

a curriculum for excellence

progress and proposals

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a curriculum for excellence

progress and proposals

a paper from the Curriculum Review Programme Board

Who Is This For?

All Educators

What Is This For?

Professional Reflection

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foreword

I am pleased to present this report to Ministers on the work which has been undertaken on developing *A Curriculum for Excellence* since its launch in November 2004. What lies behind this document is 15 months of consultations and stimulating discussions with thousands of educational staff around the country.

The values and principles of *A Curriculum for Excellence* have resonated with almost everyone with whom we have spoken. There is a genuine feeling of excitement about our goal of enabling all young people to become successful learners, responsible citizens, effective contributors and confident individuals. This document explains more of how that enthusiasm can be reflected in a new approach to the curriculum.

The work on *A Curriculum for Excellence* signals a need to revisit traditional assumptions about the curriculum in Scotland. The challenge for all staff in establishments engaged in learning will be to extend their model of the curriculum to embrace all experiences which promote effective learning. This will involve teachers in working with other services which contribute to the learner's confidence, participation and success. Schools recognise that they cannot meet the needs of all learners on their own. Some schools will need sustained support from other services for children to achieve the goals set out in *A Curriculum for Excellence*.

A Curriculum for Excellence therefore embraces a wider definition of how and what children and young people should learn and experience in their journey through their education, and the need to recognise a broader range of achievements. A fundamental principle is the need for all those involved in education to encourage a wide range of achievements for their pupils, as well as enabling high levels of attainment.

Effective learning and teaching are at the heart of *A Curriculum for Excellence*. With this in mind we are determined to build on the experience of establishments where practice is increasingly delivering the benefits of *A Curriculum for Excellence* and seeking ways of enabling all schools and centres to use the professional skills and commitment of their staff to the full.



We shall be extending our engagement with professionals as we prepare our advice to Ministers on the shape of learning both in and – vitally – across curriculum areas. We will also focus on the implications of the developing curriculum for the ways we assess and certificate young people's achievements.

We expect that the ideas in this document will stimulate discussion between colleagues across the country. We need debate and discussion to take place amongst all those with an interest in education, and hope that we have provided food for thought in what follows.



Maggi Allan OBE
Chair of the Curriculum Review Programme Board
March 2006

introduction

A Curriculum for Excellence was published in November 2004 following the National Debate on education in Scotland. It set out, for the first time, values, purposes and principles for the curriculum 3 to 18 for all children and young people.

The Ministerial response to *A Curriculum for Excellence* initiated a programme of work to put these values, purposes and principles into practice. The Programme Board was established to advise Ministers and to steer this programme.

This publication marks the next milestone in putting *A Curriculum for Excellence* into practice and should be relevant to teachers and educators of children and young people from age 3 to 18. For reasons of brevity we mainly use the word ‘schools’ in this document to cover the different stages and establishments, from early years settings through to colleges and universities working in partnership with schools, and equally we have used the word ‘teachers’ for all educators.

This document is founded on the messages from the extensive process of engagement with colleagues in schools and education authorities and groups representing key stakeholders in Scottish education. Where there is a clear body of evidence or principles which justify them, we make proposals. We also identify areas for further consideration where wider engagement is needed to inform the thinking.

The purposes of this publication are therefore:

- to describe progress and the main findings of the activities so far
- to provide a narrative on the direction of travel, outlining recommended features of the curriculum in the future
- to outline aspects where more thinking is required
- to stimulate the next stage of professional discussion and reflection, as part of the continuing process of shaping and influencing the curriculum.

At key points within this document we have included a number of questions for reflection. Further guidance to support professional development activity amongst staff and to support schools’ activities with their own stakeholders will be available on the website (www.acurriculumforexcellencescotland.gov.uk).

The document includes an outline timetable and more detail on the results of the review process so far, including a rationale for science. Over the next few months we will be placing the emerging results of work on specific curriculum areas and cross-curriculum aspects on the website for discussion and engagement.



progress so far

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The approach to change

This review of the curriculum is a continuous process of professional learning and development, not a one-off change.

In the past, national curriculum developments have often been supported by central guidelines, cascade models of staff development and the provision of resources to support the implementation of guidance by teachers. Our approach to change is different. It aims to engage teachers in thinking from first principles about their educational aims and values and their classroom practice. The process is based upon evidence of how change can be brought about successfully – through a climate in which reflective practitioners share and develop ideas.

There have been three main strands of activity:

- engagement
- review
- development of skills for work courses.

This work has been carried out through close partnership between the Scottish Executive, Learning and Teaching Scotland (LTS), The Scottish Qualifications Authority (SQA) and HM Inspectorate of Education (HMIE), with involvement by education authorities, schools, colleges, professional associations and members of the research community.

Engagement

From the start, Ministers were clear about the importance they attach to an approach to change which draws on professional and public dialogue. The first phase of engagement focused on professional reflection on the values, purposes and principles of *A Curriculum for Excellence*, stimulating discussion and debate about our aspirations for children and young people in Scotland, the shape of a curriculum that will meet the needs of the next generation, and the approaches to learning and teaching that will be needed to achieve our aspirations. These discussions have revealed a very high level of consensus about the values, purposes and principles set out in *A Curriculum for Excellence*.

- The engagement process included a major programme of conferences and professional development events in each of the 32 education authorities and with independent schools.
- We now have a network of education authority contacts who will lead change within their authority.
- We have had useful dialogue with colleagues involved in related programmes such as *Assessment is for Learning* and *Determined to Succeed*, to promote coherence.
- More than 600 centres have enrolled in the register of interest, which is designed to identify examples of good practice, and to test and develop innovative approaches.



Review

Our task is to develop a curriculum framework which will support all children and young people from 3 to 18 to develop as successful learners, confident individuals, responsible citizens and effective contributors, ready to play a full part in society now and in the future. As part of the review process we need to develop clear guidance which sets out expectations of what children and young people should learn and also promotes flexibility and space so that teachers can use their professional judgement creatively to meet children's needs.

- Working with partners, we have considered the implications of *A Curriculum for Excellence* for the overall structure of a curriculum which will span all stages from 3 to 18. We have also explored and advised on the implications for assessment, continuing professional development (CPD) and resources.
- Groups carried out initial reviews of existing curriculum guidance using evaluative questions based on the values, purposes and principles of *A Curriculum for Excellence*. They prepared outlines of suggested changes to guidance.
- The groups concentrated on the 3 to 15 stages. This was to enable future changes to the 15 to 18 curriculum, including qualifications, to build upon the revised 3 to 15 curriculum.
- Research was commissioned to make sure that, where possible, proposals for change were supported by research or other evidence. The research papers are available on the website.

Skills for work courses

One of the proposals in Scottish Ministers' response to *A Curriculum for Excellence* was to extend the range of qualifications for all young people through developing Skills for Work courses. New courses are being piloted in session 2005-06 in: construction crafts; early education and childcare; financial services; and sport and recreation. The courses focus on the skills, knowledge and attitudes which are important not only for employment but also for lifelong learning. Learning is mainly practical and takes place in schools, colleges and other work-related settings.

- 1300 young people (mainly in S3 and S4), 28 colleges and 145 schools across 21 education authorities have been involved in the first year. The schools have been in partnerships with colleges and other providers.
- The courses are being closely monitored and evaluated. The range of courses will be extended in Session 2006-07 to cover hairdressing, rural skills and construction engineering. We expect that many more young people will enrol for the courses next session.

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main messages from the process so far

Some simple, but strong, messages have emerged consistently from this period of engagement and review.

The whole school has responsibility for developing the four capacities in every child and young person

This has implications for the contributions of each adult who supports children and young people, and for whole-school policies, planning and partnerships with other organisations. The revised curriculum framework needs to provide national guidance with clear parameters to enable every teacher to promote the four capacities within his or her classroom.

Learning and teaching are at the heart of an effective curriculum

Teachers have recognised and welcomed the professional challenges presented by the four capacities for their learning and teaching approaches. They are aware that it is the ‘how’ of classroom practice which will support successful learning and promote confidence, participation and responsibility.

Review work shows that space can be found for learning in depth and for wider experiences

The work has shown that this can be achieved by, for example, reducing the number of levels at which outcomes are described, defining targets for learning differently and removing duplication within and across curriculum areas.

***A Curriculum for Excellence* offers a way of unifying the curriculum**

Activities such as enterprise, citizenship, sustainable development, health and creativity, which are often seen as add-ons, can be built into the curriculum framework.

All of this reinforces the view that we need to think about the curriculum in a different way. In the following section we set out our thinking on the structure of the curriculum based on the engagement and development process so far.

proposals: looking at the curriculum differently

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Our approach to the curriculum sees it as a single framework for development and learning from 3 to 18. The framework needs to allow different routes for progression from one stage of learning to the next, and promote learning across a wide range of contexts and experiences. It should equip young people with high levels of literacy, numeracy and thinking skills and support the development of their health and wellbeing. It should enable every

child to develop his or her full potential through a broad range of challenging, well-planned experiences which help them develop qualities of citizenship, enterprise and creativity.

In particular, it should offer rich opportunities for development, progression and achievement for children who need additional support for their learning. Individualised educational programmes, co-ordinated support plans and any other plans which are used to support individual children should sit within the single framework.

As many schools recognise, the curriculum is more than curriculum areas and subjects: it is the totality of experiences which are planned for children and young people through their education – a canvas upon which their learning experiences are formed. At all stages from the early years to S6 the curriculum will include learning through:

- › the ethos and life of the school as a community
- › curriculum areas and subjects
- › interdisciplinary projects and studies
- › opportunities for personal achievement



The ethos and life of the school as a community

Teachers know that positive relationships and the climate for learning in a school – its values, its ethos and its life as a community – are essential starting points for successful learning.

The wider life of the school – activities such as assemblies, community events and school projects – makes an important contribution to the development of the four capacities, helping to enable all young people to become successful learners, confident individuals, responsible citizens and effective contributors. Schools also offer pupils opportunities to learn through such activities as peer mentoring, membership of school councils, undertaking responsibilities and playing a part in decision making.

Curriculum areas and subjects

Curriculum areas and subjects provide familiar and important vehicles for learning. We recognise their key role within the curriculum. With that in mind, curriculum areas and subjects will be refreshed and re-focused as part of the review process to take full account of the contributions they can make to developing the four capacities and preparing learners for the challenges of the future.

Interdisciplinary projects and studies

The curriculum needs to include space for learning beyond subject boundaries, so that learners can make connections between different areas of learning. Through interdisciplinary activities of this kind, young people can develop their organisational skills, creativity, teamwork and the ability to apply their learning in new and challenging contexts. To be successful, these activities need to be well planned with a clear purpose and outcomes in mind.

Opportunities for personal achievement

Opportunities for personal achievement, planned through the school, often enrich the life experience of learners. Taking part in activities such as performances, community or enterprise activities and trips plays an important part in widening a young person's horizons and developing confidence. Schools can also respond to the personal interests and aptitudes of learners through clubs, community, charitable and fund-raising activities. Many of these activities are voluntary for learners and have traditionally been organised as 'extra-curricular' opportunities. However, they play a major part in creating opportunities for individual growth, progress and achievement and we need to consider how they can be made available for all learners.

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Reflective question 1

To what extent does the design of the current curriculum in your school reflect this model?

What contribution could you make now to adjusting the current balance?

What are the implications for your future planning?

Children will make progress from stage to stage through a combination of all of these curriculum components. We now move on to think about how the child will progress through different stages of learning.



the child's journey through the curriculum

Progression

Children and young people enjoy making progress and find satisfaction in meeting the challenges posed by a curriculum that engages and motivates them. Teachers need staging posts for charting progress, for reporting to parents and to assist planning. We also need clear national expectations of progress and attainment. To reflect the broader definition and purposes of the curriculum we are proposing a different way of describing progression. The following are key features of the approach:

- It recognises that children and young people will progress at different rates.
- Expectations will be described in terms of experiences as well as broad, significant outcomes.
- Experiences and outcomes will be described from the learner's point of view, using terms like 'I have ...' for experiences and 'I can ...' for outcomes.
- Experiences and outcomes will be designed to reflect the four capacities and to promote the development of literacy, numeracy and other skills.
- There should be fewer levels, more widely spaced, to allow teachers to plan for greater depth, enrichment and consolidation of learning.
- The framework should support teachers in planning for both lateral (broadening and enriching) and vertical (becoming more challenging) progression. This means enhancing experiences within levels as well as providing for progression to the next level.
- The framework should not create artificial ceilings which might limit expectations of what children can achieve. When children are secure in their learning at a particular level and have experienced sufficient breadth of activity, they should move on towards the next level.
- The framework should provide a good basis for reporting to parents about their children's progress, making use of the 'I can ...' and 'I have ...' approach to describe achievement within levels as well as between them.

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This approach has implications for the way we view rates of progress through levels. The levels are not there as hurdles to get over as quickly as possible, but rather as staging posts on a journey which offers opportunities for challenge and depth.

We have considered a range of options for describing progress in a simple framework and we recommend the following as a best fit with these key features. Our proposal also reflects the commitment to reduce 'clutter' and assessment loading.

Curriculum for Excellence achievement framework

Level	Experiences and outcomes for most children or young people:
early	in pre-school and in primary 1
first	by end of P4, but earlier for some
second	by end of P7, but earlier for some
third	in S1 – S3, but earlier for some
fourth	fourth level broadly equates to SCQF level 4
senior	in S4 – S6, but earlier for some

In developing the expectations for each level, review groups will be taking account of evidence of what children can achieve with appropriate pace and challenge, setting higher expectations where there is evidence to support this.

It is important to stress that the levels do not imply that there will be testing at specific stages (such as at the end of P1). Teachers will constantly be observing and judging progress using a broad repertoire of approaches. As part of this overall approach to assessment they will need to take stock through broad summative judgements when they believe that a child has a secure grasp of a significant body of learning.

There is an important relationship between these curriculum levels and the Scottish Credit Qualifications Framework (SCQF). The two need to be linked, to enable young people to progress smoothly into the appropriate level of qualification (for most young people, this move into qualifications will take place in S4 and beyond). They are not equivalent, however. SCQF levels relate to qualifications and not to expectations for the curriculum and associated assessment pre-14.



Reflective question 2

What are the implications of the proposed approach to progression for:

- *planning*
- *assessing*
- *reporting*

If progression of different kinds represents one dimension of the curriculum, a second dimension is the breadth of activity.

How learning is organised: curriculum areas

If young people are to play a full, informed part in society they need to develop their understanding and their skills in different contexts. To provide a device for ensuring that learning takes place across this range of contexts we need to group the range of experiences and outcomes into recognisable components. We are proposing the following groupings for structuring experiences and outcomes:

- health and wellbeing
- languages
- mathematics
- sciences
- social studies
- expressive arts
- technologies
- religious and moral education

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In the next stage of engagement we will develop this approach further. In the meantime, we are proposing that health and wellbeing would be likely to include components such as personal and social development, understanding of health, physical education and physical activity, and contributions from home economics. Languages and mathematics would include specific components of literacy and numeracy respectively. In addition, languages would include English, Gaelic, modern languages and classics. Sciences would include learning in biological, physical, chemical and environmental contexts, and the social studies would include learning in historical, geographical, social, political, economic and business contexts. Drama,

dance, music and visual arts would be included in the expressive arts. The technologies might include craft, design technology, graphics, computing and home economics. Philosophy might be included with religious and moral education.

In some cases this would represent a change from existing curriculum structures such as, in S3/4, the modal structure. Home economics, for example, would make important contributions to at least two of these curriculum areas, including practical food preparation as an important aspect of health and wellbeing for all young people.

The curriculum areas should provide the basis for learning and the development of skills across a broad range of contexts. They offer opportunities for citizenship, sustainable development, enterprise, creativity and cultural aspects. Taken together, their outcomes and experiences should represent our expectations for general education for all young people in Scotland before they embark on greater specialisation – in most cases by the end of S3.

It will be open to schools to organise the outcomes and experiences differently (for example, designing challenging interdisciplinary projects), taking account of local circumstances, to plan for progression, breadth and depth of learning. Outcomes and experiences might also be grouped differently for different stages of learning, such as early learning, or for young people with additional support needs.

The overall framework needs to provide a coherent approach to progression for skills which are developed through the various curriculum areas. As part of the review we will consider how to best achieve more coherent approaches to the development of literacy, numeracy and other skills across the curriculum.

Reflective question 3

What opportunities would this approach present in your school?

What are the implications for your future planning?

Making choices in learning

The proposed changes to the structure of the curriculum give us an opportunity to look differently at choices in learning at all stages. As with other aspects of the curriculum, different factors apply to choices at different stages.

As part of the engagement process we would like to work with schools to explore possibilities for different approaches to personalisation and choice. We wish to consider, for example, whether it would be desirable and possible for choices to



take place over a more extended period across S1 to S3, rather than the S2 course choice model. We would like to consider approaches to subject choice which are not based on the current modal structure but still address the needs and interests of young people. We then propose to develop a toolkit to support schools' approaches to offering choices of different kinds.

Reflective question 4

Where do opportunities for personalisation and choice lie at present in your class or school?

What principles should underpin 'personalisation and choice'?

What are the implications of extending personalisation and choice for your future planning?

Learning and teaching

A goal of the curriculum review is to give teachers more freedom to teach in innovative and creative ways. The quality of learning and teaching in every classroom – and the inspiration, challenge and enjoyment which can come from teachers' enthusiasm and commitment – will be critical to achieving our aspirations for all young people.

If we consider the four capacities and the attributes and capabilities we wish children and young people to develop, it is very clear that teachers will need to deploy a very broad range of approaches to learning and teaching.

Reflective question 5

To what extent do your current teaching styles contribute to the development of the four capacities?

What changes to your teaching would lead to further development of these four capacities?

What are the implications for your future planning?

Assessment, achievement and qualifications

The purposes of learning are being redefined, so it follows that there are implications for assessment. Assessment needs to fit the purposes of the learning, using techniques which are well chosen to support learning, inform planning of next steps and give a good basis for reporting on progress.

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Assessment is an integral part of learning and teaching.

Assessment is for Learning supports the purposes of *A Curriculum for Excellence* and is developing teachers' skills and understanding about using assessment to support learning. Teachers using assessment practices which involve high-quality interactions based on thoughtful questions, careful

listening and reflective responses help children to achieve their aims and to develop their learning and thinking skills. Effective use of summative assessment and processes where teachers 'share the standard' complement good formative assessment. These good practices can support and enhance the benefits of an improved curriculum.

From a child's very first day in nursery, recognising achievement is an important part of learning and development. The recognition takes different forms and serves different purposes at different stages, from a child's pride at having a picture displayed on the wall in the nursery, to the SQA certificate when a young person leaves school. This implies a progression in the ways we acknowledge achievements at different stages.

One of the most important aspects of *A Curriculum for Excellence* is the need to be able, for each child and young person, to give recognition to a broader range of their achievements than we do at present. We need to develop straightforward and simple ways of doing this, especially so that processes of assessment do not distort the intrinsic value and satisfaction of achievement.



S3 offers an opportunity to recognise achievements of different kinds across the whole range of experiences and learning, across all of the components of the curriculum and beyond. Taking stock of achievements at this stage can give recognition to all that has gone before in readiness for young people to make decisions about future pathways and specialisms. It can support the young person's curriculum choices. This stage can be used to ensure that firm foundations – including in literacy and numeracy – have been laid for the next stage of learning and for life.

The process of recognising broad achievements should be able to continue cumulatively up to the point when a young person leaves school with achievements captured in a way that is valued by young people, their parents, employers and colleges and universities.

Reflective question 6

In what ways are the achievements of children and young people recognised in your class and school?

Qualifications represent a very important, but not exclusive, aspect of achievement. By the end of S3, learners should have established a solid basis of learning on which they can build as they move into a framework of qualifications. This has implications for the structure of qualifications and the outcomes which are assessed within them. Addressing these implications will be an important area for future work by relevant partners.

what might be different?

In the following sections we identify possible features and changes as we move towards a curriculum for all young people. We will refine and adjust this thinking in the light of the engagement process.

The early years

- › Building on the real strengths: the existing guidance for the curriculum 3 to 5 is working well
- › Some changes to refresh, update and extend guidance in response to evidence of practice and to enable good progression
- › Better continuity between children's pre-school and P1 experiences, especially in learning and teaching approaches, through the proposed new structure

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Primary

- › Some adjustment to curriculum areas
- › Substantial simplification and prioritisation of the curriculum and supporting guidance
- › Guidance setting out both experiences and outcomes
- › Fewer, more broadly-spaced levels
- › More emphasis on active learning through P1 and beyond
- › Emphasis on literacy and numeracy retained
- › Assessment 'fit for purpose', i.e. it supports learning
- › Schools focusing more on outcomes achieved by children than on 'inputs', with recommended time allocations for each area of the curriculum discontinued
- › Better continuity in learning and in methodologies to maintain pace and challenge across the transition to secondary, building on effective transition models.



Secondary

- Greater clarity about the purposes of learning, especially in early secondary school: to enable young people to develop the four capacities and prepare them for life in 21st century Scotland
- Successful, confident, responsible and effective young people prepared for their chosen route from school, whether into colleges, universities, or the world of work
- Greater scope for different approaches to curriculum design in S1 to S3 within clear parameters
- Curriculum includes planned opportunities for broader achievements, interdisciplinary activities and choices as well as learning across all curriculum areas
- S1 to S3 provides a strong platform for further learning and a good basis for choice and greater specialisation
- Curriculum areas and subjects revised and enriched through the review process to provide challenge and enjoyment, depth and relevance
- Focus on ‘raising the bar’ on expectations for attainment, notably in literacy and numeracy, but also for achievement in health and wellbeing, citizenship, enterprise and creativity
- Assessment ‘fit for purpose’, i.e. it supports learning
- An important feature during S3: taking stock and recognising a broad range of achievements
- In due course, changes needed in the S4 to S6 curriculum, to build upon the revised S1 to S3 base
- Recognition process continues so that when a young person leaves school the span of their learning and achievements is captured in a way that does justice to them
- Scope to plan for S4 to 6 as a single stage with a great deal of opportunity for individual pathways and choice, with continued emphasis on the development of the four capacities
- Learning outcomes within SQA arrangements revised to reflect *A Curriculum for Excellence* purposes and principles: SQA are committed to revising the learning outcomes within their arrangements to ensure good progression from the revised S1 to S3 curriculum.

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implications

The role of the teacher

Scottish Ministers have increasingly emphasised the value they place on the professionalism and commitment of teachers in Scotland. We have a motivated and well-trained workforce which is being asked to embrace a shift away from prescription about the detail of the curriculum and towards more responsibility for professional judgement and creativity within broader parameters.

If we are to be successful in our aim of preparing young people for the challenges of the future, we will rely even more on individual teachers' commitment to refreshing and updating their own professional skills and knowledge.

There will be implications both for initial teacher education and continuing professional development. Aspects are likely to include developing understanding of new models of the curriculum and using new guidance, updating subject and thematic knowledge, new approaches to learning and teaching, and leadership at all levels. Teacher education institutions, LTS, education authorities, school managers and individual teachers will all have roles to play in taking this forward.

Leadership

A Curriculum for Excellence places increased expectations on the leadership of schools. As at present, headteachers and other leaders will need to ensure that children and young people experience a consistently high quality of learning and teaching. They will be in a central position to support professional dialogue and debate about the curriculum. They will also have opportunities to be creative in curriculum design, learning from evidence of practice, within clear parameters for flexibility.



Guidance for teachers

Following the period of engagement, existing curriculum guidelines will be replaced by streamlined guidance. Instead of separate guidance for different stages and sectors we will produce a single framework 3 to 18. It will draw upon the best of existing guidelines for 3 to 5 and 5-14. Guidance on broad aims of the curriculum will also extend to age 18, complementing SQA Arrangements Documents.

The guidance will specify only what needs to be specified. The level of detail will be matched to the need for specificity – so, for example, we can expect that there will be detailed advice on progression in literacy and numeracy. We have not yet identified the best form of presentation for guidance, but we will seek teachers' views as part of the engagement process and we want to take full advantage of the potential of ICT to make guidance accessible in different ways for different purposes.

Reflective question 7

What are the implications for teachers of specifying only what needs to be specified?

Improvement framework

Frameworks for improvement and accountability will need to reflect and support the expectations of *A Curriculum for Excellence*.

next steps

Engagement

As we indicated at the start of this document, our thinking and proposals have been developed and tested through a process of engagement. We plan to extend this process as we move into more detailed work – testing, modelling and refining the ideas set out in this document and developing proposals for curriculum guidance. We will be engaging with staff in all sectors and, in particular, through centres which have signed up for the register of interest. We have also reached the stage where we need to engage with a wider range of stakeholders, particularly parents and employers, as well as children and young people themselves.

We hope that the emerging ideas will stimulate wide-ranging discussion in classrooms and staffrooms across the country. The success of the process will depend upon the establishment of shared understanding and professional dialogue. The most important place for this to happen is between colleagues in individual establishments, and we hope that the reflective questions in this document together with the additional development materials on the website will support this. We expect that the dialogue will be encouraged, enabled and facilitated by managers and head teachers and that authorities will play a major role in ensuring that the programme is informed by, and progresses through, these discussions.

We need to learn from this process of engagement so that we can use the views of staff, parents, employers and, importantly, young people in developing our thinking and shaping guidance. LTS will make important contributions by providing resources such as toolkits for reflection for staff and parents, web space, and running focus groups and workshop sessions.



Reviewing the curriculum

The next phase of review work will include a number of interlocking strands of development. We plan to:

- commission the refinement and further development of the work of the early review groups, based on what we have learned in the first stage
- conduct work across the curriculum to ensure that
 - the values, purposes and principles
 - literacy and numeracy and other skills
 - enterprise, citizenship, health, creativity and problem solving, for example, are embedded and developed coherently across the curriculum
- commission modelling work on timetabling and curriculum design
- plan for the development of supporting resources for teachers.

The products of these activities will be shared through the website as part of the ongoing development and engagement process.

Tentative Timeline

2006	
Now	Continue to develop curriculum architecture and assessment and qualifications framework Use register of interest to identify schools to participate in development
March 2006	Publish 'Progress and Proposals'
June 2006	Engagement through meetings, focus groups, seminars Develop CPD strategy/plan future events for engagement Concentrated work on the guidance on the curriculum: curriculum areas; curriculum architecture; assessment and qualifications
September 2006	Begin to publish draft Guidance on the Curriculum
December 2006	Engagement through meetings, focus groups, seminars CPD ongoing Schools piloting/trialling elements from guidance on the curriculum
2007-2008	
January 2007	Concentrated work to refine and finalise guidance on the curriculum Engagement and CPD ongoing
June 2007	Publish Guidance on the Curriculum
August 2007	Year of familiarisation, preparation and development Ongoing CPD
June 2008	
August 2008	Implementation begins



appendices

Appendix 1

The work of the early review groups

Groups were established in eight curriculum areas: science, languages, social subjects, mathematics, technologies, expressive arts, health and wellbeing, and religious and moral education. Members of the groups reflected a wide range of professional experience including teachers and staff from education authorities, SQA, LTS and teacher education institutions, with support from HMIE.

The first step was to carry out an initial review of existing curriculum guidance against the values, purposes and principles of *A Curriculum for Excellence*. To do this, the review groups used a common set of evaluative questions and relevant research evidence. They based their work on the Curriculum Framework 3 to 5, the 5-14 guidelines, Standard Grade and Intermediate 1. They provided initial advice on updating, prioritising and simplifying outcomes, and reducing overcrowding. Examples of possible outcomes and experiences were developed and tested against the principles of curriculum design to ensure, for example, that they would offer opportunities for challenge and enjoyment, depth of learning, relevance, and personalisation and choice. The groups also prepared draft rationales describing the benefits to young people of learning in that curriculum area.

The groups agreed that:

- prioritisation and simplification are indeed possible and can reduce the number of strands and learning outcomes
- the most important changes relate as much to ‘how’ to teach as ‘what’ to teach
- it will be essential to support proposed changes through CPD programmes
- formative assessment strategies promoted by *Assessment is for Learning* would support changes in curriculum advice.

The curriculum area groups concluded the first phase of their work in December 2005. This preliminary work has been considered as a whole to inform the next, more comprehensive, phase of review.

Groups have also been established to consider issues relating to personal and social development, to the early years, and for children who need additional support for learning; their work is continuing.

Strategies for simplification and prioritisation

Review groups used a number of different strategies to arrive at initial proposals to simplify and prioritise the curriculum. These included:

- reducing the number of attainment outcomes² for the groupings of learning experiences and outcomes
- re-defining and re-allocating aspects of learning
- amending the degree of demand expected at particular levels to reflect research about children's development and pace of learning.

² We have used the terminology of the existing 5-14 guidelines in this section. It is likely that the revised guidance will use a slightly different terminology.



Examples of proposals for possible change

- Reducing the number of attainment outcomes
 - personal search could become a permeating element within RME
 - in science ‘Developing Informed Attitudes’ would become a permeating element
- Re-defining and re-allocating aspects of learning
 - The following elements might now sit within health and wellbeing:
 - eating for health, and safe, hygienic practices
 - physical education, physical activity and sport
 - personal safety
 - mental, social and emotional health
 - drugs alcohol and tobacco
 - sexual health and relationships
- Adjustments to level of demand
 - The early level in mathematics, for example, would take account of the very good progress children are making at the early stages with aspects of shape and number
- Introducing ideas at the appropriate stage, based upon research on children’s learning
 - In science all targets within the ‘Cells’ strand would be introduced from Level 3 onwards

Appendix 2

Science Rationale

Science 3 to 15

The most important goal for science education is to stimulate, nurture and sustain the curiosity, wonder and questioning of young people.

Young children come to the early years setting with a natural sense of wonder and curiosity and as active and eager learners endeavouring to make sense of the world. They continue to develop ideas through investigation, first-hand experience, discussion and structured or free play. As they grow older, children ask searching questions based on their everyday observations and experiences of living things, the environment and the materials, objects and devices they interact with in their play. Young people are fascinated by new discoveries and technology and become increasingly aware of, and passionate about, the impact of science on their lives, the lives of others and on the environment.

Science is a dynamic, creative, human process which contributes greatly to the development of human culture, both nationally and globally. The rate at which developments in science and technology are taking place has enormous implications for the wellbeing of our society. The values that guide scientific endeavour: respect for living things and the environment; respect for evidence and the opinions of others; honesty in collecting and presenting data; an openness to new ideas, are the basis of responsible citizenship.

Science is part of our heritage and part of our everyday lives at work, at leisure or in the home. It is important that all young people experience a sound science education given our rapidly-evolving, technologically-driven, world. Some will become the trained scientists and engineers required to build a vibrant and sustainable economy. Others will encounter science and its applications in the workplace and at home. Everyone needs to have the capacity to engage as confident individuals and effective communicators in informed debate, and make informed decisions about scientific issues of social, moral and ethical, economic and environmental importance.



In order to prepare children and young people for their future lives and careers in the 21st century the two main purposes of science education are to:

- enable young people to develop as scientifically literate citizens, able to hold and defend informed views on social, moral, ethical, economic and environmental issues related to science; and
- prepare them for further, more specialised, learning by developing their secure understanding of the ‘big ideas’ and concepts of science.

Through science, children and young people develop their understanding of the living, material and physical world. They can increase their awareness of the pace and significance of developments in biology, chemistry and physics and acquire knowledge and understanding of the impact of science on their own health and wellbeing, the health of society and the health of the environment. They are able to develop important, transferable skills to prepare them to be enterprising and creative adults. Through collaborative investigative tasks they can learn to interpret data, make deductions and draw valid conclusions based on evidence. Through learning about science in relevant, real-life contexts they can acquire the ability to express and justify their views on science-based issues of importance to society, based on knowledge and understanding of scientific principles and concepts.

Taken together, this learning through science will help their development as successful learners, confident individuals, responsible citizens and effective contributors.

The revised curriculum for science

The starting point for review was to identify the knowledge, understanding, skills and attributes that would be required by every young person in Scotland by age 15 to prepare them for their future lives and careers. The ‘big ideas’ of contemporary science were identified and grouped under three main lines of development:

- | | |
|--------------------|--|
| Our living world | including the diversity of living things, the uniqueness of being human and the importance of cells, both for the individual and society |
| Our material world | including the uses and properties of materials, sustainability, the chemistry of life processes and the applications of chemistry in society |

Our physical world including harnessing and using energy sources, motion and travel on land, sea, air and space, and the development of communication systems to meet the needs of society

While some of these lines of development can be tracked from the early level to level 4, others which are known to be conceptually demanding would first appear at later stages. This is the case, for example, with aspects such as the structure of cells and the study of atoms.

The proposed outcomes are fairly broad: suggesting appropriate learning experiences rather than prescribing specific objectives or teaching and learning sequences. Outcomes for knowledge and understanding, skills and attributes are fully integrated. In total, they represent the essential learning that most 15 year-olds would be expected to experience and demonstrate.

Teachers would be able to draw from these to develop relevant teaching contexts and activities, both within and beyond science, to a depth appropriate for the stage or class. Although described separately, it is anticipated that teachers will continue to integrate aspects of the living, material and physical world as appropriate.

Teachers would also be able to take opportunities to provide real life contexts based on the immediate environment of the school or on local, national or global contemporary issues. This offers opportunities for planned thematic and interdisciplinary work in the early years, primary and secondary settings. Productive links could be made with aspects of the technologies, social subjects, health and wellbeing and RME in particular.

Scale and scope of change – proposals

The proposed outcomes broadly reflect existing guidance. As the review work continues, the proposals will build on current best practice in teaching and learning. There will be freedom to teach in innovative ways and to make the most of the power of digital learning and expertise outwith the school sector. Young people will be able to experience challenging activities throughout their schooling and recognise and enjoy the progress they make in science.



Unhelpful repetition which currently appears across the sciences will be removed. Similarly, future analysis will help to remove duplications and ensure consistency of expectations across curriculum areas. The review so far has also taken account of recent advances in science and the nature of outcomes should allow teachers to embrace ongoing developments. For example, an outcome such as ‘I can explain the principles of modern biotechnology’ will readily allow updating.

These proposals will support an extension of experiential learning from the early years into early primary school and beyond. In the remaining years of primary school, teachers will have the opportunities to create teaching contexts that take advantage of local events and circumstances and the needs and interests of the young people they teach.

In secondary schools, the proposals will promote classroom talk, group discussion and debate about the benefits and risks associated with the applications of scientific knowledge. Learners will have the opportunity to become actively involved in their learning and to deepen their understanding of the big ideas of science. Through involvement in a wide range of open-ended experiences, challenges and investigations they will develop critical thinking skills and appreciate the key role of the scientific process in generating new knowledge.

Illustrations of proposed outcomes

The following style of outcome demonstrates the development of a ‘big idea’ in science. Through first-hand observation, practical activities and discussion, children and young people will develop a range of critical thinking skills including analysis and evaluation of data. Relevant and engaging teaching contexts and approaches are essential to breathe life into these.

“I can make observations over time in my local environment and represent them in a variety of ways” (N – P1)

“I can construct and present simple food chains from my observations of the local environment” (P2 – P4)

“I can construct a food web and predict consequences of changes” (P5 – P7)

“I can explain the importance of biodiversity to humans” (S1 – S3)

For young people, the style of outcome illustrated below is inclusive, offers opportunities for personalisation and choice, and deeper study. Young people will engage in research, discussion on the strength of evidence, and debate on important science-based issues for society.

“I can research and debate a local environmental issue” (P5 – P7)

“I can express an informed view on genetically modified plants and animals” (S2 – S3)

Reflective questions

To what extent does your present teaching in science

- › Reflect the purposes, values and principles of *A Curriculum for Excellence*?
- › Reflect the goal and two main purposes of science education?
- › Reflect the lines of development described?
- › Reflect the teaching approaches described?
- › Allow for interdisciplinary work across and beyond the sciences?

How could you now

- › Move towards the ideas described in this outline rationale?

What are the implications for your curriculum and teaching and learning?

The outline presented in this rationale will be developed further through more detailed review work and engagement.



Appendix 3

Curriculum Review Programme Board Members

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