Scottish Network for Able Pupils

The Scottish Government

Guidance for addressing the needs of highly able pupils.

Foreword

Every school in Scotland will have pupils who are capable of high achievement in one or more areas. Identifying these pupils and fully meeting their needs can prove complex and challenging for parents, teachers and support staff. These guidelines include current information from research and practical experience that will be useful to teachers and schools as they seek to meet the needs of all learners.

'Building the Curriculum 3' provides the framework for planning a curriculum which meets the needs of all children and young people from 3 to 18, and offers amongst other things personalisation, enjoyment and depth. Many learners require additional support in order to fully access their entitlements under Curriculum for Excellence. This includes learners who demonstrate particularly high abilities in one or more areas. Discussing the needs of these children and young people helps us to ensure their needs are met through personalisation and appropriate input.

There is much debate about what to call this group of pupils. They are often referred to as:

- Able pupils
- More able pupils
- The very able
- Exceptionally able
- Gifted
- Talented
- Gifted and talented
- Those with exceptional talent
- Pupils with marked aptitude

Each of these terms is problematic. Comparative terms such as 'more able' are not helpful. If one pupil can be "more able" than presumably another can be "less able." At what are they "more able" and "more able" than whom? Some terms suggest that high ability is innate and requires no effort on the part of the learner. In other words having high ability is like being given a gift. However the work of Levitin (2006) suggests that ten thousand hours of study are required to achieve the level of world class expert – in anything. Hard work and effort are part of the equation, as is environment and opportunity.

While it is recognised that no one term is ideal, throughout this document the term "highly able" is used. For the purposes of this document, we have assumed that "highly able pupils" refers to pupils who are working or who could be working ahead of their age peers. We have also assumed that the term includes pupils who are "highly able" across the curriculum as well as those who are "highly able" in one or more particular areas. Underpinning the

activities and suggestions is the idea that high ability is just one factor in school success. Appropriate opportunities and appropriate support from home and school, along with hard work, practice and effort also contribute to school success.

These guidelines build on the provision in the Additional Support for Learning (Scotland) Act (2004) and on Curriculum for Excellence. We hope that all who use them will find them useful in their work with highly able pupils and their families.

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Contents

Introduction

These guidelines aim to support the learning and teaching of highly able pupils and reflect the good practice which is already taking place in schools across Scotland. They are non-statutory and are consistent with the aims and objectives of Curriculum for Excellence.

The Standards in Scotland's Schools etc (2000) Act confirmed Scotland's commitment to an inclusive education system by asserting the right of every child to an education and introducing the presumption that pupils will be educated in mainstream schools unless exceptional circumstances apply. The 2000 Act enshrined the rights of able pupils in law by stating that education should be *directed to the development of the personality, talents and mental and physical abilities of the child to their fullest potential* (Section 2).

The most recent legislative development is the Education (Additional Support for Learning) (Scotland) Act 2004. This Act explicitly ties the education of able pupils into the special education arena. The Act replaced the term Special Educational Needs (SEN) with the term Additional Support Needs (ASN) because it was felt that SEN had become too firmly associated with pupils with disabilities and difficulties. This new term was accompanied by a redefinition of what it means to have educational 'needs'. The Act states that

A child or young person has additional support needs for the purposes of this Act where, for whatever reasons, the child or young person is, or is likely to be, unable, without the provision of additional support to benefit from school education provided or to be provided for the child or young person.

(Section 1)

The Code of Practice (2005), which accompanied the Act, clarifies this wider concept of additional support needs.

…all children and young people benefit from school education when they can access a curriculum which supports their learning and personal development; where teaching and support from others meet their needs; where they can learn with and from their peers and where their learning is supported in the home and in the wider community.

(Code of Practice, 2005, Section 2.2, p19)

The Code goes on to give four factors that may contribute to pupils requiring support: family circumstances; disability or health, the learning environment and social and emotional factors. It, helpfully, adds that

A need for additional support should not imply that a child or young person lacks ability or skills… more able children or young people may require a more challenging education provision than that of their peers.

(Code of Practice, 2005, Section 2.6, p21)

While a positive learning environment may compensate for a poor family background (and vice versa), where two or more of these factors exist learning can become problematic.

The next major challenge for education is the implementation of Curriculum for Excellence (CfE) which sets out the values, purposes and principles for the curriculum 3-18 for all children and young people. The aim of CfE is *to engage teachers in thinking from first principles about their educational aims and values and their classroom practice* (Improving Scottish Education, 2006). CfE outlines four purposes (successful learners; confident individuals; responsible citizens; and effective contributors) that education is charged with developing in all young people. 'Building the Curriculum 3' provides the framework for planning a curriculum which meets the needs of all children and young people from 3 to 18, ensuring a focus on developing the four capacities at every stage. In particular it highlights the needs for challenge, depth of learning, personalisation and choice.

In terms of cross curricular opportunities and open ended outcomes CfE appears to offer many opportunities for class teachers to ensure that able pupils are well catered for.

Section One A brief look at ability

1.1 What do we mean by 'able'?

A number of theories and definitions have developed as a result of researchers and academics trying to understand the concepts of giftedness and talent. However, despite copious contributions from fields such as philosophy, psychology, education and sociology and debate on the subject that can be traced back to Plato there is, as yet, no universally accepted definition.

There is however a growing international commitment to a very wide concept of intelligence which recognises multiple domains of intelligence and the existence of individual intelligence profiles (Gardner, 1983; Sternberg, 1985; Renzulli, 1986). In addition there is a substantial body of evidence that supports the idea of intelligence profiles being significantly influenced by environmental factors, alongside genetic influences.

Given that environmental factors can influence the development of intelligence the emphasis in education must be on the learning environment. It is essential that the learning environment and curriculum accommodates this wider and more individualistic view. Curriculum for Excellence provides just such an opportunity and the seven principles on which it is built provide the vehicle to nurture such a view. Development of the new curriculum, therefore, should involve from its inception:

- challenge and enjoyment
- personalisation and choice
- breadth
- depth
- progression
- coherence
- relevance

1.2 Who are we talking about?

There is no single test that will tell us whether or not a child or young person is or is not highly able, and so as teachers we need to:

1. assess current knowledge, skills, attainment and rate of progress;
2. look for certain behaviours associated with high ability or underachievement; and
3. gather information from others such as the pupils themselves, parents, peers, and other professionals who work with the child.

The problem with our assessment of current knowledge, skills, attainment and rate of progress is that this can be limited by the way that we design opportunities for learning in the classroom. For example, provision that is overly dependent on a wide vocabulary limits the achievement of children who have a hearing impairment or for whom English is an additional language. In

addition, identification processes that fail to take account of pupils' achievements outside school will be fundamentally flawed. This means that the first thing we need to look at – even before we attempt to profile pupils' abilities - is provision within our own classrooms and the availability of opportunities beyond them.

That brings us back to one of the first questions teachers ask - "how do you identify a highly able pupil?" Highly able pupils do not always develop evenly across all areas of ability. Pupils' abilities manifest themselves in different ways, at different times and in different contexts. A pupil might be highly able in one subject and yet struggle desperately in another. Due to this atypical development, there is a need to go beyond the traditional ideas of identification and to explore an holistic profile of the pupil including their educational, emotional, social and psychological needs.

The 'sports approach' to identification (Freeman. 1998) suggests we need to:

- provide a range of opportunities to all;
- see identification as a continuous and fluid process;
- use multiple criteria for inclusion in challenging opportunities;
- adopt increasingly sharp criteria at subsequent learning stages;
- gather evidence from a variety of settings;
- present students' abilities as profiles rather than single figures; and
- recognise that the ability to demonstrate skills and show aptitudes may be affected by outside influences such as culture, gender and attitudes.

The sports approach ensures that pupils are regularly and consistently given the opportunity to demonstrate skills and abilities that can then be identified and further challenged.

Throughout any identification process we need to be aware of the possibilities for:

- underachievement - for example some boys will deliberately underachieve because it is 'uncool' to be a 'geek';
- under-representation - for example children with disabilities or who have English as an additional language (EAL) are often underrepresented when 'highly able children' are identified;
- boredom - for example some children are simply bored by consistently being given repetitive work or work that lacks challenge;
- the existence of exceptional individuals - for example some children have, even before entry to school, more highly developed intelligence profiles than children of a similar age and stage. These children also require additional challenge.

With no agreed definition of who the highly able are and no single way to identify highly able pupils the teachers' understanding of this area becomes key in the identification and provision process.

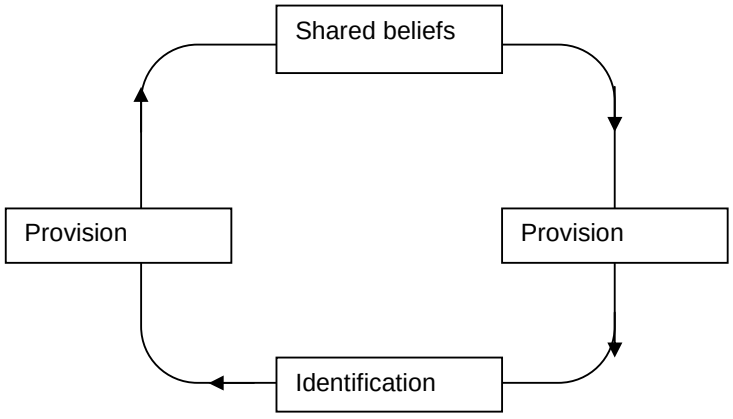
For the purposes of this document, we have assumed that the term highly able pupils refers to pupils who are working or have the potential to work ahead of their age peers. We will also assume that the term includes pupils who are highly able across the curriculum as well as those who are highly able in one or more particular areas.

The following model offers a way for staff to reflect on their beliefs and consider how these beliefs then shape provision.

Section Two Model for Reflection

The model for reflection does not rely on a set definition of highly able young people; rather it examines beliefs, provision and identification in this very specific order. The model also builds on Freeman's Sports Approach in that it is a fluid and self evaluating process. Through a five step cyclical process, it asks people to reflect on their own personal beliefs and come to shared understandings of the concept in order to provide appropriate opportunities for identification and subsequent challenging provision. Rather than start with identification, it looks first at trying to establish the practical aspects of what a highly able pupil would be able to demonstrate and could be asked to do.

In this model it is suggested that all educators would do well to clarify their beliefs about what constitutes a highly able learner (step one – shared beliefs). Only having discussed the relevant issues can provision be examined critically for the range and quality of opportunities available (step two - provision). These opportunities need to exist not only to teach those abilities deemed key to highly able learners across subject areas, but also to acknowledge those who are already able to display them in abundance (step three - identification). It is imperative, however, that we do not stop there. Further challenge for those who already display these abilities to a high level is required (step four - provision). This process may well make us redefine what we believe intelligent behaviours in particular subject areas to be (step five – shared beliefs).



(Smith and Doherty, 1998)

2.1 Step one - Shared beliefs

Aim – to reach a tentative agreement on what we mean by the term highly able pupil.

Activity - hold a staff development session to discuss key issues.

Workshop

This workshop has three steps. The first two steps are undertaken in small groups and the third should be undertaken as a whole school/centre/ department. The minimum time required for this workshop is two hours and twenty minutes. This can be done over twilight sessions or as part of an in-service day.

Key Issues

• This is a very complex area
• No single simple definition exists
• Identifying ability presents a challenge when no single definition exists
• Establishments need to reach agreement on a working definition/s in order to make progress

Preparation

- On pages 14 and 15 are nine definitions/descriptions/models of ability taken from the literature.
- Photocopy the pages onto card and cut them into single definitions.
- Make as many sets of definitions/descriptions/models as required. There should be one set for each group of four taking part in the workshop.
- Place each set of definitions/descriptions/models in an envelope.

Materials required

- One set of definitions per group
- One coin per person in the group
- One table per group

Group activity - step one

- The group decides on a reader and a timekeeper
- The reader takes the first definition from the envelope and reads it aloud to the group. He or she then places the definition on the centre of the table
- The group is given one minute by the timekeeper to consider the definition.
- At the end of one minute's thinking time members of the group all place their coin on the table (at the same time) to indicate how much they agree or disagree with the statement. The closer the coin is to the card the more the person agrees with the definition.

- Each person takes a turn and is given one minute to explain why they have placed their coin in that position i.e. in what ways they like/agree or don't like/disagree with the definition.

Total time: 45 minutes

Group activity - step two

Once each definition has been considered, try to reach agreement on one definition that most closely matches the group's view of high ability. It is acceptable to retain more than one definition if agreement cannot be reached and it is also acceptable to adapt definitions to make them more in line with the group's views.

Total time: 20 minutes

Whole school/centre/department activity - step three

Try to arrive at a working definition for your school/centre/department drawn from the thoughts of the small groups.

Now consider: are your highly able pupils catered for in your working definition?

Total time: 30 minutes

Characteristics

Having decided on a definition, what sorts of characteristics might you associate with a highly able pupil in your classroom?

- 15 minute discussion about the characteristics you might expect to see
- Compare the list you create with the characteristics outlined in the sheets on the following pages
- Feedback to larger group

Total time: 45 minutes

Total time for whole session: 2 hours 20 minutes

Definitions/descriptions/models of ability

Gifted and talented children are those identified by professionally qualified persons as children who, by virtue of outstanding abilities, are capable of high performance. They require differentiated educational programmes, and services beyond those normally provided by the regular school programme, if they are to realise their contribution to self and society.

Exceptionally highly able pupils are those who may demonstrate outstanding potential in one or more areas, and whose functioning may be so far in advance of their peer group that a school provides additional learning experiences that develop, enhance and extend their identified abilities.

An exceptional pupil is one who is outstanding in either potential or achievement in one or more spheres of activity which can be regarded as beneficial to the pupil and to society.

Children capable of high performance include those who have demonstrated achievement and/or potential ability in any of the following areas:

- general intellectual aptitude
- specific academic aptitude
- leadership ability
- creative or productive thinking

Multiple Intelligences:

- linguistic: a facility with language, patterning and systems;
- mathematical and logical: likes precision and enjoys abstract and structured thinking,
- visual and spatial: thinks in pictures and mental images, good with maps, charts and diagrams, uses movement to assist learning;
- musical: sensitive to mood and emotion, enjoys rhythm, understands complex organisations of music;
- interpersonal: relates well to others, mediator, good communicator;
- intrapersonal: self-motivated, high degree of self-knowledge, strong sense of values;
- kinaesthetic: good timing, skilled at handicrafts, likes to act and touch, good control of objects.
- naturalistic: the ability to see patterns and connections in the living world and the environment

Giftedness can come in several varieties. Some gifted individuals may be particularly adept at applying the components of intelligence, but only to situations which are academic in nature. They may thus be 'test smart' but little more. Other gifted individuals may be particularly adept at dealing with novelty, but in a synthetic rather than an analytical sense... other gifted individuals may be 'street smart' in external contexts, but at a loss in academic contexts. Thus, giftedness can be plural rather than singular in nature.

The 'gifted'. The term 'gifted, refers to children who are exceptionally able intellectually. This means those youngsters who:

- score an IQ of 130 or above on the Wechsler Intelligence Scale for Children, or the Scale for Adults, or a correspondingly high level on another well-recognised intelligence test
- obtain a standardised score of 130 or above on an English or mathematics attainment test such as produced by the National Foundation of Educational Research (NFER)
- are the winners or runners up in national or regional competitions in essay writing, mathematics, engineering or some other branch of technology, or design

The ability to comprehend, absorb and manipulate knowledge in both the synthetic and analytic modes, though this intelligence does not have to be ‘evident in a purely academic form'.

Checklist

The following characteristics (adapted from the 1998 Ofsted review of research by Joan Freeman) are not necessarily proof of high ability but the presence of some of these behaviours may alert teachers to the need to enquire further into a pupil's learning patterns and abilities.

He or she may:

- Be a good reader
- Be very articulate or verbally fluent for their age
- Give quick verbal responses (which can appear cheeky)
- Have a wide general knowledge
- Learn quickly
- Be interested in topics which one might associate with an older child or adult
- Communicate better with adults than peers
- Have a range of interests, some of which may border on obsessions
- Show unusual and original responses to problem-solving activities
- Prefer verbal to written activities
- Be logical
- Be self-taught in their own interest areas
- Have an ability to work things out in their head very quickly
- Have a good memory that they can access easily
- Be artistic
- Be musical
- Excel at sport
- Have strong views and opinions
- Have a lively and original imagination/sense of humour
- Be sensitive and aware
- Focus on their own interests rather than on what is being taught
- Be socially adept
- Appear arrogant or socially inept
- Be easily bored by what they perceive as routine tasks
- Show a strong sense of leadership
- Not necessarily be well-behaved or well liked by others

Underachievement

He or She may:

- Have low self-esteem
- Be confused about their development and about why they are behaving as they are
- Manipulate their environment to make themselves feel better
- Tend towards a superior attitude to those around them
- Find inadequacy in others, in things, in systems, to excuse their own behaviours

Subject Specific Checklists

The following checklists are drawn from the QCA Gifted and Talented website (www.nc.uk.net/gt/) and Islington Arts and Media school (www.iamschool.co.uk) with some adaptations.

Subject	Identifying Highly Able Pupils
English (Literacy)	Pupils who are highly able in English are likely to show some or all of the following characteristics. Creative flair • writing or talking in imaginative and coherent ways • elaborating on and organising content to an extent that is exceptional for their age Stamina and perseverance • using any suitable opportunities to produce work that is substantial and obviously the product of sustained, well-directed effort Communicative skills • involving and keeping the attention of an audience by exploiting the dramatic or humorous potential of ideas or situations in imaginative ways • taking a guiding role in helping a group to achieve its shared goals, while showing sensitivity to the participation of others • writing with a flair for metaphorical or poetic expression • grasping the essence of particular styles and adapting them to their own purposes • expressing ideas succinctly and elegantly, in ways that reflect an appreciation of the knowledge and interests of specific audiences • using ICT to research ideas and create new text Ability to take on demanding tasks • researching, comparing and synthesising information from a range of different sources, including ICT • engaging seriously and creatively with moral and social themes expressed in literature Arguing and reasoning • creating and sustaining accounts and reasoned arguments at a relatively abstract or hypothetical level, in both spoken and written language • grasping the essence of any content and reorganising it in ways that are logical and offer new syntheses or insights • justifying opinions convincingly, using questions and other forms of enquiry to elicit information and taking up or challenging others' points of view Awareness of language • understanding the nature of language and showing a special awareness of features such as rhyme, intonation or accent in spoken language, and the grammatical organisation of written texts

	• showing an interest and enthusiasm for language study, including an awareness of the relationship between the sounds and words of different languages that are not apparent to most of their peers. Some pupils who are highly able in English may generally perform at levels of literacy that are notably advanced for their age group. Other pupils may have unusual abilities in specific areas -- such as poetry, drama, or their understanding of the nature and structure of language -- while being unexceptional in the rest of their English work. In these cases, it may be hard to relate pupils' ability to level descriptions. It is vital to have a whole-school perspective in order to recognise how high ability in English is revealed through other subjects. In other words literacy across learning which is one of the responsibilities of all outlined in CfE.

Subject	Identifying Highly Able Pupils
Mathematics (Numeracy)	Pupils demonstrate high ability in mathematics in a range of ways and at varying points in their development. Pupils who are highly able in mathematics are likely to: • learn and understand mathematical ideas quickly; • work systematically and accurately; • be more analytical; • think logically and see mathematical relationships; • make connections between the concepts they have learned; • identify patterns easily; • apply their knowledge to new or unfamiliar contexts; • communicate their reasoning and justify their methods; • ask questions that show clear understanding of, and curiosity about, mathematics; • take a creative approach to solving mathematical problems; • sustain their concentration throughout longer tasks and persist in seeking solutions; • be more adept at posing their own questions and pursuing lines of enquiry. Some pupils who are highly able in mathematics perform at levels that are unusually advanced for their age. Other pupils with exceptional mathematical potential may not demonstrate it in this way. For example, pupils may have high levels of mathematical reasoning but be unable to communicate their ideas well orally or in writing. Sometimes highly able pupils reject obvious methods and answers as too easy, and opt for something more obscure. In these cases, formal testing alone is insufficient as a basis for identification. It is often helpful for teachers to provide enrichment and extension activities and to observe pupil responses to challenging activities.

Subject	Identifying Highly Able Pupils
Science	Pupils who are highly able in science are likely to: • be imaginative • read widely, particularly science or science fiction • have scientific hobbies and/or be members of scientific clubs and societies • be extremely interested in finding out more about themselves and things around them • enjoy researching obscure facts and applying scientific theories, ideas and models when explaining a range of phenomena • be able to sustain their interest and go beyond an obvious answer to underlying mechanisms and greater depth • be inquisitive about how things work and why things happen (they may be dissatisfied with simplified explanations and insufficient detail) • ask many questions, suggesting that they are willing to hypothesise and speculate • use different strategies for finding things out (practical and intellectual) -- they may be able to miss out steps when reasoning the answers to problems • think logically, providing plausible explanations for phenomena (they may be methodical in their thinking, but not in their recording) • put forward objective arguments, using combinations of evidence and creative ideas, and question other people's conclusions (including their teacher's!) • decide quickly how to investigate fairly and manipulate variables • consider alternative suggestions and strategies for investigations • analyse data or observations and spot patterns easily • strive for maximum accuracy in measurements of all sorts, and take pleasure, for example, from reading gauges as accurately as possible (sometimes beyond the accuracy of the instrument) • make connections quickly between facts and concepts they have learned, using more extensive vocabulary than their peers • think abstractly at an earlier age than usual and understand models and use modelling to explain ideas and observations. Pupils may be willing to apply abstract ideas in new situations; pupils may be able to use higher-order mathematical skills such as proportionality, ratio and equilibrium with some complex abstract ideas when offering explanations • understand the concepts of reliability and validity when drawing conclusions from evidence • be easily bored by over-repetition of basic ideas • enjoy challenges and problem solving, while often being self-critical • enjoy talking to the teacher about new information or ideas • be self-motivated, willingly putting in extra time -- (but they may approach undemanding work casually and carelessly) • show intense interest in one particular area of science (such as astrophysics), to the exclusion of other topics.

Subject	Identifying Highly Able Pupils
Design & Technology	Pupils who are highly able in design and technology are likely to: • demonstrate high levels of technological understanding and application • display high-quality making and precise practical skills • have flashes of inspiration and highly original or innovative ideas • demonstrate different ways of working or different approaches to issues • be sensitive to aesthetic, social and cultural issues when designing and evaluating • be capable of rigorous analysis and interpretation of products • get frustrated when a teacher demands that they follow a rigid design-and-make process • work comfortably in contexts beyond their own experience and empathise with users' and clients' needs and wants. Teachers may identify pupils who are highly able in design and technology by: • performance at an unusually advanced level for their age group • the outcomes of specific tasks • evidence of particular aptitudes • the way pupils respond to questions • the questions that pupils ask themselves. It is important for teachers to allow time for personal interaction with pupils. By observing the techniques and strategies that pupils use to tackle problems, teachers may pick up on abilities that do not come to light through more formal assessment procedures. It is important to acknowledge that these pupils may wish to hide the extent of their abilities. The pupils who are highly able in design and technology may be a very different group from those with abilities in other subjects. The breadth of designing and making means that some of them will have abilities in a specific area -- for example working with food, using computer-assisted design (CAD) or high-quality making -- but not in others.

Subject	Identifying Highly Able Pupils
ICT	Pupils who are highly able in ICT are likely to: • demonstrate ICT capability significantly above that expected for their age • learn and apply new ICT techniques quickly for example, pupils use shortcut keys for routine tasks effectively and appropriately; they quickly apply techniques for integrating applications such as mail merge and databases • use initiative to exploit the potential of more advanced features of ICT tool example, pupils investigate the HTML source code of a website and apply features such as counters or frames to their own web designs • transfer and apply ICT skills and techniques confidently in new contexts for example, having learned about spreadsheet modelling in a mathematical context, they recognise the potential of applying a similar model in a science investigation • explore independently beyond the given breadth of an ICT topic for example, they decide independently to validate information they have found from a website; having learned control procedures for a simple traffic light model, they extend their procedure to include control of a pedestrian crossing • initiate ideas and solve problems, use ICT effectively and creatively, develop systems that meet personal needs and interests for example, they create an interactive fan club website that sends out a monthly newsletter to electronic subscribers (either working on their own, or collaboratively with peers) When identifying pupils who are highly able in ICT, it is important to remember that they may not be highly able in all aspects of the subject. For example, some pupils may be able to use high-level programming skills to solve control problems, but may not be as good at constructing and investigating databases.

Subject	Identifying Highly Able Pupils
History	Pupils who are highly able in history are likely to show some or all of the following characteristics. Literacy They may: • perform at levels of literacy that are advanced for their age; • show particular skill at inference and deduction when reading texts; • synthesise information to present a cogent summary; • use subject-specific vocabulary confidently; • follow and contribute effectively to a line of argument in discussion by making relevant contributions and substantiating points with evidence; • access complex source materials with growing independence. Historical knowledge They may: • have an extensive general knowledge, including a significant amount of historical knowledge; • develop with ease a chronological framework within which to place existing and new knowledge; • demonstrate a strong sense of period as a result of study. Historical understanding They may: • grasp quickly the role of criteria in formulating and articulating a historical explanation or argument; • understand and apply historical concepts to their study of history; • be able to draw generalisations and conclusions from a range of sources of evidence; • seek to identify patterns and processes in what they study, while being aware of the provisional nature of knowledge; • appreciate that answers arrived at depend largely on the questions asked; • recognise how other disciplines can contribute to the study of history and draw readily on what they learn in other subjects to enhance their historical understanding. Enquiry They may: • be able to establish and follow a line of enquiry, identifying and using relevant information; • be good at reasoning and problem solving; • think flexibly, creatively and imaginatively; • show discrimination when selecting facts and evaluating historical evidence; • manipulate historical evidence and information well; • appreciate the nature of historical enquiry; • question subject matter in a challenging way; • be intrigued by the similarities and differences between different people's experiences, times and places and other features of the past; • thrive on controversy, mystery and problems of evidence; • show resourcefulness and determination when pursuing a line of enquiry.

Subject	Identifying Highly Able Pupils
Geography	Pupils who are highly able in geography are likely to: • understand concepts clearly so that they can apply this understanding to new situations in order to make interpretations, develop hypotheses, reach conclusions and explore solutions They understand geographical ideas and theories, and apply them to real situations; • communicate effectively using both the written and spoken word. They communicate knowledge, ideas and understanding in ways that are appropriate to the task and audience (for example, writing formal letters and reports, producing brochures representing particular groups). They learn subject-specific vocabulary, use it accurately and are able to define words; • reason, argue and think logically, showing an ability to manipulate abstract symbols and recognise patterns and sequences They use and apply mathematical principles (such as area, shape, spatial distribution) and formulae (such as Spearman's rank correlation coefficient) to solve geographical tasks and problems. They identify their own geographical questions and establish sequences of investigation. They understand, and are able to explain, complex processes and interrelationships (for example, within and between physical and human environments); • enjoy using graphs, charts, maps, diagrams and other visual methods to present information They transform relief shown by contour lines into three-dimensional models in their minds. They are competent and confident in using the wide range of visual resources required in geography -- aerial photographs, satellite images, maps of different types and scales, GIS systems and so on; • be confident and contribute effectively when taking part in less formal teaching situations They take part readily in role-play situations or simulations and enjoy contributing to outdoor fieldwork; • relate well to other people, showing an ability to lead, manage and influence others, appreciating and understanding others' views, attitudes and feelings. They are willing to share their knowledge and understanding, and steer discussion; • have a more highly developed value system than most pupils of their age They have well-considered opinions on issues such as the environment and the inequalities of life in different places; • have a wide-ranging general knowledge about the world They have good knowledge of where places are in the world and of topical issues; • be able to transfer knowledge from one subject to another They transfer their knowledge of physics, for example, to understanding climate. Or they transfer knowledge of the industrial revolution from history to help explain the location of industry in the UK; • be creative and original in their thinking, frequently going beyond the obvious solution to a problem. For example, if faced with the problem of storm pipes being unable to cope with sudden storm surges in an area, they might suggest taking measures like afforestation to reduce storm

	surges, rather than proposing technical improvements to the pipe system. If faced with the problem of congested roads, they might suggest taxing cars more heavily, improving public transport or changing land use patterns, rather than building bigger roads.

Subject	Identifying Highly Able Pupils
Modern Foreign Languages	Pupils who are highly able in modern foreign languages are likely to: • have a strong desire to put language together by themselves. They apply principles from what they have learned to new situations, transforming phrases and using them in a different context, often with humour • show creativity and imagination when using language. They often extend the boundaries of their knowledge and work beyond what they have learned, not wishing simply to respond and imitate, but to initiate exchanges and to create new language • have a natural feel for languages. They are willing to take risks and see what works, knowing instinctively what sounds right and what looks right; they are acutely and swiftly aware of the relationship between sound and spelling • pick up new language and structures quickly. They may have excellent aural and oral skills and may be able to cope with rapid streams of sound and identify key words at an early stage; they may also display outstanding powers of retention, both immediately and from one lesson to the next • make connections and classify words and structures to help them learn more efficiently. They are able to evaluate new language critically, recognising the grammatical function of words • seek solutions and ask further questions. They may test out their theories and seek to solve linguistic problems, sometimes challenging the tasks set and trying to understand their relevance to the language-learning process • have an insight into their own learning style and preference. They may say how they like to learn vocabulary or structures; they are clear about the type of tasks they like doing; they may show or display an ability to work independently, without supervision, and to make effective use of reference material • show an intense interest in the cultural features of the language being studied. They may use idiom in the language itself and explore the history and traditions of the language; some pupils may wish to share knowledge with peers

Subject	Identifying Highly Able Pupils
Art & Design	Pupils who are highly able in art and design are likely to: • think and express themselves in creative, original ways. They want to follow a different plan to the other pupils, challenge the tasks given, or extend the brief in seemingly unrelated or fantastic directions • have a strong desire to create in a visual form They are driven by ideas, imagination, flights of fancy, humanitarian concerns, humour or personal experience; they persevere until they have completed a task successfully, with little or no intervention from the teacher • push the boundaries of normal processes They test ideas and solve problems relating to concepts and issues; they explore ways to depict ideas, emotions, feelings and meanings; they take risks without knowing what the outcome will be; they change ideas to take into account new influences or outcomes • show a passionate interest in the world of art and design They are often interested in a specific culture (possibly relating to their own cultural background or sense of identity), particular art forms, contemporary culture or youth culture • use materials, tools and techniques skilfully and learn new approaches easily They are keen to extend their technical abilities and sometimes get frustrated when other skills do not develop at the same time • initiate ideas and define problems They explore ideas, problems and sources on their own and collaboratively, with a sense of purpose and meaning • critically evaluate visual work and other information They make unusual connections between their own and others' work; they apply ideas to their own work in innovative ways • exploit the characteristics of materials and processes They use materials and processes in creative, practical and inventive ways; they explore alternatives and respond to new possibilities and meanings • understand that ideas and meanings in their own and others' work can be interpreted in different ways They use their knowledge and understanding to extend their own thinking and realise their intentions; they communicate original ideas, insights and views

Subject	Identifying Highly Able Pupils
Drama	Pupils who are highly able in drama are likely to: • be able to speak confidently on a given subject; • be able to work with voice in a manner relevant to drama; • be able to seek the opinions of others when engaged in practical group work; • be able to seek the opinions of others in discussion; • be able to work co-operatively in groups and understand the meaning of team work; • understand the importance of communication; • take an active role in the learning process; • understand drama techniques and use them in planning their work; • explore issues in their environment and experience and understand their relevance to drama; • be able to use the language of drama in written work. • be able to demonstrate a strong awareness of audience in performance and also in the content of their practical work;

Subject	Identifying Highly Able Pupils
Music	Pupils who are highly able in music are likely to: • be captivated by sound and engage fully with music • select an instrument with care and then be unwilling to relinquish the instrument • find it difficult not to respond physically to music • memorise music quickly without any apparent effort, be able to repeat more complex rhythmical and melodic phrases given by the teacher and repeat melodies (sometimes after one hearing) • sing and play music with a natural awareness of the musical phrase -- the music makes sense • demonstrate the ability to communicate through music, for example to sing with musical expression and with confidence • show strong preferences, single-mindedness and a sustained inner drive to make music. • show a high degree of motivation and commitment to practice and performance. Pupils more often show their musical abilities through the quality of their response than the complexity of their response. Musical quality is very difficult to define in words, as music is a different form of communication to language. The closest we can get is to say that it 'sounds right': skills and techniques are used to communicate an intended mood or effect. Therefore musical ability is at least as much about demonstrating a higher quality response *within* levels as about attainment at higher levels. Musical ability can be seen at every level of attainment. Pupils who have ability for music show a particular affinity with sound. This is sometimes hard to identify, especially when it is not combined with more general ability. It is however often most significant, since it may be a pupil's only route to real success, increasing their self-esteem and motivation for other areas of learning. Some teachers believe that music is *only* accessible for pupils with musical talent: that pupils are either musical, or not musical. This is not the case. All pupils can develop musical skills, knowledge and understanding. Some may need more or less help, but this is no different from any other subject. Teachers need to recognise the different needs of all pupils, including not only those who are highly able, but those who are more highly able across several subjects. Music provides a context in which generically highly able pupils (that is, those who are more generally highly able across several subjects) can be identified and developed. In music, pupils have to deal with a complex range of different and simultaneous factors and bring them together when making and responding to music, using skills which are often associated with highly ability. Teachers have often commented on the way that quickness in remembering rhythmic patterns suggests the ability to think quickly and assimilate information. Similarly, a difficulty with remembering patterns can indicate potential issues across subjects -- teachers have found that music can help them to identify pupils who may require additional support. Because music is abstract, it provides a way of identifying and developing

	skills that are not language dependent. This means that it can play a particularly important part in helping to recognise highly ability in pupils whose language skills have not yet developed, especially those for whom English is not their first language.

Subject	Identifying Highly Able Pupils
RME	Pupils who are highly able in RME are likely to: • show high levels of insight into, and discernment beyond, the obvious and ordinary; • make sense of, and draw meaning from, religious symbols, metaphors, texts and practices; • be sensitive to, or aware of, the numinous or the mystery of life, and have a feeling for how these are explored and expressed; • understand, apply and transfer ideas and concepts across topics in RME and into other religious and cultural contexts. In more general terms, they may also: • have highly-developed skills of comprehension, analysis and research; • show quickness of understanding and depth of thought.

Subject	Identifying Highly Able Pupils
PE	Pupils who are highly able in PE are likely to show many or all of the following characteristics in their performance and approach to PE, sport and dance. Approach to work They may: • be confident in themselves and in familiar contexts • take risks with ideas and approaches, and be able to think 'outside the box' • show a high degree of motivation and commitment to practice and performance. Effective performance They may: • be independent, thoughtful performers, actively forming and adapting strategies, tactics or compositions • be able to reflect on processes and outcomes in order to improve performance, understanding the close and changing relationship between skill, fitness and the tactics or composition of their performance • be good decision-makers and able to take the initiative, often showing high levels of autonomy, independence and leadership • be creative, original and adaptable, responding quickly to new challenges and situations, and often finding new and innovative solutions to them. Body skilfulness and awareness They may: • have a high degree of control and coordination of their bodies • show strong awareness of their body in space • combine movements fluently, precisely and accurately in a range of contexts and activities. Some pupils may have unusual abilities in specific aspects of the programme of study or areas of activity, such as: • evaluating and improving performance through leadership • acquiring, developing and performing advanced skills and techniques • conceptual understanding, shown through the sophisticated selection and application of advanced skills, tactics and compositional ideas for their age • particularly high levels of fitness for their age, in both specific and general areas • specific strengths in general areas, such as games activities or dance activities. Some pupils perform at high levels in sport or dance in the community, for example basketball, high jump, jazz dance or sailing. Teachers should be aware that age and physical maturation can lead to better performance at certain ages and stages, but they are not a characteristic of high ability in PE and sport.

2.2 Step two Auditing current provision

Aim – to map existing good practice and identify areas for development

Activity – complete an audit of provision at school and classroom level

Schools will often be providing challenging learning experiences for all pupils. However, highly able pupils often require **additional** challenge to those of their age peers. The needs of these pupils is enshrined in the Additional Support for Learning legislation, therefore, we must be clear what additionally is required when meeting their needs. A good starting point for schools who are considering how they meet the needs of the highly able pupils is to undertake an audit of existing activities. Gathering this information into a coherent framework will help schools to be clear about where challenge is offered and where challenge needs to be enhanced.

A "Basic Audit" should establish whether:

- all curriculum policies, and particularly additional support for learning policies, contain statements concerning provision for highly able pupils
- there are systems for recognising the wide range of abilities all pupils and of highly able pupils and for monitoring their progress;
- there are procedures in place for involving parents in discussions and planning for pupils who are identified as being highly able;
- as with all pupils, the work of highly able pupils and their progress is discussed regularly at staff/department/Faculty meetings;
- the school handbook includes a statement on the school's approach to highly able pupils;
- there have been opportunities for staff to develop their understanding and skills in relation to teaching highly able pupils;
- there are shared understandings across the school as to who the highly able might be.

A series of log frames on the following pages will help you to think through the auditing process. Alongside these is a sample of the sorts of things that might currently be in place in your school. Section three will provide ideas of the kind of activities that could be put in place to aid identification and provide further challenge.

In 2008, HMIE published a document called Improving Our Curriculum Through Self-evaluation. Questions from this document have been adapted to take account of the specific needs of highly able learners. The following grids allow schools to analyse more fully the provision on offer for highly able pupils.

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Delivery of Education: 5.1 The curriculum[1]

Theme one: The rationale and design of the curriculum	What is currently in place for highly able pupils?	What evidence do we have that this is working?	What do we want to develop?
How well do we design the curriculum to account for the needs of all - including those able learners who have advanced ability profiles?			
How effectively do we put together our whole curriculum to plan opportunities for personal achievement?			
Theme two: The development of the curriculum			
How well do we identify the benefits for able learners from planned curriculum change and innovation?			
How well do we monitor and evaluate the impact and outcomes of changes in our curriculum for able learners?			
Theme three: Programmes and courses			
How successful is the use of interdisciplinary projects and studies in stimulating able learners to make links across different aspects of learning?			
How effectively do we offer planned opportunities for personalisation and choice, and for personal achievement?			
How effectively are our programmes and courses matched to the needs of able learners so that they progress well from their prior learning?			
Theme four: Transitions			
How effective are our transition procedures and programmes in meeting the needs of able learners to ensure continuity and progression in learning?			

[1] Questions adapted from Improving our curriculum through self-evaluation. HMIe, 2008

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Delivery of Education: 5.3 Meeting Learners Needs[2]

Theme one: tasks, activities and resources	What is currently in place for highly able pupils?	What evidence do we have that this is working?	What do we want to develop?
How effectively do we support and challenge able learners by choosing learning tasks, resources and activities which are well matched to their needs, progress and attainments?			
How well does our teaching on a day-to-day basis and across programmes/courses meet the needs of able learners?			
Do we have appropriate expectations for able learners?			
Theme two: Identification of learning needs			
How well do we observe and assess learning needs in the light of able learners' responses to tasks and activities?			
How well do we share information and discuss learning to enable other staff to identify clearly the learning needs of able learners?			
How effective are whole-school/centre approaches and the contributions of specialist staff in identifying the needs of able learners?			
Theme three: The roles of teachers and specialist staff			
How well do we involve appropriate specialist staff?			
How well do we identify and address barriers to learning that able learners may have?			
How well do we share information among education and other relevant agencies?			

[2] Questions adapted from Improving outcomes for learners through self-evaluation. HMIe, 2008

Theme four: meeting and implementing the requirements of legislation	What is currently in place for highly able pupils?	What evidence do we have that this is working?	What do we want to develop?
How good is our planning to meet the needs of able learners?			
How effectively have we involved other staff in drawing up these plans? Have these plans been shared by staff? Is this done through a single plan?			
Do our stage plans (including IEPs and CSPs) set out a suitable approach to meeting the needs of able learners?			
Are the short term and long term plans for able learners appropriate and clear?			
Do we regularly review the targets for able learners? Is this done through a single multi-agency review (where appropriate)?			
How do we involve the learners and their parents in these processes?			

Step 2: audit of provision

What is currently in place in the establishment for highly able pupils?

Expressive Arts	Health and Well Being	Languages	Mathematics	RME	Sciences	Social Studies	Technologies

Step 2: audit of provision

What is currently in place in my class for highly able pupils?

Expressive Arts	Health and Well Being	Languages	Mathematics	RME	Sciences	Social Studies	Technologies

Step 2: audit of provision

What is currently in place in my department/faculty for highly able pupils?

Expressive Arts	Health and Well Being	Languages	Mathematics	RME	Sciences	Social Studies	Technologies

Step 2: Out of school activity audit (completed in partnership with parents)

Activity eg sports clubs, homework clubs, art clubs, music clubs, IT clubs, choir etc	When does the activity run? eg after school, weekends, lunch time	Number of pupils involved	Age range of pupils involved	Is the activity teacher led or are outside agencies involved?	Funding source – free, Authority funded, school budget	Is the activity open to all or only those who have demonstrated high ability?

2.3 Step three – Identification

Aim – to identify tentatively young people currently displaying abilities requiring additional challenge

Activity – provide further and enhanced opportunities identified through step two

Having considered teacher beliefs and carried out an audit of existing opportunities, it is now time to consider how this helps us identify highly able pupils in our class and school.

The traditional approach would have us identify pupils first and then provide for the identified group. This, however, can lead to pupils who are not yet demonstrating abilities or who choose not to demonstrate their abilities in a class setting being "missed".

Steps one and two place the emphasis on provision which seeks to offer all pupils a range of challenging tasks. The pupils' responses to these tasks may lead to them being identified as more highly able or may identify a need for them to be taught particular skills.

The following log-frames offer one approach to recording information from a variety of sources. All information can be combined to offer us an holistic picture of the pupil.

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Step 3: Identification

Record pupils who are demonstrating abilities and/or talents

Individual profiling

(tick where evidence of high ability exists)

Name _____ Class _____Session _____

Area of ability	Formal assessments	Parental nomination	Self-nomination	School personnel nomination
Expressive Arts				
Health and Well Being				
Languages				
Mathematics				
RME				
Sciences				
Social Subjects				
Technologies				

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Step 3: Identification

Tick where you feel or have observed pupils demonstrating high levels of ability

Class profiling

Class _____ Session _____

Name	Expressive Arts	Health and Well Being	Languages	Mathematics	RME	Sciences	Social Studies	Technologies

Step four – Provision

Aim - to enhance and augment provision to ensure appropriate challenge for all children in all areas.

Activity – identify what further development is required to ensure more accurate profiling of individual abilities

2.3 What do we mean by challenge?

The literature on able pupils abounds with references to 'challenge' but what exactly does this mean? Carrie Winstanley (2004) has identified 6 ingredients of challenge.

1. Identifying the individual's zone of proximal development (ZPD) (Vygotsky) and creating cognitive dissonance (Piaget)
2. Injecting elements of novelty and variety into the learning experience.
3. Encouraging metacognition
4. Offering opportunities for independence and self direction.
5. Encouraging risk-taking.
6. Providing opportunities to work with like-minded peers.

You can hear Carrie speak about this by logging on to www.ablepupils.com and listening to a pod cast.

Tasks which should be encouraged should offer opportunities to

- formulate and reflect on personal knowledge and viewpoints,
- explore diverse viewpoints,
- consider difficult questions,
- problem solve and enquire,
- make connections between past and present learning,
- regularly engage in higher order thinking (analysis, synthesis and evaluation), and
- engage in independent thinking and learning.

Strategies in the classroom involve moving from:

- Concrete → abstract materials, ideas and applications
- Simple → complex resources, research, issues, skills, and targets
- Discreet → cross-curricular working
- Structured → open-ended questions, decisions, approaches and solutions
- Dependent → independent learning (planning, monitoring and evaluating)
- Small → large steps in imagination, insight and application

Step 4: enhancement of provision

What do we plan to develop further in the school?

Expressive Arts	Health and Well Being	Languages	Mathematics	RME	Sciences	Social Studies	Technologies

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Step 4: enhancement of provision

What do I plan to develop further in my class? (Primary)

Expressive Arts	Health and Well Being	Languages	Mathematics	RME	Sciences	Social Studies	Technologies

Step 4: enhancement of provision

What do I plan to develop further in my subject area? (Secondary)

Subject Skills from CfE				

2.4 Step five – Definition

Aim – to reach a much firmer agreement on what is meant by the term highly able

Activity - hold another staff development session to re-examine the key issues and discuss progress

- On the basis of the strengths pupils have demonstrated is there a need to revise the definition of what it is to be highly able?

- Can the criteria for identification, developed during step one, be refined?

Section Three Practical ideas to use in your school

3.1 Points to consider

Strategies that are good for highly able pupils are good strategies for all pupils. By thinking about meeting the needs of highly able pupils, teachers can raise standards throughout the school.

To meet the needs of all pupils, the class teacher may need to:

-consider and plan for different learning styles;

-use a variety of forms of differentiation in their teaching;

-plan for the use of higher order learning/thinking skills in their teaching;

-set high expectations for the pupils;

In particular they may need to:

-set homework which is challenging for highly able pupils;

-be aware of school policy and practice for highly able pupils;

-consider early examination entry;

-group highly able pupils together for specific subjects or activities;

-pace lessons to take account of the rapid progress of some highly able pupils;

-monitor and record the progress of highly able pupils;

-undertake lesson observations which monitor the progress and attainment of highly able pupils;

-give time for highly able pupils to extend or complete work if they need it;

-move highly able pupils into another class for some or all work, if their needs cannot be met in their chronological age class;

- liaise with staff from other educational settings for advice and resources eg nursery staff speak with primary school staff, primary staff speak with secondary school staff, secondary staff speak with university staff/experts in the field.

Given that environmental factors can influence the development of intelligence the emphasis in education must be on the learning environment. CfE places emphasis on the 'how' of learning and teaching. In addition this approach builds on the work carried out in relation to Assessment is for Learning. It is essential that the learning environment and

curriculum accommodates this wider and more individualistic view. Curriculum for Excellence provides just such an opportunity and the seven principles on which it is built provide the vehicle to nurture such a view. Development of the new curriculum, therefore, should involve from its inception:

- challenge and enjoyment
- personalisation and choice
- breadth
- depth
- progression
- coherence and
- relevance

3.2 Tried and tested strategies

Cross-stage setting - This involves the creation of greater homogeneity through the formation of classes or groups across stages on the basis of attainment. While there can be certain advantages to setting pupils on the basis of attainment there are also disadvantages. A useful resource to be used as a starting point for considering the relative merits of different organisational arrangements is Smith, C.M.M and Sutherland, M. J. (2000) Setting or Mixed Ability A staff Development Pack. Details of this are available from SNAP (snap@educ.gla.ac.uk 0141 330 3071).

Projects – A way of supporting individual children with particular abilities while also offering opportunities to other to develop their strengths is through whole school activities such as a regular school newspaper, radio or television show, enterprise activities and charity events. This approach lends itself well to Curriculum for Excellence.

Pull-out programmes/master classes – Pupils who would benefit from a short term specialised programme of work are identified and extracted from the mainstream class to work together as a group. This group could be across a year group or across stages. Such opportunities are offered at regular intervals in the academic year. Such programmes are offered in a revolving door format. With this format groups of pupils will be formed and reformed at different times depending on individual need. The identification is a very fluid affair as it gives the opportunity for different pupils to be identified for different activities depending on the requirements of the task and on the individual's profile of abilities. Each pupil would only be in a programme for a limited (short) period of time. It will not always be the same group and thus different pupils will be part of the programme at different times for different reasons.

Curriculum compaction is a way of making curricular adjustments for pupils in any curricular area and at any stage. As much as 50% of traditional classroom material may be compacted for some students. It is a three stage process.

1. Define the aims and outcomes of the unit or topic.
2. Determine and document which pupils have already mastered most or all of the outcomes. This can be, but does not have to be, a formal 'test'. The information

required can be gathered through a more informal pre-assessment process using discussion, mind maps etc.

3. Provide, higher challenge, replacement or 'instead of' activities for those bits of the unit or topic that they can already do.

Those with responsibility for supporting pupils within a school could offer the class teacher support in deciding how to assess and how much of the curriculum to compact.

Mentors and mentoring systems are useful for individuals. Mentoring can be offered by parents, older pupils; learning assistants; volunteer adults and organisations (e.g. VTO); and other staff in the establishment.

Higher Order Learning. One of the most common frameworks for thinking is Bloom's Taxonomy. A revised taxonomy was produced by Anderson and Krathwohl in 2001. The taxonomy consists of 6 key areas of development:

1. *Remembering* - Pupils need certain knowledge which they can recall in order to take action and think. Pupils need to be able to acquire that knowledge using a range of research and subject specific skills.
   Asking better questions will help pupils access relevant information.
   Pupils need to record their ideas and thoughts and share them using a variety of communication.
   Verbs – define, underline, list, name, reproduce
   Possible outcome – lists, worksheets, definitions
2. *Understanding* – Many pupils spend much of their time explaining, selecting or paraphrasing information. These are lower order thinking skills. Pupils also need to use higher order thinking skills. This will involve pupils comparing and contrasting information, presenting new ideas, exploring consequences, examining differing viewpoints.
   Verbs – identify, describe, explain, report, calculate, outline
   Possible outcomes – paraphrasing, summary, drawing, teaching peers
3. *Applying* – Pupils need to have opportunities to play around with and apply the new knowledge they have gained.
   Verbs – demonstrate, practice, illustrate, classify, solve, dramatise
   Possible outcomes – interview, role play, build a model, collection, presentation
4. *Analysing* – Activities that offer opportunities for analysis will allow pupils to break down their knowledge into small parts in order that they can investigate how these parts relate to one another and to the bigger picture.
   Verbs – compare, contrast, examine, outline, sequence, test, differentiate, infer
   Possible outcomes – survey, summary, questionnaire, plan, spreadsheet
5. *Evaluating* – Pupils need to make decisions and judgements about things but these judgements and decisions have to be justified. Evaluating the knowledge gained and critiquing it using evidence and reason will offer challenging opportunities for highly able learners.
   Verbs – defend, judge, select, support, verify, justify, rank
   Possible outcomes – opinion, recommendation, report, self evaluation

6. *Creating* – This allows pupils to bring together the new knowledge they have acquired and through design, imagination, reorganisation and invention they can create something new.
   Verbs – change, compose, create, predict, hypothesise, invent, combine, design
   Possible outcomes – new game, multimedia, poem, story

ICT offers endless possibilities for individual and group challenge. Online providers offer many opportunities for additional challenge. There are international challenges specifically aimed at highly able pupils e.g. World Class Tests. In addition pupils can use ICT as a learning tool making their own DVDs, writing their own programs etc.

Differentiation seeks to recognise and celebrate individual differences among pupils. These differences are then taken into account when planning and devising teaching and learning opportunities.
A differentiated curriculum relates to class and school based provision and to extra curricular opportunities that are qualitatively different from that already on offer. To do this, teachers should plan meaningful learning experiences that make the most of pupils' strengths and interests. This will involve pupils engaging with experiences that sees them moving both vertically and horizontally within the usual curriculum:

1. *Enrichment* – broadens the range of experiences for all pupils
2. *Extension* – encourages the expansion of the knowledge and skills in the mainstream classroom
3. *Acceleration* – enables highly able pupils to participate in learning at a level commensurate with their abilities. This might be alongside chronologically older pupils

There are a number of ways differentiation can be planned for e.g. by:
Task – pupils start at a higher level that their age peers and may move through concepts more quickly. They may also skip work within levels.
Outcome – pupils engage with the same content or task but the outcome may be open ended to allow the more highly able pupil to explore and extend their thinking
Resource – the class may be working on the same problem but the resources on offer within the class are different. For highly able pupils this might mean more complex texts or abstract concepts. This allows highly able pupils to explore ideas in greater depth
Pace – some highly able pupils can benefit greatly from working at a faster pace than their peers. Some highly able pupils do not require the over learning that others do. Some will make connections and may not require concrete materials. Teachers should also be aware that some highly able pupils will also relish the opportunity to work more slowly allowing time for in depth study.
Choice – all pupils will benefit from what Bruner (1996) calls agency over their learning. Highly able pupils should be given the opportunity to select their own activities. They could also select to use a variety of materials to complete a task or could choose to start a task from a different point.
Questioning/dialogue – Highly able pupils may not require such detailed explanations of the task. Alternatively they may be offered much more complex instructions and information prior to embarking on a task. Targeted questions that involve higher order thinking skills and more intricate language can be directed towards highly able pupils.

Education agencies and experts from beyond the school may become involved in assessing and providing an appropriate curriculum. They may also contribute to an Individualised Education Plan (IEP). Schools may draw on assistance from specialist colleagues, Universities, the business sector and the educational psychologist may become involved.

Pupils at this point may also be candidates for involvement in authority and out of school led initiatives for highly able pupils. Events such as

- Special projects e.g. Opportunities provided by the Scottish Network for Able Pupils such as GO, Architecture and Design challenge events; Science Fairs; Story Telling events; Maths challenge days.
- Classes run by University Departments
- Lectures and events hosted by, for example, The Institute of Physics; The Science Centre; Museums; Young Engineers etc
- Opportunities for real life challenges e.g. guest reporter with a broadcasting company; working with a design company etc

In addition to the above for many pupils a range of **after school opportunities** such as clubs are ideal ways of recognising and challenging particular strengths. Chess; local library projects; maths; sports; school orchestra; debating; dancing etc are all clubs that pupils can find outlets for their particular strengths. It does not always have to be a club offered and run by the school. It may be that the school can direct children to local community clubs and activities. However, while after school clubs can augment and enhance the opportunities and experiences available to individual pupils they cannot compensate for inadequate recognition and challenge within the curriculum.

3.3 Individualised Education Plans

Help may be required from agencies out with education such as health or social work. It may also include further or higher education. The support plan may take the form of an Individualised Education Plan (IEP) or Coordinated Support Plan (CSP).

It is entirely possible that a highly able pupil could have the involvement of outside agencies, for example if the pupil:

- also has a disability then health services may be involved,
- has factors arising from family circumstances then social work may be involved,
- is working well beyond his or her age and stage peers then a further or higher education institution may be involved.

If this involvement is parallel to support in school but not directly related to educational outcomes, than the individual may have a stage plan or an IEP.

If this involvement is integral to the achievement of educational outcomes than a CSP should be considered.

Able pupil individual plan: education objective	**Link with agency such as university, voluntary organisation, sport, art, music academy**
Will produce a portfolio of work for presentation to the Glasgow School of Art by April of her second year.	Tutor from Glasgow School of Art will provide advice to art teacher who will provide a suitable programme in class and in study support.

Section four Conclusion

There is no one way to meet the needs of highly able pupils. An establishment that recognises and celebrates individual differences in their pupils and then systematically plans and develops a challenging curriculum will offer appropriate challenge to all. Current developments in Scottish education such as Curriculum for Excellence and Assessment is for Learning appear to offer an excellent basis from which to meet the needs of highly able pupils and indeed all pupils.

Establishments should

- identify the needs of their pupils,
- identify the strengths of their staff,
- identify the opportunities for engaging learning experiences
- create an ethos that supports and promotes diversity
- systematically ensure they are meeting the needs of highly able pupils through careful lesson planning
- develop a flexible curriculum in response to abilities

We need to accept highly able pupils for who they are and what they can do. We need to help them to develop an endless love of learning, preserve their natural curiosity and increase their motivation to learn and explore their worlds.

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Winstanley, C. (2004) *Too Clever by Half: A fair deal for gifted children*
London:Trentham Books

Further detail about resources and websites is available through the SNAP website- www.ablepupils.com

Some useful resources and websites to get you started.

Resources

Bailey, R., Pearce, G., Winstanley, C., Sutherland, M., Smith, C., Stack, N. and Dickenson, M. (2008) A systematic review of interventions aimed at improving the educational achievement of pupils identified as gifted and talented. Technical report In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Smith, C. (2005) (Ed) Including the Gifted and Talented: Making inclusion work for more able learners London: Routledge

Smith, C. (2005) *Teaching Gifted and Talented Pupils in the Primary School* London: Paul Chapman Publishing

Sutherland, M. (2005) *Gifted and Talented in the Early Years* London: Paul Chapman Publishing

Sutherland, M. (2008) *Developing the Young Gifted and Talented Learner* London: Paul Chapman Publishing

Winstanley, C. (2004) *Too Clever by Half: A fair deal for gifted children*

London:Trentham Books

A range of resources are also available to school who are members of SNAP.

Websites

www.londongt.org a mine of useful information including practical activities for pupils and resources for teachers

www.ablepupils.com offering guidance and support for teachers, pupils and parents in Scotland

www.nace..co.uk resources and advice for educating highly able pupils

www.nagcbritain.org supports the families of highly able pupils

www.hoagiesgifted.org resources for parents and educators of highly able pupils

www.gifted-and-talented.net sign up to receive free weekly enrichment activities for highly able pupils

www.qca.org.uk guidance on teaching highly able pupils

www.tki.org.nz – Online learning centre in New Zealand. Includes articles and ideas for teachers of highly able pupils