

Curriculum for Excellence

Developing Skills

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Part 1

1.1 Introduction

1.1.1 *What's new?*

Developing skills is a vital part of *Curriculum for Excellence*. Of course, teachers have always been interested in skills. Schools have focused on basic transferable skills such as reading, writing and basic arithmetic. They have taught practical skills like ball control, keyboarding and reading music. And every teacher has tried to help young people become more confident, communicate and relate to others.

So, what is new? Three things in particular.

- consistency – skills development needs to be planned, assessed and recorded
- learner engagement – young people should be aware of skills and involved in taking them forward
- ambition – young people are growing up in a world where advanced skills are the key to success.

1.1.2 *This guide*

This guide is intended to help teachers develop young people's skills in a systematic and effective way. It sets out the current global context and explains why developing skills has become a high priority.

Specifically, it aims to help teachers:

- plan for skills development
- identify and promote both general intellectual and more specific skills
- encourage progress in the *experiences and outcomes* through high quality learning and teaching
- link the development of generic and specific skills
- extend learners' self-efficacy as a basis for skills development
- ensure progression in skills
- assess, record and report on skills development.

The guide is intended to help you make skills development a central feature of your practice. It deals with planning, progression, assessment, learning and teaching and many other aspects. It will not help you to 'paint skills by numbers' but is designed to support your professional thinking, preferably with colleagues, about how you can best promote skills in your classroom.

Curriculum for Excellence is about big ideas and gradual but transformational change. So, the theoretical background is important for all teachers. But the guide's main purpose is practical support for classroom activity and most space is devoted to this purpose.

It is divided into two parts:

- 1 The first part will help you understand the importance of skills within *Curriculum for Excellence*. It is concerned with the place of skills in the progressive development of learners' thinking.
- 2 The second will help you to apply the processes of planning, learning and teaching, and assessment to promote progression in a wide range of skills.

Ideally, putting an increased emphasis on the development of skills should be a whole school initiative. Taking forward such a complex task calls for leadership from staff at all levels. The qualities required are not different from those needed to achieve other significant changes in school practice. This guide is not, therefore, specifically concerned with this aspect of developing skills.

1.2 The context

Curriculum for Excellence is Scotland's educational response to global change. It seeks to promote the qualities young people need to live successful and fulfilled lives in the 21st century. These are summed up as being the qualities of successful learners, confident individuals, effective contributors and responsible citizens.

All of the published guidance – the *experiences and outcomes* and the *Building the Curriculum* series – is intended to help teachers realise this objective in practice. What has emerged is an ambitious improvement programme containing numerous strands; curriculum development, pedagogy, assessment, reform of qualifications, learner engagement and so forth. The central concept, however, is that of 'deep learning'.

1.2.1 Deep learning

Deep learning can be understood in two ways. It can refer to the kind of approaches to learning that are likely to promote genuine understanding. ('Active learning' is the term used in the published guidance.)

The second use of the phrase relates to outcomes. Deep learning goes beyond the acquisition of knowledge and embraces understanding and the application of knowledge. It involves the use of a wide range of skills.

This emphasis on deep learning and on skill is a reflection of circumstances of the contemporary world.

1.2.2 The global context

Curriculum for Excellence has both an economic and a social mission. The economic mission stems from globalisation and technological advance. We live in a world of rapid scientific and technological change. Our workforce can be globally competitive only when it embraces these developments.

For high-wage economies, such as that of Scotland, this has profound implications. We cannot compete on price or scale of production. Scottish business needs to be innovative, creative and better able to meet customers' needs. This requires intellectual ambition, agility and the capacity to anticipate the 'next big thing'.

It also requires very high levels of skill from a wide range of employees. There are still jobs, especially in some service industries, that require only modest levels of skill, but their numbers are declining and they bring only poor rewards. By contrast, traditional craft skills such as plumbing and joinery, remain in high demand. However, the driver of a modern economy in the developed world is creative business based on high-level cognitive skills. Future prosperity depends on the capacity of the education service to ensure that more and more young people possess these advanced skills in ample measure.

Technological change has brought in its wake massive social change. Beliefs and attitudes have undergone a rapid transformation over the past 50 years. People have become increasingly free to choose their own lifestyles. Globalisation has played a part by making our societies more diverse. Many of the traditional sources of support for the individual have been weakened. This is true even of the family, the basic building block of human societies everywhere. In these circumstances, many people find it increasingly difficult to live stable and fulfilled lives. Young people often feel that education fails to address the issues that are of immediate concern to them or to equip them to deal with the personal challenges they will undoubtedly face.

Curriculum for Excellence thus has a vital social mission. Young people must be helped to lead happy, worthwhile and fulfilled lives in unprecedented circumstances. This requires personal and interpersonal skills, emotional intelligence, resilience, self-management skills and so forth.

Whether viewed from an economic or a social perspective, therefore, the promotion of skills is central to the success of *Curriculum for Excellence*.

1.3 What are skills?

What do we mean by 'skill'? We use the word in a variety of ways. Skill can suggest manual dexterity and physical accomplishment. It can refer to simple techniques or to the most complex intellectual operations. Skills can be very specific as in much vocational learning or highly transferable like reading. Often it is difficult to distinguish between skills and personal qualities or dispositions such as perseverance or ambition.

Much of the practical guidance that follows can be applied to any kind of skill. However, the focus is on those kinds of skill that are especially important in taking forward *Curriculum for Excellence* and that are not always consistently

developed in schools. Transferable cognitive skills are among the most important of these.

Some transferable cognitive skills are, of course, already promoted consistently in schools. Indeed, the skills of literacy and numeracy are considered so important that they have been designated as being the responsibility of all educators. However, other generic intellectual skills tend to receive less systematic attention. These include the skills itemised in the taxonomy set out on page 7.

This is not to undervalue other kinds of skill. Swimming, keyboarding, judging speed and distance when crossing a road, manipulating Boyle's Law and conjugating French verbs are all legitimate skills and are vital in particular contexts. They are not, however, essentially transferable skills and can be effectively promoted within the appropriate curriculum areas. Most vocational skills fall into the same category although some such as career management and communication are much more general. Such specific skills are generally covered in the *experiences and outcomes* and are, in any event, usually very familiar to subject teachers.

This guidance, therefore, puts particular emphasis on generic skills that can be applied in many situations. Often these are cognitive skills such as problem solving and analysis. Some, however, are closer to personal qualities. Instances would include effective communication and interpersonal skills.

1.3.1 Developing generic skills

One function of school is to provide a preparation for later life. The time is long gone when teachers believed that this meant that they should give their pupils a complete toolkit of all the knowledge and learning they would ever need before leaving school. The aim now is to develop lifelong learners. Partly, this is a matter of motivation. Partly, however, it is about equipping them for the task. This involves developing a set of generic or transferable skills that will help them cope with the challenges of future learning, life and work.

1.3.2 Using a taxonomy of generic skills

A taxonomy is a classification of skills. It helps to organise thinking about skills development. In particular, a taxonomy can help teachers use the everyday learning experiences of the classroom to promote generic cognitive or thinking skills. Thus, a lesson about measurement is likely to involve using prior learning (application) and working out the meaning of problems (analysis).

In principle, a taxonomy can deal with any type of skill. Indeed, the most famous taxonomy, Bloom's, was originally intended to be a classification of cognitive, affective (emotional) and psycho-motor skills. In practice, however, only the first part was ever completed.

Teachers are, of course, free to use any taxonomy that they find helpful. However, the following paragraphs describe an approach offering a coherent set of categories of transferable skills, both cognitive and personal: see www.scotland.gov.uk/Resource/Doc/920/0121113.pdf.

The approach employs a classification of cognitive skills similar to that of Bloom or his successor Anderson (as cited in *Building the Curriculum 4* and as used in the development of the *experiences and outcomes*) but with the addition of **synthesis**, the combining of separate ideas to form a new concept, and **systems thinking**, the essential skill for dealing with complexity.

The full classification is as follows:

- 1 knowing
- 2 understanding
- 3 application
- 4 analysis
- 5 synthesis
- 6 evaluation
- 7 systems thinking
- 8 creativity

Taken together, these eight items cover all the generic, transferable cognitive skills that learners should develop. Of course, there are many other ways in which they can be described but learners will find it helpful if the same descriptions are used consistently and in every curriculum area.

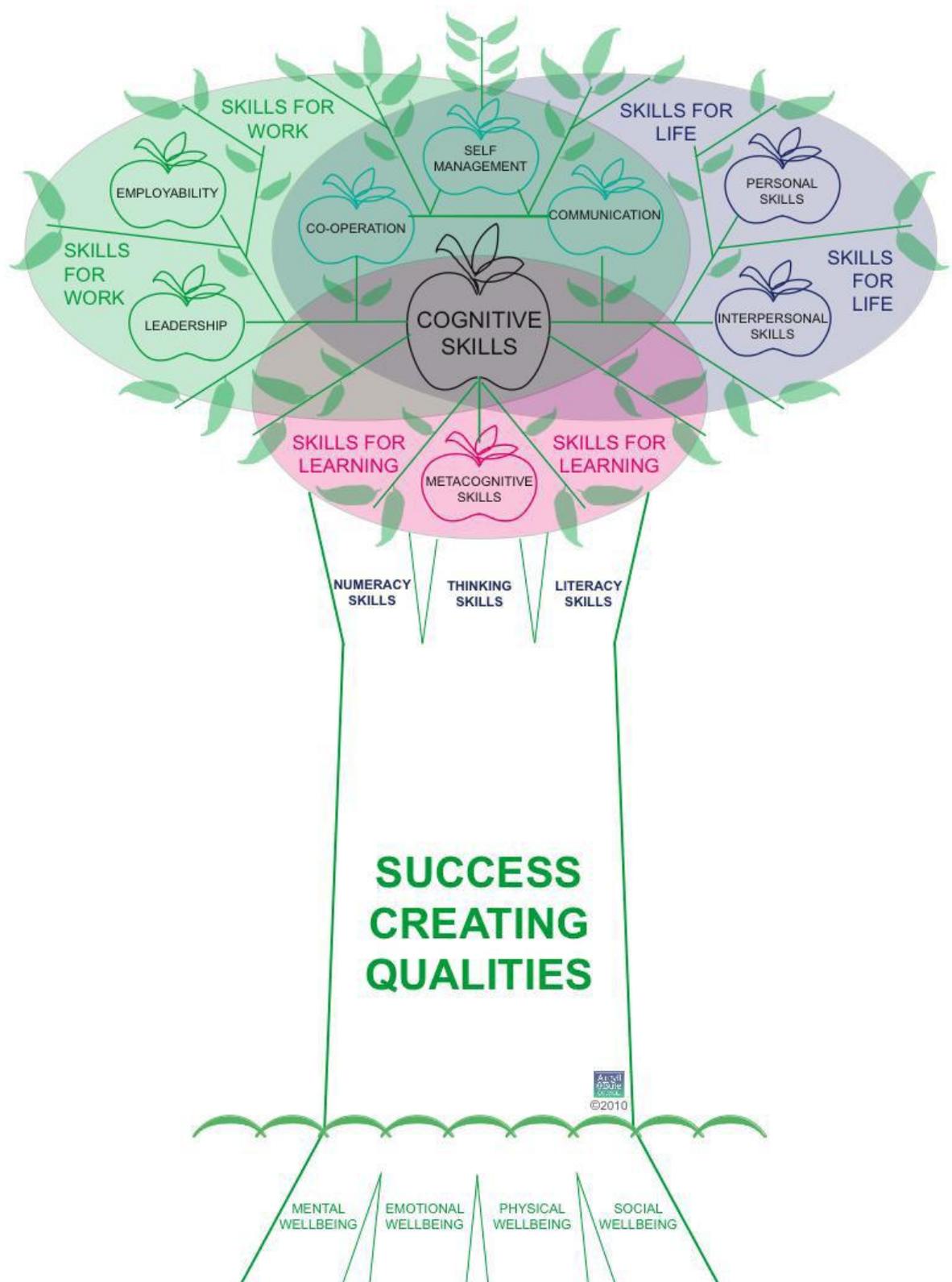
This taxonomy is also set out in the web-based version of this guide, which also provides short definitions and examples of appropriate activities that may help you to recognise classroom situations where one of the generic skills is being used. It may be useful in helping to make learners aware of the process.

In addition, the approach recognises that, if an individual is to progress in developing these cognitive skills, certain attitudes and beliefs need to be in place. The learner requires to be engaged and motivated. He/she needs to believe both that the task is worthwhile and that it can be achieved. Essentially, self-efficacy involves:

- 1 attention
- 2 motivation
- 3 personal resources
- 4 self-belief
- 5 reflection

These are the key to developing both cognitive and personal skills but their application is much wider. They can be described as prerequisites of learning itself. Unless they are in place, little progress will be made.

The relationship between the pre-requisites and the cognitive skills is shown diagrammatically below. This diagram takes the form of a tree.



Personal wellbeing is the foundation of learning as well as of other aspects of life. This is shown at the roots of the tree. The qualities associated with the four capacities of *Curriculum for Excellence* constitute the trunk and the main types of transferable cognitive skill (literacy, numeracy and thinking) are the main branches. All these are the prerequisites of developing the wide range of more specific skills associated with life, learning and work that are displayed in the foliage. Of course, all of this is an oversimplification but the image of the tree may help demonstrate the relationship between the various kinds of personal qualities and skills that teachers help young people to develop.

Part 2

Part 2 is concerned with practical suggestions intended to help teachers embed skills development into their practice. It covers key issues such as planning, progression, learning and teaching and assessment.

2.1 Planning for skills development

When you are planning a course, unit of work, series of lessons or individual lesson, it is just as important to think about the skills that you want to develop as it is to plan any other learning that you intend to promote.

This section is organised to help you to think about:

- 1 what's in the frame?
 - (i) the learner
 - (ii) the skills from the *experiences and outcomes*
- 2 selecting a small number of skills to promote
- 3 developing skills separately and using them in context
- 4 skills for learning, life and work.

2.1.1 *What's in the frame?*

The two starting points for planning skills development for an area of learning are:

- the learner: you know or need to find out about the learner's prior learning (in this case in relation to skills), and
- the curriculum guidance, including the *experiences and outcomes*: you can use the curriculum guidance to identify skills that you intend to develop, always remembering that unintended or incidental learning will also take place.

Being clear about what type of skills you want to develop helps in planning the focus for learning and in showing relevance:

- Skills which are specific to curriculum areas or subjects – e.g. movement in PE, solving an equation in mathematics.
- Transferable skills such as ‘evaluating’ which feature in more than one area of the curriculum with the consequence that a common language and approach will assist learning. These are mainly cognitive skills.
- Skills in those aspects that are the responsibility of every teacher. These include ‘soft skills’ from health and wellbeing as well as literacy and numeracy skills. Many of these skills are used in learning, work and life. They are also transferable.

2.1.2 Selecting a small number of skills to promote

An important decision when planning is whether to focus on a small number of skills or whether to try to develop every skill that might feature in the learning.

Focusing on a small number of skills helps:

- to concentrate on those skills which are highly relevant to a particular area of learning, for example skills in designing, conducting and evaluating experiments in science investigations
- where appropriate, to combine these with a focus on a skill from literacy, numeracy or health and wellbeing.
- to make ‘what is to be learned’ clear and manageable for learners and teachers
- to identify steps in progress and ways of discussing success in improving skills, and
- to involve learners, and where appropriate parents and partners, in promoting the skills.

Of course, other incidental development will take place because a wide range of skills will feature in many learning situations but ***a clear focus helps to promote learning.***

2.1.3 *Developing skills separately and using them in context*

We all develop skills by practising them. This applies to skills that depend heavily on repeated use such as keyboard skills on a piano or a computer. It also applies to ‘higher order’ skills where practising difficult thinking develops our skills.

We often develop our skills through a combination of practising the skill separately and using it in real and relevant contexts. For example, we may practise separately skills such as throwing, catching, passing when running, and shooting and use these skills together ‘for real’ in playing a netball game. In turn, the game may suggest some skills that need more practice.

In planning for skills development you need to consider how opportunities for learners to develop skills separately and to practise skills in real and relevant contexts will best complement each other. Thinking about good contexts for developing the skills may often take you into the use of skills in everyday life, learning and in the world of work. It will also lead you to consider ways of involving other partners and agencies in promoting skills.

2.1.4 *Skills for learning, life and work*

We use many skills across learning, life and work so there are not separate sets of skills for each of these contexts. For example literacy skills will be important in many areas of learning, they will be essential skills used in many areas of work and in many situations in day-to-day living.

Thinking about the use of skills in these aspects of our lives helps learners to see the relevance of the skills and the way that they are applied in life and work for different purposes. This helps to motivate learners and shows the rich opportunities for developing skills that exist beyond the classroom. A strong emphasis on relevant skills can restore motivation for disaffected learners.

A key motivation to acquire *skills for learning* is that they open up the potential to use the skills in many situations. For example, developing skills in finding information will bring transferability – the power to find information in many different contexts. In teaching these skills, this aspect of their value should be highlighted with learners.

Learners readily see the importance of *skills that are useful in everyday life*. If they need to plan a journey, fundraise for a charity, work together in a team or committee, develop a CV or coach younger children, they will be motivated to acquire or use the skills needed and see how they may be transferable. If you intend to develop skills in managing money, using a real fundraising situation has benefits compared with a paper exercise.

Thinking about and developing the *skills needed for the world of work* similarly motivates learners by showing their purpose and transferability in situations

that are relevant to their futures. Some skills are developed and enriched through the contexts of enterprise in education activities or Skills for Work qualifications, Duke of Edinburgh's Award or ASDAN, or preparation for, participation in, or follow up to work placements and work shadowing. Other skills and personal qualities developed as part of *Curriculum for Excellence* – such as literacy, numeracy, career planning, teamwork and perseverance – are equally valuable for work. Their purpose and relevance is highlighted through world of work contexts, simulated or real.

So the contexts of learning, life and work are rich and motivating contexts for developing skills and of showing aspects that are transferable – and we should make full use of these contexts to help us promote skill development.

To sum up, in planning to develop a skill or area of skills, you will wish to consider

- which skills or sub-skills need separate practice, and
- what contexts can you use to 'bring the skill to life' by using skills for a real purpose.

Practising skills is important, but applying skills in real contexts tests their acquisition and brings them to life.

2.2 Progression in skills development

Progression is a key concept in *Curriculum for Excellence*. As learners mature and become more knowledgeable, their skills should also increase. In a sense this is obvious. Teachers have always believed that, as they progress through school, learners should know more and be able to tackle harder tasks. But building progression into skills development is not always straightforward.

The curriculum has traditionally been defined in ways that emphasise content. Teachers have been expected to cover specified topics at particular stages. In this respect, *Curriculum for Excellence* is different. The *experiences and outcomes* attempt to indicate in fairly broad terms what kind of learning experiences young people should undergo and – crucially – what they should be able to do as a result.

The traditional approach makes an assumption that content increases in difficulty over time. In some cases this is true. Division, which is a technique for repeated subtraction, is certainly more difficult than subtraction itself. Reading contours is harder than interpreting shading on a map. By any standards *The Waste Land* is a difficult poem. In other instances, however, the assumption is not valid. There is nothing intrinsically more difficult about twentieth century history than the history of the Romans or the Vikings. Yet the one tends to be studied in the middle and later secondary years while the earlier periods usually feature in primary.

In this case, the difference lies in the nature of the intellectual activity that is called for. An understanding that people have lived differently at different times might be a sound outcome for young children. At later stages, teachers would expect a more sophisticated appreciation of factors such as causation.

In other words, progression in *Curriculum for Excellence* is very largely concerned with the promotion of learners' capacity to understand and to do. Skills development thus lies at the heart of progression. This may seem straightforward but, as the following sub-sections show, it can be difficult to demonstrate in practice.

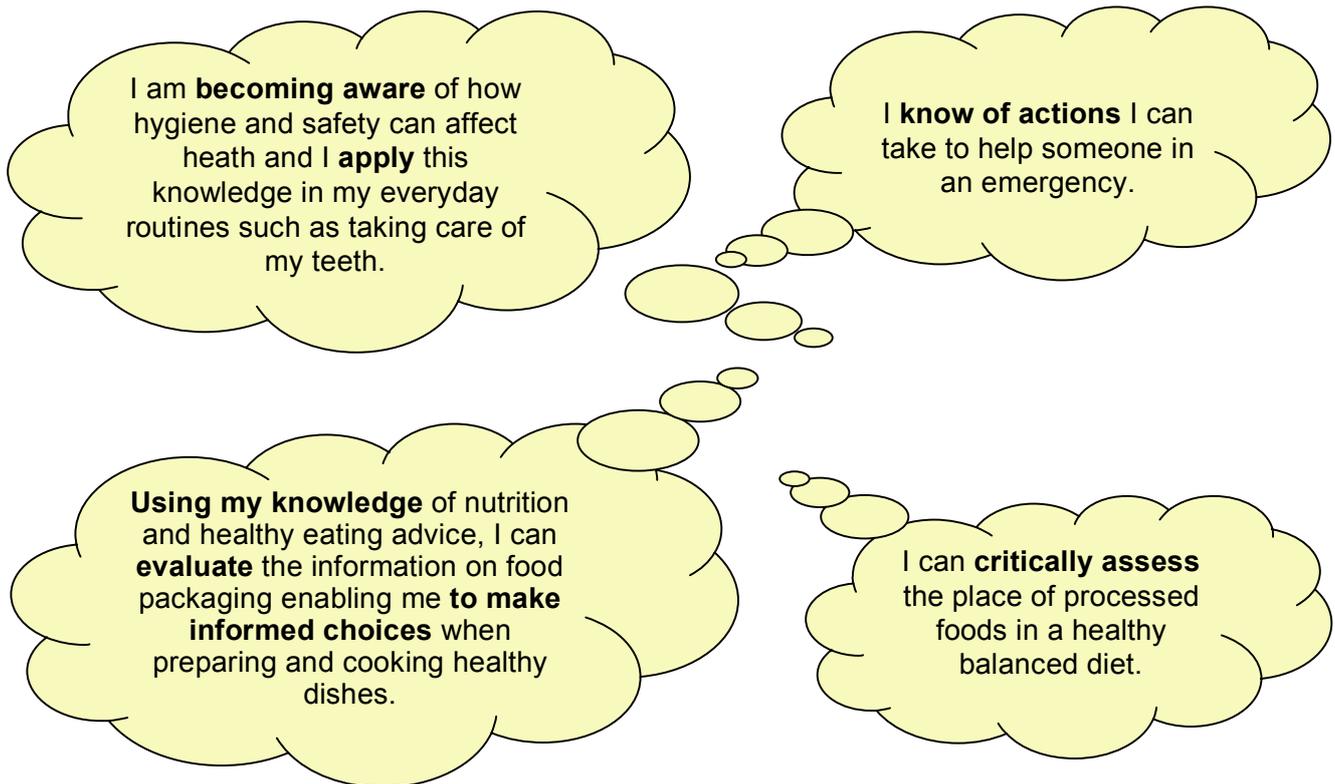
To plan learning experiences that are likely to promote progression in the skills that you have selected, you will need to think about how progression takes place. What will be the next steps in learning which will advance the skills? How will you involve learners in the process?

Progress will take place in different ways – sometimes in steady steps, sometimes in a spurt, sometimes in unexpected ways. As a teacher your professional judgement of what counts as progress will be particularly important. However, there are sources of help that you will find useful, especially in areas of learning where you may be less confident about your own expertise.

2.2.1 Using the experiences and outcomes to achieve progression

Working with the *experiences and outcomes* will help you because they contain signposts of progression in skills. If you look closely at the selection of *experiences and outcomes* on page 14 from 'Health and Wellbeing', you will be able to identify which words signal progression in skills and which are the more or less challenging skills. The writers of the *experiences and outcomes* used a taxonomy similar to the one described in this guide to help them to signpost progression in skills. You will see that they have used words such as 'apply', 'evaluate' and 'critically assess' as signposts. As a result, you will probably be able to identify which of the *Curriculum for Excellence* levels they are selected from. Try it!

You can identify the levels because you are using your professional expertise alongside the curriculum guidance. In the process, you are probably interpreting the words in the way that the writers intended. For example, knowing actions to take to help someone in an emergency is at the early level. Appropriate examples might include getting help from a known adult such as a parent or teacher. These words could be taken to refer to the skills of a trained first aider but they were not intended in that way. The *experiences and outcomes* in the lower part of the diagram contain more difficult skills at levels 2 and 3 – it is easy to see why.



As shown previously, most of the *experiences and outcomes* contain a skills element that is readily apparent. In some cases, however, more interpretation is required.

Throughout the writing process, I can check that my writing makes sense.
LIT 1-23a

Here the skill obviously lies in the ability to check that the writing makes sense. However, what this means in practice is not specified in detail although it is clear that the learner is expected to put himself/herself in the place of the reader and see whether the writing would be likely to convey its meaning as intended. The teacher will have to decide and advise on what kind of checks would be appropriate at this level.

Through play, I have explored a variety of ways of making sounds.
SCN 0-11a

In this instance all that is specified is the experience. The skill – which presumably relates to the practicalities of producing sounds using a variety of equipment – is entirely for the teacher to define.

However, there is more to using the skills dimension of the *experiences and outcomes* than identifying the skill that is expected at particular levels. Progression is obviously concerned with the development of skills both within levels and in passing from one level to the next. Progression within a level is normally concerned with consolidating and extending the specified skills and making use of them in more sophisticated ways. What this entails may require

careful interpretation by the teacher, especially in those instances where a descriptor applies across more than one level. Thus, in the following example which applies to the first and second levels, much more will be expected by way of explanation of preferences at, say, age 12 than at age 6.

I regularly select and read, listen or watch texts which I enjoy and find interesting, and I can explain why I prefer certain texts and authors.

LIT 1-11a and 2-11a

In moving between levels, there is often a requirement to take on new skills. The *experiences and outcomes* do not always make explicit what these additional skills might be. They can, however, be inferred from looking at the descriptors for the two adjacent levels. Sometimes the difference between the two will reveal the additional skills clearly.

To help me develop an informed view, I can recognise the difference between fact and opinion.

LIT 1-18a

To help me develop an informed view, I can recognise and explain the difference between fact and opinion, recognise when I am being influenced, and have assessed how useful and believable my sources are.

LIT 2-18a

Here the difference lies in the ability to explain the difference between fact and opinion and evaluate the quality of sources.

However, matters are not always as straightforward. The differences between the following descriptors are subtle and, indeed, open to a variety of interpretations.

I am increasing my knowledge and understanding of different forms of worship and artefacts within world religions and can explain their importance for followers of world religions.

RME 2-06a

I have researched and reflected upon the major ceremonies and customs of world religions and can explain the significance of these to the followers of these religions.

RME 3-06a

Teachers need to reflect carefully on examples of this type and decide for themselves what are the essential elements of the second descriptor that are not present in the first. Sometimes careful reading will suffice but, on occasion, a discussion involving analysis and professional judgement may be needed.

For a worked example of a technique that can be used in these situations see the table on the next page. This technique may appear very cumbersome but it should be remembered that no teacher will have to cope with all five levels. A comparison of two adjacent levels is the most that will be required.

	Early	First	Second	Third	Fourth
<i>Experience and outcome</i>	I am developing a sense of size and amount by exploring, using and communicating with others about things in the world around me.	I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate.	I can use my knowledge of rounding to routinely estimate the answer to a problem, then after calculating, decide if my answer is reasonable, sharing my solution with others.	I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem.	Having investigated the practical impact of inaccuracy and error, I can use my knowledge of tolerance when choosing the required degree of accuracy to make real-life calculations.
Additional elements at each level	Developing a sense of size and amount.	Using the sense of size and amount, to estimate answers. Calculating answers and comparing estimate with calculated solution.	Using technique of rounding in estimating answers. By comparison with calculated solution, considering critically the quality of the estimate.	Developing skills to determine appropriate levels of accuracy in estimating.	Assessing the practical impact of inaccuracy in calculations. Developing the concept of 'tolerance' and applying the concept to real-life calculations.
Skills	Appreciating differences in size from observation and exploration. Appreciating differences in quantity from observation and exploration. Articulating concepts of size and amount.	Carrying out simple numerical calculations. Estimating answers from observation. Comparing results obtained by calculation and estimation.	Carrying out more complex calculations. Rounding numbers.	Analysing problems to determine level of accuracy needed in answers. Applying the analysis to determine approach to rounding.	Understanding the impact of inaccuracy. Appreciating that some level of inaccuracy may have little practical effect. Forming a concept of 'tolerance'. Applying the concept to determine levels of accuracy in estimating.
Generic skill					
Activity for teachers	<i>In the empty boxes above insert the generic skills from the taxonomy that are contained within the more specific skills described above. Look at the definitions of the generic skills and notice which actions (e.g. seeing, finding out, comparing etc.) are associated with those generic skills. Which of them are particularly relevant to this set of outcomes?</i>				

2.2.2 Using a taxonomy to achieve progression

Another source of help is through taxonomies of skills which map out progression in broad categories of skills such as analysis or evaluation that are contained in the taxonomy outlined on page 7.

Remember that these skills are not really organised as a hierarchy. Knowledge is the foundation of all cognitive skills, but the others do not represent a fixed order of complexity. For example, evaluation is not always more challenging than synthesis, nor is synthesis always more complex than analysis. And progression takes place within each of the categories. For example, understanding that 5 is a bigger number than 3 usually comes long before an understanding of photosynthesis. Similarly, learners will use analysis to put two historic events in a time sequence and progress later to analysing causal relationships between the events.

These skills are broad and challenging skills. Learners will develop them throughout their schooling and their lives rather than acquiring them at a fixed point. Their profile of development will usually be 'jagged' depending on the context to which they are applied and their personal strengths. Learning involves revisiting them again and again at different times and in different contexts and increasing the level of challenge as we progress.

The taxonomy classifies cognitive skills in terms of eight broad categories. Learners at every stage use many of these types of skill. However, their actual activities change markedly as they mature and progress. It is important, therefore, to be able to use the taxonomy in ways that support this progression.

It is possible to use the taxonomy in conjunction with the *experiences and outcomes* in order to help ensure progression. Most of the *experiences and outcomes* give an indication of skills that they are designed to promote. Often these are quite specific. Even in such cases, however, it is usually possible to see which of the general transferable skills of the taxonomy is involved.

Here are a couple of examples:

I can use addition, subtraction, multiplication and division when solving problems, making best use of the mental strategies and written skills I have developed.

MNU 1-03a

Here the main transferable thinking skill is *application*. The learner has to make use of strategies previously acquired to solve new problems in different contexts.

To show my understanding across different areas of learning, I can identify and consider the purpose and main ideas of a text and use supporting detail.

LIT 2-16a

The learner has to *analyse* the text to find the main ideas and show *understanding* by being able to find evidence to support his/her views.

It is worth looking at the *experiences and outcomes* in this way in order to become familiar with the generic thinking skills. However, it is also possible to use the approach more systematically to build progression into your teaching.

You will always need to use your professional judgement in planning progression for your learners because progression for learners depends both on the skill and on the context in which it is used. It also brings in more factors than can be listed in an *experience and outcome*: the degree of independence or support provided in using the skill, the degree of complexity of the ideas or situation to which it is applied, the extent to which it can be used in new contexts.

A clear view of progression is a key factor in promoting good progress in learning. The complexity of progression in skills means that professional judgement is vital in applying curriculum advice in planning for learning.

2.3 Promoting skills through quality learning and teaching

The quality of learning and teaching and the approaches used in your classroom are the most important factors in determining whether your intentions and aspirations for your learners (identified in your planning) are realised in practice. They will be decisive in whether or not your learners make the progress that you intend.

This section is organised to help you to think about promoting skills during learning and teaching by:

- 1 involving learners fully in the learning process
- 2 building on learners' previous learning
- 3 focusing directly on skills development in learning and teaching
- 4 ensuring that learning opportunities are stimulating, active and challenging.

2.3.1 Involving learners fully in the learning process

One important achievement of *Curriculum for Excellence* is that learners are often more fully involved in dialogue about their learning.

Key purposes of dialogue with learners are to involve them in becoming clear about their prior learning, to motivate them and to engage them in understanding their learning and next steps in learning. Dialogue is one of the main ways that helps you get to know your learners better and find out about their existing skills, enabling you to personalise or customise their learning to take account of their needs and experiences. It also helps learners to learn more

effectively if they understand better how they learn – and discussing this with them helps to develop this understanding, sometimes called ‘metacognition’. Setting their own goals, resolving difficulties, discussing their progress and being clear about the nature of the skill that they are developing and what it ‘looks like’ when it is used well can all be developed through dialogue. So spend time talking about these aspects.

It helps the learner if different teachers use a common language when they discuss skills with learners.

Good dialogue enhances learning and encourages ownership of the learning by the learner.

2.3.2 Building on differences in prior learning

“At the proposal stage, they carry out a skills analysis and plan how to enhance strengths and address weaknesses throughout the project. In addition to the cognitive skills specified, the approach highlights self-confidence, strong communication/interpersonal skills and an ability to work independently.” *A teacher’s view*

It is an ideal of every teacher to personalise learning and teaching to take account of the differing needs of their learners. *Curriculum for Excellence* includes personalisation as an important feature of a quality curriculum. You can personalise learning and teaching when you know your learners well: the role of dialogue and diagnostic assessment in finding out about your learners and their prior achievements of skills has been stressed above. But personalisation has to take account of the realities of teaching and class sizes. Teachers move further along the spectrum towards personalisation by:

- seeing the whole child, taking an interest in learners as individuals, being aware of their lives and their skills
- listening and responding to their questions and ideas and providing opportunities for them to show their skills during learning
- reviewing their overall progress periodically, talking with them to assess their understanding and provide feedback on their next steps and progress
- taking account of their prior experiences, learning, and interests during teaching, showing relevance and designing tasks, activities and support in the light of their prior learning
- using a variety of learning approaches to help them learn in different ways, and
- working well with others who support them.

Personalising learning helps learners to use their existing skills in acquiring new skills at a pace that suits and challenges them.

2.3.3 *Focusing directly on skills development in learning and teaching*

To focus directly on skills development, it may help you to think about three aspects:

- 1 how you introduce a new skill
- 2 how you practise or consolidate the skill
- 3 how you encourage its application in new or unfamiliar contexts so that secure learning is promoted and learners forge ahead in some areas.

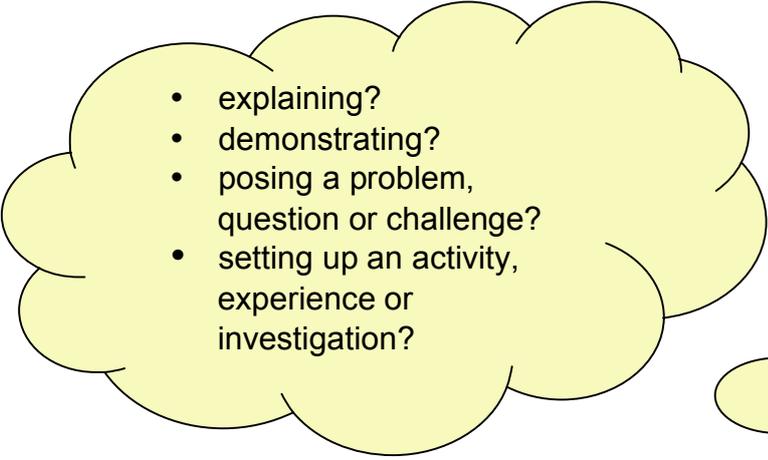
These are highlighted as important features of progression in *Building the Curriculum 5: a framework for assessment*. The ‘thought bubbles’ on page 21 will help you to think about each of these aspects. You will need to take into account the type of skill to be developed and the ways in which you intend to develop the skill discretely and in context.

Remember that a key aim of skill development is to encourage deep learning, to make learners think and understand and be involved in their own learning. So making learners think hard and operating at a challenging level for them should be key features of learning and teaching. You may have experience of approaches such as critical skills and philosophical enquiry which can help you make learners think hard and clarify their ideas during learning.

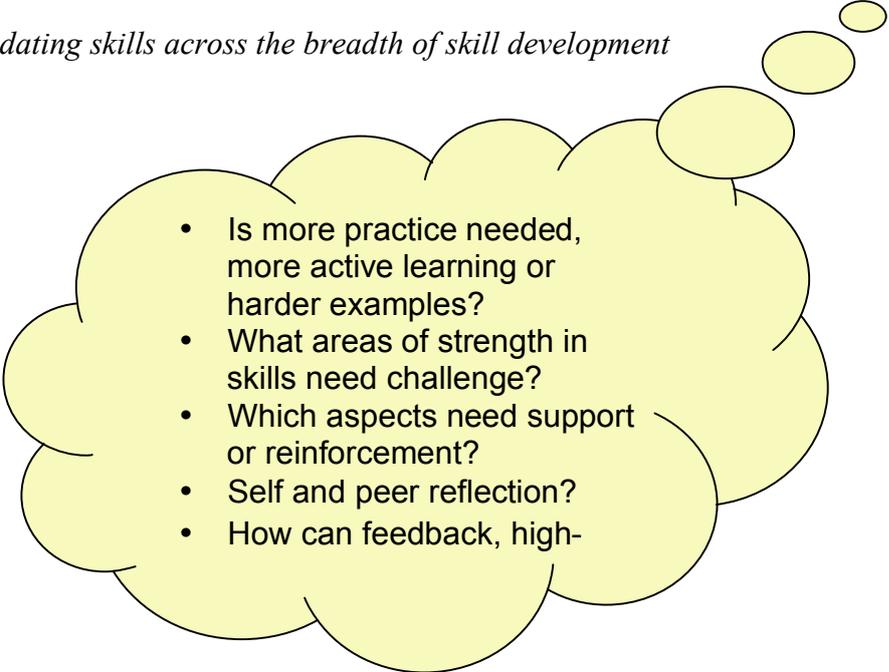
There are several courses and materials specifically designed for developing thinking skills. Programmes that have often been found beneficial include the ‘cognitive acceleration’ programmes in mathematics and science (CAME and CASE), Teaching for Understanding and Philosophy for Children. The World Wildlife Fund’s ‘Linking Thinking’ offers a good introduction to systems thinking, including at early stages.

One characteristic of any approach to developing thinking skills, especially at advanced levels, is that learners are expected to engage in tasks and enquiries that are ‘open-ended’, in other words there is no clearcut single answer. Often it is difficult to predict the direction the enquiry will take. This calls on the teacher to be prepared to give up a degree of control. This kind of ‘leap in the dark’ calls for confidence and a professional capacity to gather divergent ideas together in a way that makes sense at the end of the lesson or group of lessons.

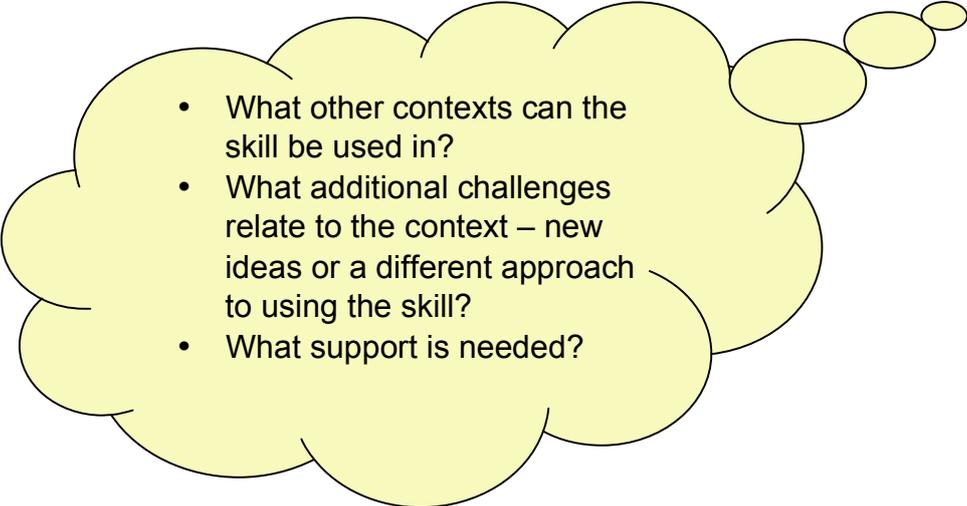
Introducing skills in learning and teaching

- 
- explaining?
 - demonstrating?
 - posing a problem, question or challenge?
 - setting up an activity, experience or investigation?

Practising or consolidating skills across the breadth of skill development

- 
- Is more practice needed, more active learning or harder examples?
 - What areas of strength in skills need challenge?
 - Which aspects need support or reinforcement?
 - Self and peer reflection?
 - How can feedback, high-

Encouraging application in new or unfamiliar contexts

- 
- What other contexts can the skill be used in?
 - What additional challenges relate to the context – new ideas or a different approach to using the skill?
 - What support is needed?

If you look at a section of the *experiences and outcomes*, you will find many examples of active ways of introducing and consolidating skills and using them in new contexts.

Taking steps to introduce, consolidate and use skills in different contexts will help to promote skills during learning and teaching and provide a good basis for assessing progress.

2.3.4 Ensuring that learning opportunities are stimulating, active and challenging

At a simple level, skills are about being able to ‘do’ certain things so that acquiring skills is helped by *active* thinking and doing. Learning becomes more active when the learner pays attention, becomes engaged and thinks hard. As a teacher you can increase the likelihood of your learners becoming more actively engaged when you are introducing, developing or applying skills, for example by:

- interacting with them to involve them during teaching and practice (if you don’t interact with them they can quickly become more passive)
- posing questions, challenges or problems so that they need to respond by thinking or doing – and so that you can see their response
- asking them to explain to you or to other learners what they are thinking
- getting them to plan investigations or experiments and work cooperatively
- making some activities first-hand or experiential, and
- connecting what they are learning with their experiences, interests or feelings.

Active learning will often stimulate learners. Other features that promote stimulating learning include well-chosen contexts for developing ideas and skills; lively, enthusiastic teaching with positive and constructive feedback; and involving learners in directing their learning and monitoring their progress.

Challenge makes learners think hard and develops their skills to the full. As teachers, we help to take learners to their next stage by the expectations that we set, by challenging them through our dialogue, through the examples that we model, the activities that we plan and the tasks that we set to help them to progress beyond their current levels to those just within reach. So getting the challenge level right is an important part of promoting progression.

As in other aspects of learning, you progress in skills by being challenged to extend your capabilities and go beyond what you have already achieved. Assessing learners' 'best level' of skill development by trying out more demanding tasks is one important way of getting the challenge right.

To plan for challenge, it helps for learners and teachers to be aware of the additional elements or sub-skills that will be involved in moving from one level to another. Discussing the difference between the skills embodied in one level of the *experiences and outcomes* and those at the next level will help in planning the right level of challenge.

2.4 Assessing and tracking progress in skills

There is detailed advice on assessment for *Curriculum for Excellence* in *Building the Curriculum 5: A Framework for Assessment*. This section highlights some aspects that are particularly relevant to assessing and recording learners' progress in skills development.

Previous sections have stressed that a clear view of progression in skills is important for assessing and recording skills development because it helps you to decide what to look for in learners' work.

As with other areas of learning, to assess progress in skills you will need to:

- 1 provide opportunities for learners to show what they have learned and what they can do
- 2 gather a range of evidence of learners' progress in acquiring and applying skills in different ways
- 3 provide timely, focused feedback and plan next steps in learning
- 4 involve learners in assessing and recording their own progress, and
- 5 record and share information on learners' progress.

2.4.1 Provide opportunities for learners to show what they have learned and what they can do

You may know a lot about your learners' progress in the skills that you plan to develop through your own or colleagues' previous experience and records. If, on the other hand, you have little information, pupils may be able to tell you about their achievements from planning and tracking their own learning. If not, you need to enable them to show their skills and identify any gaps in development by designing an activity for them to demonstrate the particular skills. The information you have will help you to plan suitable starting points to take learners' skills forward, catering for their differing needs.

Whatever your starting point, you need to plan and build in appropriately challenging opportunities for learners to show what they can do, and to reveal any gaps in development by designing learning activities where they can apply the relevant skills.

For example, you may aim to develop skills in ‘synthesising information from different sources where some of the information is conflicting’ in a healthy eating context. Synthesising information may be a new skill for your learners or some may have experience of it from the media, discussions at home or work in other curriculum areas.

You will need to plan relevant activities that involve the use and application of these skills. Depending on your starting point, you can decide how challenging to make them. You could use two straightforward sources of information with some clear elements of conflict, or you might judge that your learners could cope with more and different types of information with more subtle conflicts of fact or ideas. In tackling the activities, the responses of your learners through what they say, write, make or do will help you to ‘tune in’ to their progress in synthesising information and to talk with them about their next steps in learning.

2.4.2 Gather a range of evidence of learners’ progress in acquiring and applying skills in different ways

Previous sections have emphasised that skills are developed through ‘active thinking and doing’. This has implications for the way you assess progress, both as part of ongoing learning experiences and in summative assessments or qualifications. You need to build in assessment of progress and achievement in ways that clearly reflect the nature of the skills involved. Those designing new qualifications have recognised the need for increased emphasis on assessment of skills and the need to assess achievement in ways that reflect the nature of the skills acquired.

For example, gathering evidence of learners’ skills in analysis or creativity or enquiry will often require more open-ended activities and rely more on professional ‘best fit’ judgements across a range of evidence than assessment of routine knowledge. Similarly, assessment of practical skills such as designing and making a model or leading a group discussion will be best done by observing these skills in action.

During learning and teaching it is important to keep the big picture of learners’ progress in mind and to keep the assessment process manageable. Often a learner’s ability to carry out a particular task can provide evidence that they have developed and linked several different related skills, and there should then be no need to assess each of these separately.

For example, if a learner prepares a meal successfully in a Technologies lesson, you can assume that skills in weighing, following a recipe, timing and coordinating several activities have all been used and applied successfully. Similarly, a learner's presentations on a researched topic in history can provide evidence of using, linking and applying skills in finding, understanding and presenting information, and of listening and talking, as well as coordinating activities.

You will need to take stock of learners' progress in skills periodically by

- considering strengths and needs across the breadth of skill development indicated in the *experiences and outcomes*
- discussing each learner's progress in aspects of skill development which are challenging for them, and
- considering how well they can apply skills in new contexts as evidence of deep learning.

2.4.3 Provide timely, focused feedback and plan next steps in learning

Feedback must be timely, focused on the intended learning and based on a sound understanding of what progression in a particular aspect of skills development looks like. This is at the heart of good assessment and part of 'teaching as enquiry'. By reflecting on the evidence you have gathered and analysing what it tells you about learners' development and progress in the selected skills, you can gain a clear understanding of how successful their learning has been and what needs to be done to improve it, for both individuals and the group as a whole.

By working through this process together with your learners and helping them to both give and receive careful feedback, you can help them to understand better

- what the skills in focus are about
- what success in using and applying them in different ways looks like
- where their own strengths lie, and
- how they can improve their learning.

It will also help learners to develop the language they need to talk about their skills and explain their own and others' learning, which in turn will help them to learn more and learn better.

2.4.4 *Involve learners in assessing and recording their own progress*

Involving learners in the assessment process is a key way of helping them to manage and ‘take ownership’ of their learning, by thinking about what they have achieved and planning ahead. Involving them in assessing and recording their own and each other’s progress and planning the next steps in learning can deepen their understanding and reinforce their sense of achievement. It can also help the manageability of the assessment process for teachers.

Learners who have been involved in self- and peer-assessment and personal learning planning speak positively about how the process has helped them to learn and develop their skills:

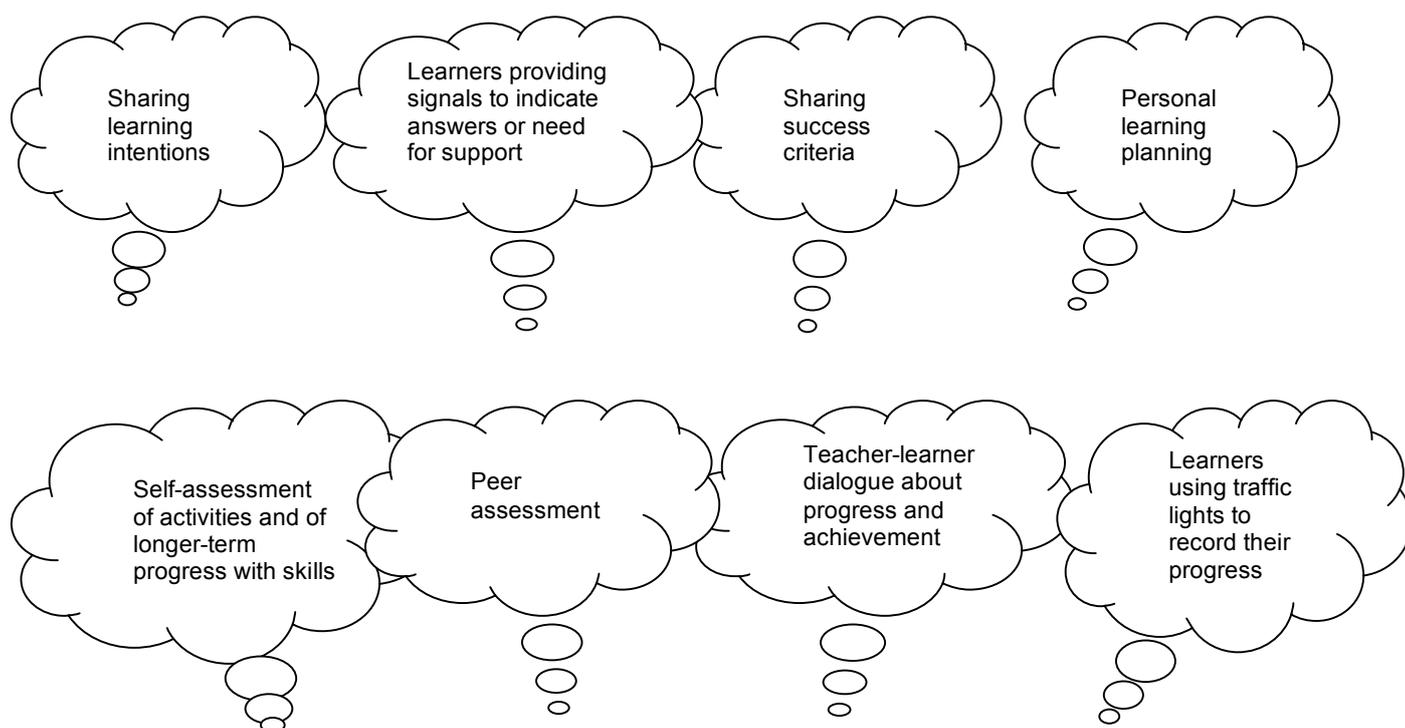
“I felt it has taught me a lot about myself and how I can sometimes shrug someone else’s ideas off before giving a chance to see if they work.”

“I am much more confident in writing stories using good vocabulary. I am happy to share my stories with others in the class.”

Activity

This guide has stressed the importance of involving learners in the process of skills development. Drawing on your experience of *Assessment is for Learning*, discuss with a partner how you can involve learners in the assessment and recording of their own progress in skills.

At the end of the activity, compare your ideas with those in the speech bubbles below.



2.4.5 Record and share information on learners' progress

Recording of progress in skills needs to be manageable and to involve the learner wherever possible. Making learners responsible for aspects of recording involves them in managing their own learning and thus eventually assists them to learn better. Many schools have found successful and manageable ways of involving learners in self- and peer-assessment and personal learning planning.

From day-to-day and week-to-week you may sometimes want to focus on the detail of skills in order to identify learners' strengths and development needs and plan the next steps in their learning. What you learn about their progress will be evident in your regular planning, but need not necessarily be formally recorded.

Building the Curriculum 5 advises that from time to time you will need to take stock of and record progress, providing 'summary statements of progress within and through the curriculum levels'. For this process the focus should be on the 'big picture' of skills development, rather than the detail of separate skills. Recording progress in each skill separately can lead to over-elaborate and fragmented record-keeping, which can be more confusing than helpful for learners and their families.

However, when a learner makes significant progress in skills, that is worth recording and sharing with parents and colleagues through reporting. Since skills are developed and transferable *across*, as well as *within*, curriculum areas, it is also important to share your judgements about significant progress with colleagues who teach the same group.

We suggest that you will find it helpful to distinguish between:

- the detail of skills development that is useful for short-term diagnosis, feedback and planning next steps in learning, *versus*
- 'the big picture' which helps to build up understanding of significant progress for recording and reporting skills development.

The Activity on page 28 should help with this.

Activity

The examples below show this distinction. Discuss them with a partner and identify three more examples relating to your current teaching of skills.

Detailed skills	Significant progress
Moira can identify half and quarter-hours on the clock.	Moira can tell the time confidently.
John showed a good understanding of housing during the industrial revolution in a written piece.	John's work this term shows a good understanding of many aspects of lifestyle during the industrial revolution. He applied this well in making comparisons with life today, supported by evidence.
Amy gave a clear talk illustrated by photos to the class on a visit to the zoo.	Amy has good skills in making presentations, communicating main points clearly and using examples and illustrations effectively.
Balbir's picture showed a good awareness of colour and tone.	Balbir's folio shows many good examples that illustrate her skill in using line, colour, tone pattern and texture to express her own ideas in artwork.

Conclusion

The conscious and systematic development of skills is, in large measure, a field of developing practice. It also represents one of the most visible and ambitious changes that *Curriculum for Excellence* is initiating. Extensive professional development will also be needed. As good practice emerges, Education Scotland and local authorities will have a key role in ensuring that it spreads and becomes influential.

This guide is intended to help teachers get started. It does not pretend to offer comprehensive advice with a long shelf-life in front of it. We hope, however, that you will find it useful.

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