Consultation on Proposed Changes to the Key Stage 4 Curriculum

May – July 2003

QCA
Guarding standards

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1 EXECUTIVE SUMMARY

1.1 This consultation is about introducing greater flexibility and choice in the key stage 4 curriculum. These proposals would enable schools to offer programmes that better meet young people's individual needs and strengths, whilst ensuring they acquire the core of general learning and experience essential to later learning and employment.

1.2 The booklet covers proposals relating to:

- changes to the science programme of study at key stage 4 (section 3)
- greater development of ICT skills through other subjects and additional ways to accredit Information and Communication Technology (ICT) capability of pupils who do not follow a discrete ICT course (section 4)
- the nature and scope of a statutory requirement and framework for work-related learning (section 5)
- details of the statutory requirement and guidance on entitlement to arts, humanities, design and technology and modern foreign languages (section 6)
- a further set of disapplication regulations (section 7)
- support to schools (section 8).

1.3 This booklet also includes the text of the draft Order to amend Section 85 of the Education Act 2002 (section 9).

1.4 A questionnaire inviting your views is included with this booklet. This should be returned to:

Research Data Services
National Foundation for Educational Research
The Mere
Upton Park
Slough
SL1 2DQ

Questionnaires should be returned by Friday 18 July 2003.

2 BACKGROUND AND CONTEXT

2.1 The Government set out in *14-19: opportunity and excellence* its vision for a 14-19 phase that stretches all young people whatever their ability; uses curriculum flexibility to motivate students and encourage achievement; and encourages institutions to work together to deliver programmes suitable for each learner.

2.2 The document sets out specific proposals for greater curriculum flexibility and choice for young people between 14 and 16. The intention is to amend the curriculum at key stage 4 so that:

- all students will still have to learn English, mathematics and science. These will continue to be statutory requirements. In English and mathematics the breadth and depth of content will be no less than at present. The current substantial programmes of study for science will be reviewed to set a core content that is suitable for all learners. However, it is expected that the majority of students will spend the same proportion of their programmes on science as they do now
- Information and Communication Technology (ICT) will also remain compulsory. However it is expected that pupils will increasingly develop their ICT skills through other subjects and, in time, ICT may no longer need to be discretely specified as a statutorily required national curriculum subject. Many students will, of course, wish to pursue ICT in more depth and to gain appropriate qualifications
- all students will continue to be taught citizenship, religious education, sex education, physical education and careers education. There is, however, potential across these areas for greater co-ordination and cross-curriculum delivery than now
- all 14-16 year olds will learn about work and enterprise
- schools will no longer be required to teach modern foreign languages and design and technology to all students. All schools will be required to ensure as a minimum that they are available to any student wishing to study them; and
- there will be similar entitlements to study the arts and the humanities, neither of which is currently compulsory at key stage 4.

2.3 In January 2003 ministers invited QCA to advise on the detail of these changes. Ministers have now received that advice and have asked QCA to consult on these changes. The consultation will run until 18 July 2003. The proposals to make these changes to the curriculum at key stage 4 have been the subject of extensive consultation through the Green Paper *14-19: extending opportunities, raising standards*. Ministers' intentions to proceed with the changes were set out in *14-19: opportunity and excellence*. This consultation, on the detail of the expected changes, is slightly shorter than the standard period of 12 weeks in order that the consultation can be completed within the summer term. This is to ensure that schools will have adequate time to prepare for the implementation of these changes. QCA will report to Ministers on the result of the consultation in August.

2.4 The detailed proposals outlined in this booklet have been developed by QCA working with a wide range of stakeholders. They are designed to enable schools and colleges to use increased flexibility in the curriculum to meet individual needs. Wherever possible the proposals are set in a 14-19 context and have regard for the possible structural changes that may emerge from the Working Group on 14-19 Reform.

3 SCIENCE

Ministers have decided that science will remain a statutory subject for all students but with a revised and updated science programme of study that sets out a small core relevant to all learners and leads into a wide range of science qualifications, including a new single award science GCSE. This would then enable the removal of the provisions to disapply science for the purposes of extended work-related learning.

Summary of the proposal

3.1 It is proposed that the current programmes of study for science should be replaced with the programme of study (below) which:

- conforms to the common format for all programmes of study
- sets out the procedural skills and knowledge and understanding of how science works
- includes selected areas of science which provide a broad and balanced science experience
- updates the content and sets it out in general terms, so that it would then be amplified in the qualification criteria for a wide range of science qualifications.

Background

3.2 The proposed science programme of study builds on:

- QCA's three year curriculum development project *Science for the 21st Century*, which identified opportunities to make science up to date, relevant and engaging while preserving the rigour of current examinations
- the comments of practitioners and the science community, including the Association of Science Education, Royal Society of Chemistry, Institute of Biology, Institute of Physics, Earth Science Teachers' Association and the Royal Society
- the Government's response to the recent report of the House of Commons Committee on Science and Technology
- QCA's monitoring of the science curriculum.

The proposed programme of study

3.3 The proposed programme of study has been developed to:

- provide both an essential basis for progression to other science and science-related courses, and to contribute to students' personal development in a relevant and motivating way
- be suitable for learners of all abilities, including those currently disapplied from science
- focus on procedural skills and knowledge and understanding of how science works to promote competence in analysing, problem solving and thinking about scientific issues in ways that are motivating and up to date
- set out the content in more general terms than the current programmes of study, leaving amplification to the GCSE qualifications criteria, as is already the case with many other GCSE subjects. Amplifying the content in the relevant qualifications criteria would enable the core content to be taught and assessed in contexts relevant to each particular qualification and provide greater flexibility while retaining rigour. The example following the programme of study indicates how this could be done for three different types of science specifications.

3.4 The proposed programme of study provides a basis for a range of different qualifications. A new single award science GCSE would be developed based on it, providing a more appropriate option for students not committed to proceeding directly to further study in science. This new science qualification could be introduced in 2005 or 2006. An example of this type is being piloted from September 2003 as the core qualification for *Science for the 21st Century*. Other elements of this pilot provide alternative progression routes through the study of Additional Science GCSE.

3.5 In the longer term this programme of study will provide the basis for further distinctive qualifications in the sciences, potentially with a unitised structure, enabling students to re-engage with science post-16.

Such developments would build on the experience of piloting other elements of the pilot science GCSE and could provide a basis for considering a coherent science experience spanning 14-19.

3.6 In the shorter term, the flexibility offered by the proposed programme of study would allow current science specifications – the GCSE in Science: Double Award, the GCSE Double Award, Applied and GCSE in separate sciences to continue with some amendment. This would provide an important element of continuity given that current specifications in these qualifications will be examined for the first time in summer 2003.

3.7 It is expected that the majority of students will continue to study a substantial amount of science. The full range of current science options will continue to be available and the ministerial exhortation for the majority of students to study a substantial amount of science will remain as part of the national curriculum documentation.

3.8 The non-statutory introductory text to the current programmes of study would also be retained (possibly in a revised format). This describes effective science teaching and learning at key stage 4. The proposed programme of study would help promote science teaching that is effective, motivating and relevant. This could be further supported by an extension of the key stage 3 science framework to key stage 4 as part of the 11-19 teaching and learning framework.

Consultation

This consultation seeks your views on:

- whether the proposed programme of study provides a suitable basis for courses that are relevant and motivating to learners of all abilities and provides progression to other areas of science or science-related courses
- whether the skills, knowledge and understanding outlined in the proposed programme of study provide an effective core of science which will lead into a range of qualifications
- the idea of amplifying the content in subject criteria for qualifications as a way of retaining rigour and enabling the development of a range of distinctive specifications
- the development of a new single award GCSE in science based on the proposed programme of study
- whether the new programme of study and the new qualification should be introduced for first teaching as soon as possible, ie 2005.

Proposed programme of study for science

Key stage 4

During key stage 4, pupils learn about a wider range of scientific ideas and consider them in greater depth, laying the foundations for further study. They explore how technological advances relate to the scientific ideas underpinning them. They consider the power and limitations of science in addressing industrial, ethical and environmental issues, and how different groups have different views about the role of science. When they carry out investigations they use a range of approaches and select appropriate reference sources, working on their own and with others. They do more quantitative work and evaluate critically the evidence collected and conclusions drawn. They communicate their ideas clearly and precisely in a variety of ways. They see how scientists work together to develop new ideas, how new theories may, at first, give rise to controversy and how social and cultural contexts may affect the extent to which theories are accepted.

Skills, knowledge and understanding of how science works

Teachers should ensure that the **skills, knowledge and understanding of how science works** are **integrated** into the teaching of the **breadth of study of science** in organisms and health; chemical and material behaviour; energy, electricity and radiations; and environment, Earth and Universe.

1. Data, explanations and theories
   Students should be taught:
   a. about scientific data, how it is collected and analysed and how conclusions are drawn from it;
   b. how scientific theories and explanations are based on interpretation of evidence, creative thought and testing of ideas;
   c. that, while scientific ideas can explain many phenomena, there are uncertainties in scientific knowledge, and questions that science cannot answer.

2. Practical and enquiry skills
   Students should be taught:
   a. to seek and evaluate scientific information from a wide range of sources, including ICT based sources;
   b. how to collect first-hand and secondary data to answer a scientific question or solve a scientific problem;
   c. how to carry out practical procedures carefully and accurately, recognising hazards, assessing risks and taking action to reduce risk to others and themselves;
   d. how to evaluate methods and results.

3. Organisation and communication of ideas
   Students should be taught to:
   a. recall, apply, interpret, analyse and question scientific information;
   b. use quantitative approaches, where appropriate;
   c. use a wide range of scientific, technical and mathematical language, symbols and conventions to present and communicate ideas and develop an argument from evidence.

4. Applications and implications of science
   Students should be taught:
   a. about the use of up to date scientific and technological developments in society;
   b. to consider the benefits, drawbacks and risks of current scientific and technological developments, and how decisions are made, including those raising ethical issues and to evaluate the social, economic, and environmental impact of these.

Breadth of study of science

During the key stage, students should be taught the **skills, knowledge and understanding of how science works** (data, explanations and theories; practical and enquiry skills; organisation and communication of ideas; and applications and implications of science) **through** the four areas of the **breadth of study of science**.

1. Organisms and health
   a. Organisms are **interdependent and adapted** to their environment.
   b. There is **variation within species** which over time can produce changes to species.
   c. The way in which organisms function is related to the **genes** in their **cells**.
   d. **Human health** is affected by a range of environmental and inherited factors, and by **medical treatments**.

2. Chemical and material behaviour
   a. **Chemical change** takes place by **atoms** rearranging themselves.
   b. There are **patterns in the chemical reactions** between substances.
   c. **New materials are made** from natural resources by chemical reactions.
   d. The **properties of a material** determine how it might be **used**.

3. Energy, electricity and radiations
   a. Methods of obtaining and transmitting usable **energy** vary in **efficiency**.
   b. **Electricity** transfers energy for use in a range of ways.
   c. **Radiations, including ionising radiations** can transfer energy.
   d. Radiations can be used for **communication**.

4. Environment, Earth and Universe
   a. Human activity has impacts on the **environment**.
   b. The **Earth's** surface and the atmosphere have changed over time.
   c. **The Earth** is part of **the Universe** which is changing; it is likely it began with a 'big bang'.

Please note that the skills, knowledge and understanding of how science works will be integrated into the teaching of these four areas of the breadth of study of science.

Programme of study	Amplification in criteria
1. Organisms and health	
a. Organisms are **interdependent and adapted** to their environment.	To stay alive living organisms need a supply of energy and materials from their surroundings and from the other organisms there. There is often competition between different animals and plants for the same space or food source.
b. There is **variation within species** which over time can produce changes to species.	There is variety within species; some individuals with certain characteristics are more successful in producing and rearing offspring than others. Over many generations the combined effects of changes to genes, environmental changes and natural selection can produce changes within species, and new species.
c. The way in which organisms function is related to the **genes** in their **cells**.	The nucleus of a cell contains chromosomes that carry the genes and control the cell's activity. In sexual reproduction each parent contributes half the genes. In asexual reproduction, which produces clones, all the genes come from one parent. Genetic modification offers possibilities for treatment of disease and for producing organisms with particular characteristics.
d. **Human health** is affected by a range of environmental and inherited factors, and by **medical treatments**.	When new medical treatments are devised they have to be extensively trialled and tested before they can be used. The human body has defence mechanisms against the harmful effects of micro-organisms. Medical treatments against diseases caused by these include immunisation and antibiotics. Substance abuse can affect the healthy functioning of organ systems.
2. Chemical and material behaviour	
a. **Chemical change** takes place by **atoms** rearranging themselves.	All chemical elements are made up of atoms which consist of nuclei and electrons. Different elements have different properties that relate to the structure of their atoms. Atoms join in different ways to make compounds. No atoms are lost or made in chemical change.
b. There are **patterns in the chemical reactions** between substances.	Similar elements or similar compounds react in similar ways. Knowledge of chemical reactions is useful in predicting what will happen in other reactions and in deciding how to make a new material.
c. **New materials are made** from natural resources by chemical reactions.	All materials are obtained or made from substances in the Earth's crust, sea or atmosphere or from living things. Materials production can have environmental impacts.
d. The **properties of a material** determine how it might be **used**.	Materials differ in their properties and so are suitable for different purposes. New materials are developed to meet specific requirements, eg 'smart materials'.

3. Energy, electricity and radiations	
a. Methods of obtaining and transmitting usable **energy** vary in **efficiency**.	There are a range of energy resources both renewable and non-renewable which provide energy directly or by generating electricity. The efficiency of energy transfers has economic and environmental impacts.
b. **Electricity** transfers energy for use in a range of ways.	Electricity is widely used because it can readily transfer energy to devices which produce movement, heating, light and sound.
c. **Radiations, including ionising radiations** can transfer energy.	Electromagnetic radiation can transfer energy from a source to a receiver or detector through a vacuum. When radiation strikes an object, including living material, some energy may pass through it, some may be reflected and some absorbed. Radioactive materials emit bursts of ionising radiation all the time.
d. Radiations can be used for **communication**.	Radiowaves, microwaves, infra-red and visible light can carry information over large and small distances. Information can be processed to improve the effectiveness of a communication system.
4. Environment, Earth and Universe	
a. Human activity has impacts on the **environment**.	Human activity has an impact on the whole biosphere. The impact relates to population, industrial processes and levels of pollution and waste. It may have to be dealt with on a global scale and it is important that development should be sustainable.
b. The **Earth's** surface and the atmosphere have changed over time.	Changes in the outer layer of the Earth can be explained as resulting from the movement of a number of plates. The position of the continents has changed as the plates have drifted.
c. **The Earth** is part of **the Universe** which is changing; it is likely it began with a 'big bang'.	Exploration of the solar system and the galaxies in the Universe can be carried out on Earth and from space. The evidence suggests the Universe is expanding and that it began with a 'big bang'.

Examples of different approaches

Different courses can be constructed to engage students' varied interests and aptitudes whilst ensuring that all cover the proposed programme of study. The examples below show how the same topics in the programme of study could be covered with a different emphasis in each of three different courses.

A course to develop **scientific literacy for the 21st Century** enables students to engage with the world of science as a consumer or citizen and be prepared for future roles such as householder, parent or juror. It answers questions about ourselves and our place in a technological world.

A course to develop a **broad understanding of science**, such as **Science Double Award**, engages students in the world of the scientist and provides preparation for a more advanced study required for careers in engineering and medicine. It has an emphasis on explaining and theorising.

A course to develop **practical scientific capability**, such as **Science Double Award (Applied)**, engages students in the world in which science is applied to occupations such as health care, agriculture, manufacturing, communications and technical quality assurance. It has a practical emphasis, developing procedural and technical understanding.

1. Health topic

Programme of study statement – Breadth of study 1d: **Human health** is affected by a range of environmental and inherited factors, and by **medical treatments**.

Amplification in criteria – The human body has defence mechanisms against the harmful effects of micro-organisms. Medical treatments against diseases caused by these include immunisation and antibiotics.

Examples of different emphases in three courses:

- As part of **Science (21st Century)**, students in the context of vaccination and the dilemmas for parents, discover the limitations of science; find out that data are always open to interpretation; learn that epidemiology can indicate what is best for a population, but that individuals still have to deduce their own best course, taking into account emotional and ethical aspects.
- As part of **Science (Double Award)**, students learn about the main causes of disease including bacteria, viruses and fungi; find out about the ways that the body prevents and fights infection; understand the immune system and the way in which vaccination can help to stimulate immunity to disease.
- As part of **Science (Double Award Applied)**, students working from first-hand experience and secondary data, learn about procedures involved in collecting and interpreting data from patients; learn about the process of detailed diagnosis; learn about the monitoring of patients during treatment.

2. Materials topic

Programme of study statement – Breadth of study 2d: The **properties of a material** determine how it might be **used**.

Amplification in criteria – New materials are developed to meet specific requirements, eg 'smart materials.'

Examples of different emphases in three courses:

- As part of **Science (21st Century)**, students learn to collect and interpret data on the properties of materials which inform choices about the suitability of a product for a particular purpose, such as a transducer; learn about the use of the materials and carry out a cost benefit assessment of their impact.
- As part of **Science (Double Award)**, students investigate the properties of a material, eg piezoelectric materials used in transducers and relate their behaviour to their atomic composition; study how the properties may be modified by changing structure; learn how transducers are used in sensors.
- As part of **Science (Double Award Applied)**, students learn to carry out standard procedures for measuring the properties of selected materials, eg for use in sensors; test the suitability of a range of materials or devices such as transducers being considered for a particular application.

3. Electromagnetic radiation topic

Programme of study statements – Breadth of study 3c: **Radiations, including ionising radiations** can transfer energy & Breadth of study 3d: Radiations can be used for **communication**.

Amplification in criteria – Electromagnetic radiation can transfer energy from a source to a receiver or a detector through a vacuum. Radiowaves, microwaves, infra-red and visible light can carry information over large and small distances.

Examples of different emphases in three courses:

- As part of **Science (21st Century)**, students review the range of electromagnetic radiations and their effects on materials and living things; consider some of the beneficial and harmful effects of radiation; consider the meaning of risk and the use of the 'precautionary principle' as it applies to new technologies.
- As part of **Science (Double Award)**, students study the wave model of electromagnetic radiation and use it to explain the phenomena of transmission, absorption, reflection, and refraction, in a range of contexts, such as the transmission of radio signals.
- As part of **Science (Double Award Applied)**, students learn about the use of electromagnetic radiation in communication technologies; have practical experience of making and testing, selecting and installing, operating and maintaining communication systems.

4. Astronomy topic

Programme of study statement – Breadth of study 4c (part): **The Earth** is part of **the Universe** which is changing;…

Amplification in criteria – Exploration of the solar system and the galaxies in the Universe can be carried out on Earth and from space.

Examples of different emphases in three courses:

- As part of **Science (21st Century)**, students study the development of ideas about the Earth's place in the Universe, including the possibility of extra-terrestrial intelligence; study the relationship between observation and theory; consider the cultural impact of scientific ideas.
- As part of **Science (Double Award)**, students study the use of electromagnetic radiation in observational techniques, including light, infra-red and x-ray telescopes and relate these to theories of the nature of stars, planets and nebulae.
- As part of **Science (Double Award Applied)**, students make direct observations of part of the night sky, recording their results in a database, and compare these with published data; consider the requirements of a space probe designed to obtain particular information, eg whether there are signs of life on Mars.

4 ICT

Ministers wish to see greater development of ICT skills through other subjects and more students gaining qualifications which recognise their ICT capability.

Summary of proposal

4.1 To enable the majority of students to gain a qualification, QCA should carry out work to:

- identify new ways of recognising ICT capability for those who do not take specialist ICT qualifications
- incorporate more specialist 'employer focused' qualifications within the national framework.

Recognising ICT capability through qualifications

4.2 The number of students obtaining discrete ICT qualifications is increasing annually as they see the benefit to future employment and their own learning. However, the majority do not take an ICT qualification and their ICT capability, developed through the national curriculum from the age of 5, is not acknowledged. QCA will investigate additional ways to recognise the ICT capability of these students.

4.3 Existing work on performance measures and key skills will provide a starting point. For example, greater use could be made of the IT key skill qualification or of other ICT qualifications. QCA could also explore ways to accredit ICT capability demonstrated in other subjects. This would support current moves, including QCA guidance, to embed the development of ICT capability in other subjects.

4.4 For students wishing to follow a career in ICT, further work needs to be undertaken to ensure that more specialist 'employer-focused' ICT qualifications are embraced within the national framework.

4.5 Future structural reforms being considered for the 14-19 phase, including work on vocational qualifications and unitisation and credit, could provide the context for developments in this area as well as greater accreditation of ICT in other subjects.

Consultation

This consultation seeks your views on:

- the need to provide more explicit recognition of the ICT capability of all students
- ways of doing this, for example through the IT key skills qualification, other qualifications or recognising ICT skills embedded in other subjects
- the need to accredit more specialist 'employer-focused' qualifications.

5 WORK-RELATED LEARNING

Ministers have decided that there should be a statutory requirement that all young people should learn about work and enterprise at key stage 4 but that this should not require additional curriculum time.

Summary of the proposal

5.1 To ensure young people at key stage 4 experience and undertake some work-related learning there should be:

- a statutory requirement for all students to learn about work and enterprise
- a proposed framework setting out the minimum experience for all young people. Schools would take this framework into account in meeting the statutory requirement.

QCA, working with key players, will develop information and guidance to help schools provide work-related learning for all students in ways that do not require additional curriculum time.

5.2 Schools will be required to make provision for all students to learn about work and working practices, develop skills for enterprise and employability, and learn through direct experience of work. This requirement would be supported by the proposed framework set out below.

The proposed framework

5.3 The proposed framework for work-related learning is based on:

- analysis of a comprehensive body of academic research on work-related learning; relevant publications; and project reports
- analysis of practice in other parts of the UK and the wider world
- wide consultation with a range of stakeholders including teachers, employers, LEAs, LSCs, Ofsted, education-business link organisations and Connexions services
- the involvement of an external reference group of experts, including representatives from major stakeholders
- consideration of the merits of different approaches to specifying the requirement, including a statutory programme of study or a non-statutory framework.

5.4 Work-related learning is not a new concept and existing definitions of work-related learning and current practice have helped shape the approach set out below. This approach takes into account existing practice in the large number of schools in which work-related learning is already a feature of curriculum provision. It also recognises and incorporates current developments in enterprise education, careers education, citizenship education and the development of education-business links.

5.5 Work-related learning results from using the context of work to develop knowledge, skills and understanding useful in work. It comprises three strands:

- learning through experience of work
- learning about work and working practices
- learning the skills for work.

5.6 This widely accepted approach highlights that it is not the skills and knowledge which are unique to work-related learning, but the context in which they are developed. Direct experience of the world of work (through a variety of activities) should be at the heart of work-related learning provision.

Implications for schools

5.7 Work-related learning aims to benefit the general education and career planning of all students; it is not a response to disaffection and/or underachievement. Equally, work-related learning needs to be defined broadly so that it can be interpreted and acquired in different ways for different students. Using the proposed framework as a basis, schools would have the flexibility to provide opportunities for learning that

suit students' individual needs. The experiences of students would differ, and how they acquire work-related learning would depend on their individual learning pathways. The proposed framework would be more effective in emphasising this flexibility than a statutory programme of study.

5.8 The capacity of all schools to provide for sufficient learning experiences has been taken into account in designing the proposed framework, as have the opportunities provided through partnerships with other institutions. All subjects in the curriculum can use the world of work as a context for learning, including those taken by all students such as English, science, careers education and citizenship. In addition, most schools already set aside curriculum time for work placements, other experiences of work, enterprise activities and industry days. Supporting guidance, including case studies and exemplification material, will be in place by September 2003. This guidance will help schools recognise that there is ample opportunity in the curriculum to develop work-related skills and knowledge and should enable schools to implement the requirement in September 2004.

Implications for employers

5.9 The proposed framework takes into account employers' needs and their capacity to support work-related learning. Employers already make a significant investment in work experience and other work-related activities. The proposed framework would give these activities a sharper focus and improve the quality of work-related learning. It would not make extra demands on employers, but rather would help them get a better return from their existing investment. A stronger and more dynamic relationship between schools and local businesses would be fostered by the new requirement. In addition the proposed framework could encourage schools to collaborate with other schools and with colleges on work-related learning.

5.10 The framework has been designed primarily for use at key stage 4, but could form the basis of a 14-19 framework. It could also be adapted for an even wider age range to foster coherence between this framework and the new 11-19 careers framework.

Consultation

This consultation seeks your views on:

- whether the proposed framework sets out clearly an effective minimum experience for all students
- whether the framework and supporting guidance will enable schools and employers to implement the requirement effectively in September 2004.

A proposed non-statutory framework for work-related learning

The following statements set out what all schools should provide as a minimum to meet the statutory requirement for work-related learning.

Work-related learning comprises three strands: learning through work contexts, learning about work and working practices, and learning the skills for work. Schools should make provision for all students to:

- **learn through work,** by providing opportunities for students to learn from direct experiences of work (for example through work experience or part-time jobs, enterprise activities in schools, or learning through vocational contexts in subjects)
- **learn about work**, by providing opportunities for students to develop knowledge and understanding of work and enterprise (through, for example, vocational courses and careers education)
- **learn for work** by developing skills for enterprise and employability.

All students should be given opportunities to:

- recognise, practise and develop their skills for enterprise and employability
- use their experience of work, including work experience and part-time jobs, to extend their understanding of work
- learn about the way business functions, working roles and conditions, and rights and responsibilities in the workplace
- develop awareness of the extent and diversity of local and national employment opportunities
- relate their own abilities and attributes to career intentions and make informed choices based on an understanding of alternatives
- undertake tasks and activities set in work contexts
- have contact with personnel from different employment sectors
- have experience (direct or indirect) of working practices and environments
- engage with ideas, challenges and applications from the business world.

6 THE ENTITLEMENT AREAS

To enable schools to have greater flexibility in curriculum design to better meet the needs of individual students, ministers have decided that schools should no longer be required to teach modern foreign languages and design and technology to all pupils. To protect students' entitlement to high quality and appropriate teaching in these subjects, ministers have decided that all schools will be required to ensure as a minimum that they are available to any pupil wishing to study them; and that there will be a similar entitlement to study the arts and the humanities. Schools must make available a minimum of one course in each of the arts, design and technology, the humanities and modern foreign languages with the expectation that schools would offer at least two courses in each entitlement area.

Summary of the proposal

6.1 To implement this in ways that are fair to students and practicable for institutions, it is proposed that:

- the statutory requirement should be limited to requiring schools to provide access to a minimum of one course leading to a qualification in each of the following areas – the arts, design and technology, the humanities and modern foreign languages
- there should be accompanying guidance which sets out what is covered in each area and how schools might provide access to a range of courses in that area
- QCA should provide information on the range of qualifications in each area and examples of curriculum plans that provide the entitlement
- the guidance sets out the expectation that schools should offer at least two courses in each entitlement area.

Background

6.2 To achieve choice for students without unduly adding to the burdens on school management and workload, any proposal needs to:

- contribute to the strategy to provide greater flexibility to schools at key stage 4 so that they are better able to meet individual students' needs
- recognise the ability of individual schools to make any of the entitlement areas compulsory for their students if they wish to do so
- recognise that how schools provide the access to the entitlement areas will be a matter for local decision. The courses can be provided through, for example, collaboration with other institutions as well as directly by the school, so enabling a wider range of choice in each area
- enable a school's curriculum design to provide the opportunity for students to take a course in all four areas, should they wish to do so
- encourage schools towards provision that goes beyond the minimum requirement, ensuring continued learning and a broad and balanced curriculum.

The proposed statutory requirement

6.3 The statutory requirement should focus on the need for schools to provide access to a minimum of one course leading to a qualification in each of the entitlement areas – the arts, design and technology, the humanities and modern foreign languages. The focus is deliberately on the responsibility of the institution to meet individual needs rather than on the rights of the individual, since schools and their governors are responsible for determining the curriculum offer to meet students' needs. This may well involve making any of the entitlement areas part of their mandatory curriculum.

Supporting guidance

6.4 The proposed statutory requirement should be supported by guidance that would address the implications for schools by setting out details of each area, and indicating how schools might provide access to a range of courses in that area. The proposed requirement and the guidance are given below.

6.5 It is important that courses meet students' needs, provide for progression from key stage 3 and to further study, and provide opportunities to gain a qualification approved under Section 96. All stakeholders agree on the importance of the opportunity to gain a qualification, particularly in national curriculum subjects that students will have been studying from the age of five. There are, however, currently no statutory requirements that students are entered for a qualification in any of the existing national curriculum subjects. Ministers propose, however, to include this in the requirement to emphasise its significance and substance.

6.6 The guidance encourages schools to go beyond the minimum and, as now, offer a range of courses as part of curriculum choice at key stage 4. This is particularly important in the arts, design and technology and the humanities where different courses offer significantly different experiences.

Further guidance

6.7 The key stage 4 programme of study for design and technology will be retained as a non-statutory framework. In modern foreign languages, where the current combined key stages 3 and 4 programme of study will become the key stage 3 programme of study, QCA will develop a non-statutory framework to support progression from key stage 3.

6.8 Other support materials available in September 2003, will include:

- exemplification of how current school curriculum plans meet the new requirement to raise awareness of ways in which learning in each area can be provided
- lists of the range of qualifications in each area.

Schools will then have a year to review their curriculum structures before these requirements are implemented in 2004.

Consultation

This consultation seeks your views on:

- whether the proposed statutory requirement and guidance make it clear what schools have to do and how they can do it
- whether the requirement should include the need for courses to lead to a qualification
- whether schools can offer the subjects within each entitlement area
- the proposal to replace the current combined key stages 3 and 4 programme of study in modern foreign languages with a statutory programme of study for key stage 3 only
- proposals for further support materials
- whether schools will be able to offer access to all four areas, possibly in partnership with others, by September 2004.

Proposed statutory requirement

Schools must make available a minimum of one course leading to a qualification in each of the following areas – the arts, design and technology, the humanities and modern foreign languages – and have regard for the non-statutory guidance from QCA set out below .

Proposed guidance to support the statutory requirement

What does statutory entitlement mean for schools?

For each of the statutory entitlement areas, a school should provide access to a minimum of one course that:

- is appropriate to each student's learning potential and needs
- allows for progression from key stage 3 and to further study
- provides the opportunity to gain a qualification approved in Section 96
- takes into consideration the information on each entitlement area.

A school's curriculum design should provide the opportunity for students to take a course in all four areas, should they wish to do so.

A course is a planned learning programme with learning objectives. It does not imply a fixed size or duration. Different courses will offer very different learning experiences.

The range of courses offered in each entitlement area is for the school to determine. The majority of schools currently make a range of possibilities available, including at least two courses in each of the entitlement areas – the arts, design and technology, the humanities and modern foreign languages. All schools should aspire to offering as wide a choice as possible (see information on each area).

The requirement is for schools to provide access to a course within each entitlement area. How schools provide the entitlement to access these subjects will be a matter for local decision, and it could be met, for example, in collaboration with other institutions.

Schools are responsible for determining the nature of the curriculum offer. Even though modern foreign languages and design and technology are no longer statutory, schools can still decide, as now, to make courses from any of the entitlement areas part of their mandatory curriculum.

What does the information on each entitlement area cover?

For each entitlement area, the information given below:

- sets out the distinctive nature of the entitlement area, how it contributes to learning and, where appropriate, indicates the existing curriculum subjects it includes (what is it?)
- provides advice about the range of ways in which the continued learning in each entitlement area could be provided (what should the school offer?)

The Arts Entitlement Area

What is it ?

The arts entitlement area:

- involves students in making, sharing and responding to works of art as a dynamic part of culture past and present
- covers the existing curriculum arts disciplines of art and design, music, dance, drama and media arts. (It does not include literature, as opportunities already exist for this area within English).

More specifically, the arts entitlement area:

- develops cultural understanding and stimulates and enables life-long learning
- develops the skills and knowledge needed to access an expanding range of arts-related careers (arts-related industries grew by an average of 9.8% between 1997 and 2000 compared to an average of 2.8% for the whole of the economy. Arts-related industries accounted for 7.9% of GDP in 2000. Exports contribute £8.7 billion to the balance of trade in 2000 – these exports grew at around 13% per year over the period 1997-2000)
- develops skills needed for work and life eg working collaboratively and sensitively with others, mood regulation, self-discipline, critical analysis, creativity, communication and the ability to challenge assumptions and form their own opinions.

What should the school offer?

Each course offered within the arts entitlement area should provide sufficient depth and breadth of experiences for all students to:

- engage with a variety of artforms from different times and cultures, extend their own interests and explore their own thoughts and feelings
- develop artistic skills, knowledge and understanding
- participate in shared arts experiences
- understand the arts in context
- be prepared for life as a discriminating arts consumer/contributor.

Schools can make this possible by providing access to courses that:

- focus on separate disciplines within at least two of the areas of media arts, performing arts and visual arts
- focus on the development of critical appreciation and understanding across a range of arts disciplines.

All courses should provide opportunities, within and beyond school, for first-hand experiences of the arts disciplines studied eg involvement with galleries, cinema, concerts, theatre, dance performances, working with arts practitioners.

The experience of individual students choosing the arts will differ according to the courses chosen. Some students will study more than one arts discipline; others will study combinations of arts courses of different sizes; some may focus on one arts discipline or one broad arts course during key stage 4.

The Design and Technology Entitlement Area

What is it?

The design and technology entitlement area:

- involves students in:
  - developing and applying knowledge and understanding of materials, components, systems and control and how they can be combined and processed for design, industrial and manufacturing purposes
  - developing, planning and communicating ideas that take into account technical, social, aesthetic and environmental concerns and respond to needs, function and industrial practices
  - working with tools, equipment and computers (CAD and CAM) to produce quality products through product analysis, focused practical tasks and design and make activities, including activities related to industrial practices
  - evaluating processes and products in a discriminating and informed way
- covers the knowledge, skills and understanding and the breadth of study set out in the non-statutory guidelines for design and technology.

More specifically, the design and technology entitlement area:

- extends students' knowledge and skills in all aspects of designing and making processes and in a range of contexts and materials
- prepares students to participate in rapidly changing technologies including computer aided design, computer aided manufacture, new and smart materials and ICT based sources for research in projects that are linked to their own interests, enterprise activity, industrial practice and the community
- encourages students to analyse needs, wants and opportunities and intervene creatively to improve the quality of life, to become autonomous problem solvers individually and as members of teams
- provides opportunities for innovation during designing and making processes
- encourages reflection and evaluation of present and past design and technology, its uses, advantages, disadvantages and effects on society and students' own lives
- encourages students to develop the skills and knowledge needed to address a wide range of fundamental employment needs in manufacturing, the service sector and public health.

What should the school offer?

Courses offered within the design and technology curriculum area should give access to:

- a foundation for general, technical and vocational learning from 14 to 19
- opportunities for designing and making products and systems and combining practical skills with an understanding of aesthetics, social and environmental issues, function and industrial practices from a range of designing and making contexts, building on experiences at key stages 1, 2 and 3.

Schools can make this possible by providing access to courses in at least two of the following areas:

- product design (including textiles technology, resistant materials, graphic products) or manufacturing
- food technology or hospitality and catering
- systems and control, electronic products, electronics and communication technology or engineering.

Schools' provision in this area will be supported by the DTI/DfES agenda on electronics and communication technology, DfES plans for CAD/CAM in schools, and the DoH/DfES Food in Schools project.

The experience of individual students choosing design and technology will differ according to the courses chosen.

The Humanities Entitlement Area

What is it?

The humanities entitlement area:

- involves students in exploring the spatial, political, social, economic, environmental, and temporal dimensions of human existence and in addressing issues of concern to humanity in the past, present and future
- covers the existing curriculum subjects of history and geography. (English, RE and citizenship have separate statutory requirements and so are not included here).

More specifically, the humanities entitlement area:

- develops students' knowledge and understanding of the places and environments in which they live, of the diversity of human experience and societies, and of the causes and consequences of peoples' actions in the past, present and future
- builds on students' own experiences and interests, helping them to understand the world around them and confirm their own identity and potential contribution to society
- extends young people's horizons in time and space, helping them to make connections, to explore spiritual and moral dimensions of life, and appreciate and respect other periods and cultures
- helps young people to develop their own values and attitudes, to recognise their rights and responsibilities and to gain a sense of personal autonomy as preparation for adult life
- develops skills that are useful in a wide range of careers and in adult life generally, especially those skills involved in critical enquiry, creative problem-solving, and communication through a variety of media.

What should the school offer?

The total provision within this entitlement area should provide sufficient depth and breadth to allow:

- study of a diverse range of places, communities and environments in which people live and on which they depend in different parts of the world
- study of a wide range of past societies, events and individuals responsible for shaping the world in which we live
- opportunities to develop a range of skills (as above) in many different contexts, inside and outside the classroom and involving working independently and collaboratively with others
- the chance to review and reflect on the moral dilemmas implicit in current issues.

Schools can make this possible by providing access to courses that:

- focus on the separate subjects of geography and history
- focus on issues and themes that result in combining aspects of geography and history (eg in humanities)
- focus on issues and themes that result in combining substantial aspects of geography and/or history with other disciplines and curriculum areas (eg literature, the arts, science, modern foreign languages, ICT)
- focus on issues and themes that combine aspects of geography and/or history with relevant vocational areas (eg heritage industry, galleries work, urban/rural planning, leisure/tourism, journalism).

All courses should provide opportunities within and beyond school for first-hand experiences of places, environments, events and activities which expand understanding of the past, present and future (eg the local area, sites of environmental or historical interest, public meetings, museums, theatre performances).

Students will have different experiences of the humanities according to the courses chosen. Some will study both geography and history to GCSE level; some will study combinations of history, geography and other subjects; others will study humanities courses of different sizes; some may only study one separate humanities subject during key stage 4.

The Modern Foreign Languages Entitlement Area

What is it?

The modern foreign languages entitlement area

- involves students in:
  - speaking and writing in a modern foreign language
  - understanding and responding to speech and written materials in that language
  - learning about the culture of countries or communities where the language is spoken
- covers the knowledge, skills and understanding and the breadth of study set out in the non-statutory guidelines for modern foreign languages in key stage 4.

More specifically the modern foreign languages entitlement area:

- enables students to communicate with speakers of other languages
- extends students' knowledge of the structures of the foreign language(s) being studied and of the way language can be manipulated and applied in different ways for different purposes and contexts
- develops understanding and appreciation of different countries, cultures, people and communities, making students aware that they are citizens of the world as well as of the United Kingdom
- lays the foundations for the study of other languages later in life, to be used for pleasure or for work
- broadens the range and variety of accessible careers, improving employability and facilitating personal mobility.

What should the school offer?

Courses offered within the modern foreign languages entitlement area should

- enable students to:
  - acquire knowledge and understanding of the language(s) studied
  - develop language skills
  - develop language-learning skills
  - develop cultural awareness
- provide for progression through further study of a language learned in key stage 3 and/or by extending the range of languages studied.

Schools can make this possible by providing access to courses that include the study of one or more of the official working languages of the European Union. Schools may also provide access to courses in additional languages, whether or not these languages are offered in key stage 3.

The experience of individual students will differ according to the courses chosen. Some students will continue to study one or more of the languages learned in key stage 3; others will study a language learned in key stage 3 together with a language they have not learned before; some might only study a language they have not learned before. The content and focus of courses will vary according to the qualification(s) that students are preparing for.

7 DISAPPLICATION AT KEY STAGE 4 CHANGES TO REGULATIONS FOR SEPTEMBER 2004

Ministers have decided that the arrangements that enable schools to disapply some aspects of the national curriculum should be brought in line with the proposed changes to the curriculum at key stage 4.

7.1 The Green Paper *14-19: extending opportunities, raising standards* proposed that, with the new curriculum changes, there would no longer be a need for disapplication at key stage 4, under Section 91 of the Education Act 2002, and it would disappear. Since its publication changes have been made to the disapplication regulations to simplify the administrative arrangements and to bring the arrangements in line with the proposed curriculum changes.

7.2 The latest changes mean that from September 2003, schools will be allowed to disapply certain national curriculum subjects at key stage 4 for two purposes:

(i) to undertake extended work-related learning

(ii) for any reason providing it educationally benefits the pupil.

Two of science, modern foreign languages and design and technology can be disapplied in the case of (i) and design and technology and/or modern foreign languages in the case of (ii). These regulations will continue to apply for those pupils entering Year 11 in September 2004.

Proposal

7.3 The curriculum changes planned for September 2004, more specifically the introduction of the modern foreign languages and design and technology entitlement areas, will mean that there will no longer be a need for the disapplication arrangements relating to these subjects. However, because a new reduced programme of study for science is unlikely to be introduced before September 2005, it is proposed meanwhile to retain those parts of the regulations that allow schools to disapply science for the purpose of extended work-related learning and to modify the science programme of study.

Consultation

This consultation seeks your views on:

- whether there should be scope to disapply science for the purpose of extended work-related learning for pupils starting Year 10 in September 2004
- whether there should be scope to modify the key stage 4 science programme of study for pupils starting Year 10 in September 2004.

8 SUPPORT AND GUIDANCE MATERIALS

QCA intend to produce guidance materials to help implement the proposed changes.

Proposal

8.1 To help schools implement the changes, QCA will produce:

- materials for September 2003 informing schools, colleges and other stakeholders about what has changed and the new arrangements
- guidance to support the new work-related learning framework
- guidance on the entitlement requirement
- guidance on effective coordination of those curriculum areas contributing to students' personal development
- guidance on pace and progression
- guidance to assist teachers to emphasise physical fitness, health and well being when teaching PE
- a brief guide to the key changes that come into effect in September 2004.

8.2 QCA has developed a dedicated 14-19 website, www.qca.org.uk/14-19, which will provide an effective means of providing this guidance to a wide range of stakeholders.

Consultation

This consultation seeks your views on:

- other areas where support and guidance would be helpful.

9 DRAFT STATUTORY INSTRUMENTS

9.1 These set out the statutory regulations to the legislation to implement the proposed changes.

Consultation

This consultation seeks your views on:

- whether the draft Orders deliver the policy set out in sections 5 and 6 of this booklet
- whether the draft Orders have policy consequences not outlined in this consultation document
- whether the subjects listed within each entitlement area should be specified in a statutory Order, or in non-statutory guidance.

Draft Order laid before Parliament under section 210(3) of the Education Act 2002, for approval by resolution of each House of Parliament.

DRAFT STATUTORY INSTRUMENTS

2003 No. [ ]

EDUCATION, ENGLAND

The Education (Amendment of the Curriculum Requirements or the Fourth Key Stage) Order 2003

Made ..... *[ ]*

Coming into force ..... *[ ]*

Whereas a draft of this Order has been laid and approved by resolution of each House of Parliament;

Now, therefore, the Secretary of State for Education and Skills, in exercise of the powers conferred on the Secretary of State by sections 86 and 210(7) of the Education Act 2002[a], hereby makes the following Order:

Citation, commencement and extent

1. (1) This Order may be cited as the Education (Amendment of the Curriculum Requirements for the Fourth Key Stage) Order 2003.

(2) This Order shall come into force on [proposed date – September 2004].

2. For section 85 of the Education Act 2002 (Curriculum requirements for the fourth key stage) there is substituted–

"85 Curriculum requirements for the fourth key stage

(1) For the fourth key stage, the National Curriculum for England shall comprise the core and other foundation subjects and shall specify programmes of study in relation to each of them.

(2) The following are the core subjects for the fourth key stage–
(a) mathematics,
(b) English, and
(c) science.

(3) The following are the other foundation subjects for the fourth key stage–
(a) information and communication technology,
(b) physical education, and
(c) citizenship.

(a) 2002 c.32.

(4) For the fourth key stage, the National Curriculum for England shall also include–
  (a) work-related learning, and
  (b) any entitlement subject (as defined by subsection (5)) falling within any of the following subject areas ("entitlement areas")–
    (i) arts,
    (ii) design and technology,
    (iii) humanities, and
    (iv) modern foreign languages.

(5) In this section "entitlement subject" means a subject specified, in relation to an entitlement area, in an order made by the Secretary of State for the purposes of this section.

(6) An order under subsection (5) may–
  (a) specify circumstances in which a subject is not to be an entitlement subject, and
  (b) provide for the determination under the order of any question arising as to whether a particular subject is an entitlement subject.

(7) A pupil in the fourth key stage shall, if he so elects, be entitled to follow a course of study in an entitlement subject within each entitlement area; but this entitlement is satisfied where one entitlement subject within each entitlement area is made available to him by or on behalf of the school at which he is a registered pupil.

(8) In the exercise of their functions under this Part by virtue of this section, a local education authority, governing body or head teacher shall have regard to any guidance relating to work-related learning or the entitlement subjects which is issued from time to time by the Qualifications and Curriculum Authority.

(9) In this section–

"course of study" means a course of education or training which leads to a qualification approved under section 98 of the Learning and Skills Act 2000 for the purposes of section 96 of that Act;

"work related learning" means planned activity designed to use the context of work to develop knowledge, skills and understanding useful in work, including learning through the experience of work, learning about work and working practices and learning the skills for work.

Transitional Provisions

3. This Order shall not affect the National Curriculum requirements for the fourth key stage as they apply to a pupil who immediately before [the coming into force of this Order] was in the fourth key stage and section 85 of the Education Act 2002 shall continue to apply in relation to that pupil as if this Order had not been made.

Minister of State
Date Department for Education and Skills

EXPLANATORY NOTE
(This note is not part of the Order)

This Order amends section 85 of the Education Act 2002 by substituting new provisions in respect of the requirements for the fourth key stage of the National Curriculum for England. This Order relates only to England.

The effect of the Order is to make the following changes to the National Curriculum requirements for the fourth key stage. The Order–

(a) removes "design and technology" and "modern foreign language" from the compulsory foundation subjects;

(b) introduces a requirement for work related learning within the curriculum;

(c) introduces a new category of entitlement areas, being arts, design and technology, humanities and modern foreign language;

(d) enables the Secretary of State by order to specify those subjects which constitute each of the entitlement subjects within each entitlement area;

(e) gives a pupil in the fourth key stage an entitlement to follow one course of study in a subject within each of the entitlement areas;

(f) requires the local education authority, the governing body and the head teacher to have regard to guidance issued by the Qualifications and Curriculum Authority relating to the provision of entitlement subjects and work related learning;

(g) removes the requirement to specify attainment targets and assessment arrangements in relation to each of the core and other foundation subjects.

The Order makes transitional provisions in respect of pupils who at the date of the coming into effect of the Order are already in the fourth key stage.

2003 No. [ ]

EDUCATION, ENGLAND

The Education (National Curriculum) (Entitlement Subjects at Key Stage 4) Order

Made ..... *[ ]*

Laid before Parliament .... *[ ]*

Coming into force ..... *[ ]*

The Secretary of State for Education and Skills, in exercise of the powers conferred on the Secretary of State by section 85(5) and 85(6) of the Education Act 2002([a]) hereby makes the following Order:

Citation and commencement

1. This Order may be cited as the Education (National Curriculum) (Entitlement Subjects at Key Stage 4) Order and shall come into force on [date].

Entitlement subjects in the fourth key stage

2. The entitlement subjects in each of the entitlement areas for the fourth key stage shall be as specified in articles 3 to 6 of this Order.

3. In respect of arts, the entitlement subjects are "art and design", "music", "dance", "drama" and "media arts".

4. In respect of design and technology, the entitlement subjects are "product design", "manufacturing", "food technology", "hospitality and catering", "systems and control", "electronic products", "electronic and communications technology" and "engineering".

5. In respect of humanities, the entitlement subjects are "geography", "history" and "the humanities".

6. Subject to article 7 in respect of modern foreign languages, the entitlement subjects are any of the official languages of the European Community, being such languages as are specified as official languages of the Institutions of the European Community by Article 1 of EEC Council Regulation No. 1 of the 15th April 1958([b]).

7. In respect of modern foreign languages, an official language of the European Community shall not be an entitlement subject unless a qualification is specified for that language under section 98 of the Learning and Skills Act 2000([c]) for the purposes of section 96 of that Act.

Minister of State
Date Department for Education and Skills

EXPLANATORY NOTE
(This note is not part of the Order)

This Order made under section 85 of the Education Act 2002 specifies the entitlement subjects that may be studied at key stage 4 in relation to each of the entitlement areas. The entitlement areas are the arts, design and technology, the humanities and modern foreign languages.

([a]) 2002 c.32; section 85 was substituted by [S.I.2003/xxxx].
([b]) O.J. 1959 34/650.
([c]) 2000 c.21.