer, the first cohort of students is being examined on the Twenty First Century Science GCSE suite. We recommend that evaluation outputs from the introduction of this syllabus should be fed into the development of the new Science Diploma. The Applied Science inputs may be of particular value, as this is where there is likely to be greatest GCSE crossover with the Diploma content.
6. The Extended Project concept proposed in the framework presents an excellent opportunity for students to gain experience in self-directed research and develop the analytical skills that underpin further study in many fields, including science. The Trust provided funding for development of the Perspectives on Science AS level, which is now providing a model for the Extended Project. The Trust welcomes the proposed expansion of Extended Project availability to all learners.
7. To ensure the successful implementation of the new qualifications framework, the provision of high quality Continuing Professional Development (CPD) for teachers will be crucial. High quality and inspiring teaching from well-trained teachers is vital to ensure effective student engagement. The Trust is pleased to note the recently announced £81M awarded by DCSF to

the Specialist Schools and Academies Trust (SSAT) for the purpose of additional CPD in Diploma-delivery.

8. Teacher training is particularly key in science education, where tailored CPD will be needed to equip teachers with the necessary skills to deal effectively with changes to the curricula, and to experiment with innovative techniques.
9. The national and regional Science Learning Centres offer the potential to deliver appropriately tailored CPD and increasing teacher access to these Centres is essential. The Wellcome Trust is a founding partner in Project Enthuse, a £30 million collaboration between the Trust, Government and industry, announced in Budget 2008, which aims to remove barriers to CPD. Project Enthuse provides bursaries for travel and lesson cover, allowing teachers to attend residential courses at the National Science Learning Centre. The Trust encourages DCSF to consider ways in which the highly-regarded Science Learning Centre network can support the work of the SSAT in delivering Diploma CPD .
10. Enthuse also increases interaction between employers and schools, as teachers will be able to nominate at least 50 high potential A-level science students for internships with participating businesses. The Trust is pleased to note that industry links are built into the proposals for a qualifications framework, as such collaborations enable training for key generic and analytical skills and help students to make more informed career choices.
11. The needs of employers and higher education institutions (HEIs) are a necessary consideration in the Diploma development process. The Diploma Development Partnerships (DDPs), which include representatives from these and other stakeholder groups, are well equipped to take these issues into account. We recommend that careers advice provision is specifically addressed in the light of the proposed framework, to enable students to decide what type of course is right for them, and what future opportunities the new qualifications could afford them.
12. The Trust suggests that the remit of the multi-agency DDPs could be valuably extended to include regular longer-term monitoring and content evaluation of the new Diplomas. This would preserve the stakeholder relationships formed during Diploma development, and extend the closer engagement of these groups with 14-19 education.