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Good teaching, effective departments

Findings from a HMI survey of subject teaching in secondary schools, 2000/01

HMI 337

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Introduction

Good teaching, effective departments reports on the inspection by the Majesty's Inspectors (HMI) of subject work in 152 secondary schools between April 2000 and July 2001. Approaching 1,500 lessons were observed across 15 subjects. The inspection took place to provide a detailed evaluation of subject teaching in order to explore some of the features of the best practice and to investigate the departmental or school organisation that underpins such very good teaching. The report is intended to help senior managers, heads of subject department and teachers further to improve standards and raise the quality of subject teaching.

The schools inspected in this survey largely met OFSTED's criteria for short inspections, and were deemed, therefore, to be "effective" overall. They do not, therefore, constitute a representative sample of all schools nationally. However, schools of all types are included, and the large majority have intakes covering the full range of attainment.

Many good and a smaller number of excellent departments were inspected. These instances of good practice provide the evidence on which the features of good teaching highlighted in the report are based. However, the quality of work seen was not entirely even in quality. It is a fact that, even in good schools, achieving full consistency across the whole curriculum remains a considerable challenge. The variability in the quality of work of different departments inspected underlines that pupils' experiences were not always of uniformly high quality. This finding should not be overstated, since in many of these schools most pupils attain high standards, but it is clearly an important finding. To raise satisfactory quality to good and good to excellent is a demanding challenge, and it is still an issue in many of the generally successful schools.

The survey confirmed strongly that, in a number of important areas, schools which were effective overall performed significantly better than the national average. The areas identified included:

- the quality of leadership and management;
- the quality of the monitoring of teaching;
- the quality and the range of learning opportunities;
- the breadth and balance of the curriculum;
- the quality of monitoring of pupils' performance.

The evidence is clear therefore that, in the most effective schools, a number of key aspects of quality combine to produce successful learning for pupils across the whole curriculum.

Part 1 of this report draws mainly on the very good and excellent lessons seen in these schools in order to describe good teaching in each subject.

Part 2 focuses on the school and departmental circumstances in which good teaching can thrive.

Part 3 offers checklists of the characteristics of high quality teaching and leadership, drawn from the evidence of this survey, to support teachers, departments and schools in reviewing their own work and raising their sights still higher.

Part 1: Good teaching

English

Language is the medium both for communication between people and through which individuals make sense of the world for themselves. The former requires agreed **conventions and shared meanings**; the latter leads to **individuality of response and creativity**. A major challenge for teachers of English is to maintain a balance between teaching pupils to use language accurately, so as to maximise communication, and encouraging personal interpretation and sufficient choice or originality in composition. The teachers whose work is selected here all maintained this balance very well.

A second, and related, balance needs to be struck by English teachers between paying special attention to literature, plays or films, with their **aesthetic uses of language and form**, and giving sufficient weight to the wide **range of other types of speech, writing or moving image** which the **National Curriculum** programmes of study cover. Most teachers represented in what follows give equal status to different types of reading, writing and oral work, seeing reading for information, taking notes or preparing a short improvisation as being just as important to do well as polished essays or final performances.

The best teaching in English shared several other key characteristics. In all of their work, teachers demonstrated excellent **knowledge** of literature, language and drama, combined with an **infectious enthusiasm** for the subject. They also showed **thorough knowledge of pupils as individual learners** and commitment to their intellectual, cultural and aesthetic development. Such knowledge often stems not only from detailed marking and assessment of work in each attainment targets but also extends to pupils' reading, writing or drama performances outside normal curricular time. This knowledge is rooted in a clear and

agreed understanding of what progress to expect within each scheme of work. This **expectation** is often linked to common assignments or tasks, but with the precise challenge, or choice of text or task, matched to the needs and interests of different pupils.

In these circumstances, teachers challenge all pupils, including the most advanced, to **think for themselves** and take responsibility for their learning. They also maintain a strong sense that **the whole class is learning together**, skilfully deploying whole class teaching or discussion, pair/group work and individual tasks, moving frequently and logically from one to the other. Models of good performance are regularly shown to pupils, with discussion of their qualities. Assessment criteria are shared with pupils, with frequent opportunities for pupils to evaluate their own and others' work. Throughout, the skills needed in timed examinations and those required for extended coursework are kept in balance.

A number of these features clearly echo the recommendations of the Government's **Key Stage 3 Strategy**, including the importance of clear and shared objectives, the emphasis on the whole class moving forward together, particularly by the use of the plenary, modelling and the 'deconstruction' of texts. Such teaching has variety and pace, though lessons are not frenetic and contain sufficient time for pupils to think, respond or create.

A particular feature of a number of the best English lessons, with pupils who already have well-developed literacy and study skills and who are preparing for tests or examinations involving set texts (such as Shakespeare in Year 9, or GCSE and A-level literature classes), is the **inversion of an often-used lesson structure**. Rather than beginning with teacher exposition, followed by group or pair work and leading finally to individual writing, these effective lessons typically begin with a challenge to individuals to read and understand a poem, scene or chapter for themselves (based on homework reading), making notes in response to identified questions or themes. Individual responses are compared in pairs or small groups. The findings are then shared in a class plenary, with the teacher or a pupil volunteer making notes on a whiteboard or transparency for overhead projection. From this process, discussion of rival interpretations often follows, and at this point the teacher introduces new information on vocabulary, context or literary genre to deepen understanding or add complexity to questions of tone or nuance. The lesson typically ends with a summary discussion, led by the teacher, and time for pupils to complete notes.

Such teaching is especially effective where the skills of note-taking have been explicitly taught and notes are regularly checked for their usefulness. In such classes pupils are forced to wrestle with texts or ideas for themselves first, but in the knowledge that the lesson will support and deepen their understanding. Collaborative talk is of a high standard as it follows the initial framing of ideas. **Teaching is concentrated at the point which the pupils in the class, including the higher attainers, have reached independently and aims to move them forward**. An atmosphere of lively intellectual enquiry or debate is common with a strong sense of whole-class teaching and inclusiveness, but with sufficient time for individual reflection. This successful teaching also moves seamlessly from literary concerns, such as the interpretation of character, to language or literacy objectives such as understanding persuasive language or the techniques of newspaper journalism, as in the following example.

A teacher with an able Year 9 mixed class in a selective school was preparing for the Shakespeare test on Macbeth*, but also following a scheme of work on persuasive language. The lesson began with an exercise where each pupil worked individually to note down what Lennox, as an observer of the Banquo's ghost scene, would have noticed about the behaviour of Macbeth and Lady Macbeth and the turn of recent events in Scotland. This was revision, but also anticipated the next scene to be read. Pupils then worked in groups to compare findings and summarise the main points. The focus then turned to persuasive writing – each group was asked to imagine Lennox as a modern reporter on a specified newspaper (some tabloid, some broadsheet - all recently looked at in class), and to write the headline and first paragraph of the report of the banquet. This task was given a game-like twist by cards containing certain words, given out at random, which pupils had to include in the headline. Pupils achieved a very high standard in this collaborative writing task in a short time, drawing equally effectively on their knowledge of the play and its characters and on their study of the features of persuasive language and journalism. The lesson had been preceded by a reading homework on the scene, and was followed by a written homework in which each pupil would write the full article. Homework thus supported, and was supported by, the classwork, with each being used to best advantage.*

The conscious development of pupils' general as well as subject vocabulary is evident in the best teaching and marking in these schools.

In one Year 10 GCSE class of boys, in a lower attaining set, pupils were working towards an oral assessment based on the preparation of a marketing strategy for an invented product. The teacher emphasised in his introduction the importance of appealing to a specified audience, and stressed the role of language choice in this. His own language was rich and challenging, and he was skilled at directing pupils to the thesaurus and dictionary during their groupwork. In the final plenary, as groups justified their choice of marketing strategy, they used words such as 'symbolic', 'demonic', 'sinister' or 'diabolic' with confidence, and this steady concentration on enriching vocabulary and finding the precise word improved their writing for both the literature and language examinations.

In the most successful departments, the range and confidence of pupils' general vocabulary are often even more striking than their equally sure grasp of specialist terminology.

In every high-performing department the detail and helpfulness of **teachers' comments on written work are consistently strong**; they regularly include noting felicities of expression for praise, and suggesting alternative phrasing or more precise wording, to aid progress. The explicitness with which criteria for assessment and **models of good performance** were shared with pupils are a feature of many of the very effective lessons seen in this inspection, and characterise both specialist drama and English work.

> *The drama department had developed skills checklists which were used by staff and pupils alike as they watched practical work. The usefulness of these was greatly enhanced by their link to target-setting, so that pupils received feedback from peers and staff which they could translate directly into targets for their own improvement. The specific skills to be developed in each unit of the scheme of work were identified and became the focus for this kind of assessment.*

In schools which attain high standards in Key Stage 4 and post-16 drama there is very deliberate **nurturing of peer and self-assessment skills**, though the balance between the two varies, and pupils are thereby aware of their own strengths and weaknesses in performance. Similar strengths are seen in classes studying Shakespeare in Year 9 in English.

> *One such class had prepared group presentations of the opening scenes of* Macbeth, *with clear criteria concerning the creation of mood, atmosphere and sense of character. After each presentation the pupils who had performed led a discussion of their piece, inviting and responding to contributions from the class and teacher. The best performances modelled clearly what was possible, while the skills of evaluation were being developed alongside insight into the structure of the play.*

A more formal example of modelling and **shared criteria** came in a Year 11 GCSE higher tier class.

> *The class had all attempted individually a past 'understanding and response' paper. The teacher had also written her own answers, which she shared on overhead transparency. All pupils had a copy of the mark scheme and grade criteria. During the lessons, selected pupils read their answers for discussion, the teacher's answers were subject to critical scrutiny, and all pupils attempted to mark their own answers and identify where to improve their accuracy, detail, precision or economy. The whole lesson was good-humoured and unthreatening, and much was learned about how such examinations are marked. The teacher then collected the scripts in for her own assessment.*

This last point is important. In all the most successful teaching the **use of self-assessment or peer assessment is seen as an aspect of teaching and learning and not as a substitute for detailed assessment by the teacher**.

Such effective teaching fosters productive independent learning. Pupils pay close attention to language, including the language of literature - often by analysing a wide variety of texts (eg non-literary, media, scripts, poetry) to examine how effects are created – so that

language and literature objectives are integrated. They similarly attend closely to their own language and style, showing an interest in words and varied, often lively, expression. They have a clear understanding of what is expected of them and what they need to do to improve, revealing well-developed skills of evaluation. Work is of high quality, often featuring extended reading and writing, but with pupils expecting these normally to be done as **homework** rather than in class, and responding well to **opportunities for choice** as to what is read or written about.

Good sixth form teaching shares these characteristics. What distinguishes the best teaching at A level is the way that the well-informed English specialists use their knowledge of relevant academic disciplines (such as linguistics, literary criticism, literary or social theory, or cultural history) to guide students in deepening and extending their response to and analysis of texts. Such scholarship is worn lightly by these teachers, and the main focus of each lesson is on how students come to understand texts and discussing their interpretations.

> *In one Year 12 AS English Language lesson three contrasting texts written in 1914, 1968 and 1990, all dealing with the role of women in society, were presented to students. Through carefully phrased questions (oral and written) the teacher guided groups of students to apply a previously introduced model of linguistic levels (eg phonology, morphology, semantics) to the task of comparing the image of women presented in each text, and in so doing deepened their grasp of the impact of the language choices made by writers as well as reinforcing the 'theory'. Students were challenged intellectually and absorbed by the ideas in equal measure.*
>
> *A Year 12 AS Literature group in their first term of the course used extracts from the writing of TS Elliot and Samuel Johnson on metaphysical poetry to identify in pairs the main characteristics of the poetry that these contrasting responses chose to emphasise. They then amalgamated their lists in a well-led plenary discussion in which some misunderstandings were clarified before comparing the composite list of characteristics with one drawn up in the last lesson by the students themselves on the basis of reading a selection of Donne's poems.*

Here, well-selected literary criticism was used to build on students' existing insights at the same time as developing their ability to read complex material and analyse it.

Mathematics

Despite the successes of the National Numeracy Strategy in primary schools, many secondary school pupils still approach mathematics as a "hard" subject or one that they are "no good at". Thus effective teaching needs, above all, to give pupils confidence. Mathematics is centrally concerned with logical thinking and problem-solving and the processes of reasoning have to be made more explicit than in almost any other subject. This means that teachers need to give clear, staged exposition as they demonstrate mathematics work to the class, since they are modelling mathematical thinking. They also have to display very advanced skills of questioning, as they lay bare the thinking of pupils, to detect and correct errors and discuss the range and elegance of possible solutions. Mathematics is also a subject with a clear hierarchy of skills and ideas, with the next stage often dependent on mastery of the stage before. Thus sequence and progression dominate the planning of the curriculum and of individual lessons. However, as pupils in any class will vary widely in the speed with which concepts and skills are mastered, planning also needs to respond flexibly to the needs of individuals.

Sound **lesson planning is vital**, no matter what the teaching or learning styles adopted or the length of lessons. Planning in better lessons includes the dividing up of time and, although teachers are flexible and respond to problems encountered by their pupils, a clear overall structure remains. The **time management** of lessons is essential if a final session to check that the learning objectives have been met is not to be curtailed and unproductive. In some of the lessons, teachers even planned constructive use of the time taken for registration.

> *Registration time was used efficiently to reinforce mathematical vocabulary. Without repetitions, pupils answered the roll call by giving a mathematical word starting with the first letter of one of their names. The teacher occasionally asked a pupil to spell a difficult word or explain its meaning.*

Following from much good practice in primary schools, many mathematics lessons in secondary schools now include a **mental and oral starter**. Mental work can be a good way of settling a class as well as encouraging pupils to think mathematically from the start.

> *The teacher of one Year 7 class was annoyed by the slow way in which pupils arrived from a previous lesson. He asked quick-fire questions around the class to check recall of multiples of twelve, and of 2.5 for the higher attaining pupils, before moving on to the main part of the lesson, to convert feet and inches to centimetres. The brisk pace of the initial mental work provoked a lively and enthusiastic response, which was maintained when pupils explained their methods of calculating the various products used in estimating heights in centimetres. The teacher had planned the mental starter well to lead into the main session. Full use was thus made of the available 35 minutes.*

Where the expectation of the teacher is high and the learning objectives for the lesson are made clear to the pupils from the beginning, a final ten minutes or so at the end of the lesson informally assessing **the extent to which pupils have actually acquired new skills or knowledge** is time well spent. In some good lessons the pupils themselves are asked to explain their techniques or methods as the work through the answers to problems. Not only is the individual understanding revealed but also others can check and hence develop their own mathematical understanding.

Often a **direct input from the teacher** is vital to the quality of the lesson. Effective teaching then depends on the quality of the questioning adopted. The teacher anticipates the difficulties of the pupils and attempts to highlight potential sources of error. **Questioning** at appropriate points thus enables the teacher to build the lesson upon the secure knowledge of pupils and to check their levels of understanding as work progresses. The teacher values and listens to the responses from all pupils. Where pupils are expected to **explain methods or processes in their own words**, the teacher is able to refine the language used and to check that others have followed the reasoning. Where several methods are suggested the pupils are able to learn from one another and the teacher is enabled to explore the more efficient processes with the class.

> *Much of the teaching and learning in a second set in Year 9 was formally based on the textbook, with exposition and practice. A lesson about reflections, leading to graphical development, started with clear exposition by the teacher. The attention of all pupils was held – they clearly appreciated the teacher's subject knowledge. As the lesson progressed, questioning was used to develop the mathematical content. The questioning was challenging, and demanded justification and explanation from the pupils, so that their understanding was probed. In the written work that followed, the pupils demonstrated clearly that they had learned how to draw a reflected shape using the distance from a mirror line, and in the process had revised their knowledge of linear equations and their graphs.*

Good questioning which requires oral explanations as well as accurate answers also gives opportunities for pupils to surprise their teacher.

> *In a very lively interactive session several pupils in a Year 7 class explained sensible methods for calculating 28 x 25 mentally, including those based upon:*
>
> - *20x25 + 8x25,*
> - *7x(4x25),*
> - *252 + 75.*
>
> *The teacher praised each effort. At a later stage a question required the product 18x25 to be calculated. "Easy", said one girl. "The last mental question used 28x25=700, so we just subtract 10x25." The pupils in this class not only were accurate with their number work, but also had the confidence to attempt different methods. To the delight of their teacher, the highest attaining pupils were drawing on and transferring their previous knowledge in order to solve each new problem more efficiently.*

Many successful departments believe that a good way to develop pupils' logic and reasoning, as well as giving them the opportunity to develop problem-solving through several stages of working, is to take **an investigative approach** to some of the work. This can be time-consuming, but if initial questioning is well focused, then pupils can be steered towards deriving firm conclusions, and the process itself can be refined as pupils make progress through the school.

> *A middle attaining Year 8 class was attempting to find a relationship between the height, width and number of unit squares used in making similar T-shapes. Initially, pairs of pupils made shapes of different sizes from plastic linking cubes. Errors of perception were corrected communally when pupils attempted to tabulate some of their results on the board. Pupils were encouraged to explain the reason for any difficulty and this soon exposed the need to work in rank order. The teacher deliberately controlled this early practical work so that a modelling process was demonstrated. All pupils learned an investigative process through discussion at each of the stages of initial exploration, tabulation, ordering numerically, and generalisation. They were eventually able to make generalised statements about the sequence of shapes, and the higher attaining pupils translated these statements into algebra.*

In this school, expectations and standards were high. In all years, pupils were given many opportunities to conduct investigations for themselves, and some of their coursework for examinations was outstanding. **Homework** was very well used to reinforce the concepts learned in class and to extend the application of such concepts to new problems. The **teaching of how to investigate**, as illustrated above, was a necessary preliminary stage. In older year groups pupils were able to generalise algebraically from numerical and geometrical sequences, and used graphical calculators to describe families of curves.

Good teaching of **practical work** provides a concrete model to enable pupils to develop their thinking, and follows this up with **individual support**.

> *The teacher had carefully prepared duplicated grid sheets on which small groups of pupils in Year 8 could record their results. Each pupil selected a number in a "horse race", which was generated by adding the scores when two dice were thrown. They shaded in a bar graph for 100 throws and completed a "place table" after each 10 throws. The teacher set deadlines for completion of the practical work and a good pace was maintained. As pupils completed the task they were asked to write an explanation of the results by considering possible combinations of the scores on the dice. The teacher then moved round and discussed the results with each group and their analysis of the patterns. Many pupils gradually became aware of the significance of selecting the number 7 because of its multiplicity of combinations, and in a final plenary session the underlying probabilities were discussed.*

A major concern of many teachers is how to challenge appropriately classes which contain pupils with a wide **range of attainment**. Routine numerical work is more easily pitched at the right level, but it is difficult to enable all pupils to solve problems within their capability. The two examples below show how teachers had planned activities at different levels.

In one lesson with a Year 7 class, the teacher spent ten minutes checking multiplication facts under timed conditions using number squares. The lower attainers worked with 1 to 10; middle attainers had 3 to 12, and higher attainers 3 to 14. Based on the teacher's knowledge of prior performance, each pupil had a personal target to aim for in both time and accuracy. The activity was timed so that those completing their assignment were informed of the stopwatch reading. The answers were quickly checked so that the pupils could work out their personal targets for a future lesson.

In another Year 7 lesson, pupils practised plotting co-ordinates on a grid extended to include all four quadrants. Initial oral work enabled the teacher to emphasise the ordering of negative numbers before pupils conducted individual activities to connect points to identify famous landmarks. The activities were pitched at three levels to enable middle and higher attainers to extend the work to decimal co-ordinates and reflections in the axes. One very advanced pupil drew a shape of her own invention, thus satisfying higher level criteria. The pupils were organised in groups according to their attainment and this enabled the teacher more easily to monitor the progress of all pupils and the classroom assistant to check the understanding of the slower learners.

In such circumstances, all pupils are able to make progress in mathematics, and to be confident in their success at different levels of attainment.

Science

Many science teachers place heavy emphasis on the coverage of the content in the National Curriculum programmes of study and examination specifications: this teaching is usually thorough and well organised but it often fails to engage pupils' interest in science. **The best science teaching gives due attention to subject content, but additionally engages and motivates pupils to pursue scientific thinking**.

The most effective science teaching very often:

- combines clear explanation with questioning to develop pupils own thinking;
- extends the application of scientific ideas to human, industrial and environmental situations;
- includes a good variety of linked activities in a lesson, including purposeful laboratory practical work;

- plans opportunities for the development of the skills of scientific enquiry throughout the key stages;
- finds ways of encouraging more open discussion through the use of approaches such as modelling and role-play.

The survey identified examples of teaching that included, to good effect, some or all of the features identified above.

The foundation of all good teaching in science is good subject knowledge on the part of teachers, with "subject character" that motivates pupils towards science. **Well-informed teaching is, however, not simply accurate; it also inspires confidence in pupils, based on well-judged and appropriately pitched explanations**.

> *In a Year 13 lesson on biodiversity and evolution, the teacher's excellent knowledge of the subject was used to correct gently imprecision in students' responses and simplify through illustration some complex terminology. The teacher inspired confidence by giving easily understood answers to apparently demanding questions. Topical material from newspapers and other publications was used to provide relevant up-to-date illustration to develop pupils' understanding.*

The varied use of questioning is very often at the heart of successful science teaching. Questions can be used to ensure that pupils have grasped instructions, to check their recall and understanding, and to improve learning by asking pupils to articulate their developing ideas, as in this Year 10 example.

> *The lesson on oxidation started with a series of quick demonstrations by the teacher to review earlier work on reactions involving oxidation and reduction. Pupils were required to think and recall previous learning from the outset. Their understanding was checked throughout the lesson by careful questioning but with a sensitive approach and concern for the lower attaining pupils. Questions were pitched appropriately to individual pupils to challenge their understanding.*

Good questioning also extends pupils' application of scientific knowledge to real situations.

> *A Year 9 lesson came alive when a newspaper article on a recent tragic fire in a funicular railway tunnel was produced as a stimulus to discussion. Pupils were asked to explain why the fire spread so quickly and what the best course of action would be for people involved. This significantly encouraged pupils to apply their understanding of convection to a real human situation. Motivation and engagement improved greatly as a result.*

Prompted by this discussion, homework was set to find out about other ways in which mechanisms for the transfer of thermal energy could be applied in everyday life. **This illustrates how the introduction of relevant contexts can improve work outside as well as within lessons**.

Although many science lessons are well planned and purposeful, and often include a single main activity of class practical work, some of the best lessons contain **a variety of linked activities**. This approach frequently helps develop pupils' understanding and caters for a range of learning styles.

The teacher used short questions to review previous work on obtaining metals from their ores, to give a prompt and pacy start to a Year 9 lesson on metals. Pupils, acting as copper atoms, were organised to simulate quickly the way in which electrolysis can be used to purify a metal. A worksheet was used to reinforce key ideas; this was linked to practical applications (corrosion of the teacher's watch). The electrolysis demonstration was usefully rounded off with a check on understanding.

Information and communication technology (ICT) can be used as part of a lesson to challenge some pupils whilst ensuring that all gain an understanding of the key ideas. This seldom requires access to a computer suite: the use of a single machine is often sufficient to provide more detailed data in order to broaden the scope of the lesson.

Year 8 pupils carried out a class practical on the effect of light intensity on photosynthesis in pondweed. The rate of photosynthesis was measured by counting the bubbles of oxygen. Following this the class gathered round a demonstration using oxygen probes linked to a computer. The teacher was able to discuss pupils' findings and consolidate their understanding of basic principles whilst also providing challenge for the most able. The more precise measuring technique made available detail not observable in the class experiment. For example the simultaneous use of different conditions for different samples of pondweed enabled the teacher to introduce the limiting effect of temperature and carbon dioxide availability.

The best lessons make a crisp start, with pupils engaged and involved from the outset.

In a Year 10 lesson on genetics, the teacher provided a stimulating introduction by saying, "you are going to tackle a problem that Darwin could not solve!" School-bred gerbils were used to illustrate the problem 'How can a black gerbil be born from brown parents?' This immediately captured pupils' interest.

Laboratory practical work rightly forms a prominent part of the majority of science lessons. Pupils enjoy this practical aspect of science and most participate fully. **The key to the most effective practical sessions is a clear sense of what pupils should learn, coupled with appropriate teacher intervention**, as in the following Year 11 lesson on enzymes.

The teacher circulated around the class as pupils were engaged in practical work, questioning students on both the procedures they were using and their understanding of the central principles. A grid was used to record the teacher's observations and to provide feedback to the class on their practical technique and conclusions. During discussion the teacher challenged pupils' data and its interpretation.

Another feature of the most effective practical work is its relation to relevant human, environmental or industrial problems. This often requires very little development of the task itself but the relevant context proves highly engaging. For example:

In a Year 10 lesson on metals, practical work was set in a problem-solving context. New work was related to previously developed concepts such as the reactivity series, and the task was framed as a question "How can we obtain useful metals from their ores?" The practical activity was then seen by pupils to be linked to a real-life problem as well as offering a demonstration of a scientific principle. In addition, pupils were motivated by the competitive aspect of trying to produce the most metal from the sample of "ore" supplied.

Although practical work is central to many good science lessons, various other activities and approaches are used effectively, where they are well selected and support particular aspects of learning. For example, **when exposition is used the teacher takes steps to ensure that pupils develop the capability to interpret and apply the knowledge quickly**, as in the following Year 10 lesson on polymerisation.

There were frequent pauses in the well-delivered exposition by the teacher to set simple tasks to check pupils' understanding. For instance, pupils were asked quickly to draw models of molecules to illustrate the difference between alkanes and alkenes. Pupils provided rapid feedback to the teacher using small whiteboards. The teacher, in turn, also provided feedback to the pupils.

Many lessons are successful because of the ways in which the teacher ensures pupils' active involvement, making a clear and direct link with the learning objectives. **Role-play and modelling are used, for example, where it is important for pupils to visualise mechanisms or to allow more open discussion of controversial themes**.

In a Year 7 lesson about the menstrual cycle, a mixed class was arranged into the outline of the female reproductive system, ovaries, fallopian tubes, and so on. Tennis balls and footballs were used to represent ova and tissue paper the lining of the womb. Pupils then simulated the monthly cycle by passing footballs along the lines representing the fallopian tubes. An open class discussion followed, which avoided potential embarrassment for pupils by appropriate reference to the "model".

Teaching to prepare pupils for coursework is particularly important in science because assessment is based on the quality of their investigative practical work. **The most successful departments teach and assess practical skills throughout Key Stages 3 and 4**. These activities are integrated into the science curriculum as in the following example.

Investigative practical work is written into the schemes of work throughout Key Stages 3 and 4. Pupils practise some of the essential skills in short investigations, as part of routine practical work and during discussion of teachers' demonstrations. The department recognises the need to develop as well as assess pupils' investigative skills at an early stage. For example, in a lesson on displacement reactions, pupils were asked to predict and offer an explanation for what would happen when the teacher added pieces of zinc to a flask of copper sulphate solution. In another lesson the class was asked to discuss how they would plan an experiment to result in a "league table" of metals in order of reactivity.

In some of the most successful science work, teachers incorporate an investigative approach throughout their lessons. They emphasise empirical evidence and encourage pupils to think for themselves about what can be learnt from such evidence, so that the pupils naturally reflect on experimental outcomes and how they might be improved. For these teachers, coursework is often viewed as a culmination of what they are aiming towards rather than something bolted onto the main science curriculum.

At best, investigative practical coursework is supported by teaching which encourages pupils to think critically about the empirical approach, drawing on and developing pupils' knowledge and understanding of scientific principles.

Art and design

Central to good teaching in art and design is an understanding of the importance of drawing. Effective teachers see it as integral to the subject, an underpinning discipline or key skill that cannot be ignored. This survey set out to find out what some of the characteristics of the effective teaching of drawing are, as well as the departmental conditions that support its development within the curriculum.

In the most effective lessons, it is recognised that drawing is, in part, a set of skills that all pupils can be taught and that, like all skills, regular practice is needed if progress is to be sustained.   In order to teach drawing well, teachers need a **secure knowledge of drawing** and sufficient confidence in their own drawing ability to demonstrate the conventions and techniques they want pupils to learn.

In a Year 10 lesson, a teacher used his own sketchbook to illustrate powerfully the concept of visual brainstorming; and in another school, the teacher drew accurately on the whiteboard a proportionally divided human figure as part of a Year 7 project on self-portraiture. Elsewhere, a trainee teacher shared with sixth-form students examples of digitally generated drawings he had exhibited in his degree show.

However, drawing is also seen as more than the acquisition of technical skill. It is also perceived to be a **skill for learning**. As one teacher said to his A-level class, "surely, drawing counts as research".

In one Year 12 student's portfolio, a series of drawings opened up, delicately and precisely, the structure of a seashell: a painstaking process of discovery. This sequence contrasted starkly with quick-fire drawings in charcoal – by the same student – of a moving life model, consisting of one or two lines, expressing simply moments in time.

Pupils are shown that drawing can serve many purposes. Drawings can be shared with others or be entirely private and personal; they can be an end in themselves or be part of an investigative process: to generate a design, work out the composition of a painting, or find out how something is constructed.

In one Year 10 lesson, pupils were shown a range of sketchbooks produced by pupils from a previous Year 10 class, reinforcing their understanding of the many ways sketchbooks can be used. In another school, Year 8 pupils were asked to explain through drawing how a cardboard box was constructed, with sufficient detail and accuracy for someone to make an identical box. Elsewhere, pupils also in Year 8, prepared initial designs for a collagraph print – in some cases, of eloquent simplicity – derived from drawings, done for homework, of the Lincolnshire Fens; and girls in a Year 10 class produced complex drawings of imaginary worlds, inspired by science fiction and the paintings of Richard Dadd. In one or two schools, surrealist imagery such as that of Escher, Magritte and Dali was the starting-point for conceptual drawing, with pupils enjoying juxtaposing words and images to often powerful ironic effect or creating visual jokes such as a functioning sandcastle.

Where teaching is effective there is also recognition that **drawings can be produced in a range of media**, from graphite to charcoal to paint and wire, and can also be created on computers, although, for many teachers, the new technologies are not yet an integral part of their practice.

In one school, in a lesson based on Matisse's cut-outs, Year 8 pupils were encouraged to "use scissors like a pencil" and, in a Year 9 class, pupils debated whether an aerial photograph of the marks left by a car's tyres could be classified legitimately as drawing. Frequently, the process of mark-making in different media was a feature of lessons – often beginning with doodling or free experimentation. In one Year 7 lesson the weight of different pencil lines was explored, leading eventually to the creation of controlled effects using cross-hatching.

Pupils are also encouraged to draw on different scales and on different surfaces, vertical and horizontal, and given opportunities to work individually and to collaborate in pairs or groups.

In one department, Year 9 pupils drawing large pot plants used desk easels to rest their drawing boards, thus reducing the problem of foreshortening the subject. In another lesson, Year 8 pupils worked in pairs to solve a design problem using large pieces of paper pinned to the wall. Elsewhere, A-level students worked on large tonal drawings inspired by the architecture of Le Corbusier – the scale and medium (charcoal and chalk) helping to capture the monumentality of the subject.

Where teaching is effective, **pupils are shown how to analyse the systems and expressive purposes of drawings by other artists**, and how to use what they have learned to their own artistic ends.

Year 8 pupils analysed the paintings of Balla and Marcel Duchamp's Nude Descending a Staircase *as part of a project on the figure in movement and used the device of multiple impressions to produce their own compositions. In a similar project elsewhere, Year 10 pupils analysed Muybridge's photographic sequences of human movement and Degas' paintings and drawings of dancers moving and in repose to inform their visual studies of sporting heroes. In one school, Chinese calligraphic traditions and, in another, prints by Hiroshige, were used as visual starting points, helping to broaden pupils' cultural perceptions of drawing. Elsewhere, a blind girl in a Year 7 class, studying the work of Van Gogh, generated her own tactile version of a sunflower head using a special drawing board.*

Also important to the **good teaching of observational drawing** are methods that encourage pupils to choose how much or how little to draw within their visual field. In several lessons, for example, framing devices – from cardboard rectangles of different sizes to frames formed by the hands – were used to help pupils select a satisfying focus for their drawing.

In one Year 9 lesson, close-ups of parts of flowers selected with viewfinders were painted in the style of and colour palette of Georgia O'Keefe. Quick-fire drawing exercises, requiring pupils to draw a moving model were also used effectively in one Year 12 lesson, the time constraint impelling students to identify essential information quickly.

In the best teaching, there was often **continuing dialogue between pupils and their teacher**, for instance on matters of perception, as in this Year 8 lesson.

A pupil was asked by the teacher why he had delineated the shape of a stone with such a thick black line and was told that "By creating the outline (in this way), I am making sure the object doesn't bleed across the paper and into the background". In this situation, the problem of separating the subject from its background had posed an interesting problem for the pupil which the teacher, though discussion, was able to explore with him, helping him to see (literally) other possible solutions.

In another lesson:

> *The teacher taught the principles of linear perspective through demonstration on a whiteboard and questioning – for example, asking where they would put the vanishing point and what the effect would be if it were placed in the centre or off-centre. This Year 7 lesson also used productively pupils' interest in graffiti, requiring them to produce their signatures on large pieces of paper using linear perspective.*

The evidence of good teaching is made clear in pupils' sketchbooks. As working documents they can reveal **progression in pupils' knowledge, skills and understanding**.

> *In a sample of Year 7 sketchbooks in one school, there was clear evidence that pupils were exercising a number of operational choices in their drawings: in drawing materials, scale, viewpoint, weight and thickness of line and in technique – hatching or cross-hatching, for instance. Also evident was an increasingly secure application of a technical vocabulary – form, line, perspective, for example – when commenting on their work. These sketchbooks indicated a planned progression in pupils' experience of drawing, and, in teachers' comments, clarity of expectation over the standards to be achieved.*

Design and technology

The National Curriculum proposes that "Design and technology prepares pupils to participate in tomorrow's rapidly changing technologies. They learn to think and intervene creatively to improve the quality of life." It is important that schools plan to develop pupils' ability to apply knowledge and understanding, alongside their practical and cognitive skills, with this aim always in mind.

The best teaching in design and technology (D&T) takes place in schools where teams of D&T teachers share **a clear vision of the subject's rationale**. Teachers plan for the whole key stage, using a detailed scheme of work for each module of work undertaken. Lessons are based on clear learning objectives that are shared with pupils.

Such teachers recognise that to develop D&T capability their pupils have to extend their knowledge and understanding of materials, components and processes in each aspect of D&T alongside their generic designing and making skills. **The teaching is organised so that pupils' imagination, creativity and innovation are stimulated while still focusing on developing a product to meet a precise specification**. They do not forget the distinct aspect of designing for the user. The best teachers ensure that their pupils take into account aesthetic, economic, social, cultural, moral and environmental issues as they

undertake their own designing and making and as they evaluate the work of others. A distinct feature of the work in the best departments, therefore, is the way that teachers help pupils to design products with due attention to **functional effectiveness**. They usually draw pupils' attention to good and poor examples of existing products and organise the working environment so that it is rich with examples of products and the materials with which pupils might work.

Most teachers of D&T are enthusiastic about their specialist field and convey their own delight in designing and making to their pupils. Many have industrial or other professional experience and the best maintain their links to this world outside school, keeping up-to-date with current developments, new materials and innovative new processes. They make good use of video to support "knowledge of industrial practice", especially when it is impossible to make visits. This **command of technological knowledge and experience** means that they know how to simplify explanations accurately for younger pupils which can be expanded at a later stage. It also means that they can develop a coherent conceptual understanding of increasingly complex activity. A good example is in food technology.

> *Good teaching moved pupils' understanding, from basic principles of kneading and the importance of using strong flour to an understanding of which strains of flour are most appropriately blended to obtain optimum performance for specific bread products, and why.*

Good planning in D&T is an important element of successful teaching. It starts when a D&T department has a clear overview of the whole Key Stage so that **all parts of the curricular "jigsaw" are seen to fit together**. Departments ensure that the curriculum makes ever-increasing demands on pupils of differing ability and interests, pupils enjoy a broad range of experiences, and each aspect of D&T builds on the contribution of the others. Joint planning by the whole team of D&T teachers is a key feature of successful teaching.

In setting objectives, good teachers of D&T give due thought to progression and know exactly what aspect of pupils' learning they intend to develop. This might, for example, take the form of progression from shorter and tightly constrained tasks in Year 7 towards longer and more open-ended designing tasks in Year 9. Such an approach helps to develop pupils' confidence with practical activity.

In a Year 10 textile technology practical session, eight sewing machines were in use, including a computer-controlled machine, as well as transfer printing, web searches, hand sewing and quilting. Practical work was based on a multicultural theme selected by the pupils and included furnishing, garments, and accessories. Excellent questioning by the teacher throughout provoked pupils to think about and justify their decisions. Pupils' work demonstrated good standards and thoughtful use of materials. They drew confidently on their previous experience and knew how to select appropriate processes and materials. Notebooks were well organised and to a high standard showing careful consideration of alternatives of design details.

Lively introductions to lessons play a vital part in inspiring pupils and providing starting-points for the development of ideas. Sometimes these involve analysis of existing products, by pupils individually, in groups or as a whole class. The most effective teachers provide the relevant materials, ingredients or components for pupils to handle during these early stages.

Good teachers are clear about which particular **designing skills**, for example, they intend to foster, and choose appropriate activities to develop them. They might refer pupils back to a precise design brief or product specification to help them clarify their ideas, or require them to imagine the effects of using different materials or components in a product, or even the effects of changing the intended user.

Year 7 pupils were taught to develop a clear design specification for a wooden spatula for cooking. Each pupil constructed his or her own spatula and there was a depth to the work that emanated from detailed class discussion and brainstorming, with the teacher as the catalyst. One pupil produced the following concise specification for a carved spatula:

"Long enough to be safe. Made out of pine. Handle has to be thin in comparison with the head. It must have an angled edge. It has to be simple and easy to manufacture. No splinters, smooth edges. Easy to clean."

Two-dimensional sketching is an important skill in the communication of design ideas. Good teachers ensure that rapid sketching techniques are systematically developed. They often liaise with teachers in the art department so that pupils' learning is co-ordinated. Annotated drawings are an important aspect of design development and effective teachers ensure that pupils' drawings are free of unnecessary embellishment, at this stage. This helps to maintain the pace of the work. Appropriate attention is given to detail - first ideas are broad but with closer attention to detail when it is needed. Above all, these good teachers ensure that design portfolios communicate the story of the designing and do not become an end in themselves.

Good teachers select their **teaching strategies** according to learning objectives. It is often the case in D&T that teachers begin with a short introduction and use this to lead pupils into designing and other practical activity which they monitor carefully. This can work well with older pupils. In Key Stage 3, in better lessons, the teacher structures the work in greater detail and use devices such as paired or group discussion of design tasks in order to get pupils to grips with the ideas involved. This helps to keep pupils on task, justifying and evaluating their ideas carefully, and prepares them to tackle their work independently.

Where **demonstrations** are given, they are well organised, adding an element of professionalism. This contributes towards establishing the highest expectations for the work to be undertaken and for the specific skills and abilities to be developed in a project, including generation of ideas, researching, understanding technological content and the development of practical skills.

A teacher skilfully demonstrated to a Year 8 class the soldering of electronic components onto a printed circuit board. The principles were explained – physical attachment and electrical conductivity - and the overview of the process was described as a prelude to the actual practical demonstration. All tools and materials were to hand and technical terms were already noted on the board. Pupils could see the detail of the process as the teacher had set up a video camera to feed into the large screen monitor in the room. The teacher described what he was doing with the right level of detail – sufficient and clear. The process was quickly repeated, reinforcing sequencing and safety. A pupil was chosen to repeat the demonstration, with the whole class watching for correct procedures. Samples of possible faults – dirty surfaces, too much solder, dry joints - were shown, with questioning to elicit possible remedies. With a reminder of safety issues, all pupils immediately moved to work in pairs on a few practice joints.

The most effective teachers use **questioning** regularly. As well as checking on pupils' understanding they challenge design decisions and require pupils to justify their design proposals. This strategy is also effectively used when pupils work in groups considering each other's ideas. Good teachers time interventions and their questioning carefully, allowing the pupils to wrestle with problems but intervening to avoid frustration and to advance learning effectively.

In a Year 10 electronics lesson the teacher used questioning well to explore with individual pupils the possible reasons for the malfunctioning of a circuit. His own excellent specialist knowledge helped him to structure and restructure the questions, to delve increasingly deeply into pupils' subject knowledge and understanding. He led them to suggest a logical approach to fault-finding in that circuit: make a physical examination to check for structural integrity, compare voltage across different parts of the circuit with those suggested on a computer simulation of that circuit and check if individual components are functioning correctly. He judged well the point at which to give information to help the pupils make progress.

Despite a national picture of underachievement of boys in D&T the most successful departments have **raised boys' attainment** almost to match that of girls. Successful teaching strategies include setting boys focused targets, short deadlines, an element of "competitiveness" in lessons and tasks, and close attention to monitoring of achievement. Pupils' progress in their work is tracked through effective informal and formal assessment, focused at the level of sub-skills of designing and making, not just National Curriculum level descriptions. In good lessons, pupils are often set targets which encourage them to assess their own progress. Similarly, samples of pupils' portfolios are used by teachers to moderate and to set standards.

> *The Head of Department keeps an A3 folio for each year group containing photos of past projects, examples of design and evaluation work, together with assessment levels and reasons for allocating those levels. These are used regularly by all teachers at the start of projects to familiarise pupils with what is expected of them, the standards expected and reasons giving rise to the standards.*

Geography

Geography plays a crucial role in promoting an understanding of the world by studying the physical environment and events that have an impact on people's lives, both locally and in distant places. The teaching of geography should provide the necessary background knowledge and deepen the understanding of the forces that shape the world we live in. Good geography teaching is not primarily about the acquisition of information, but it guides and encourages students to develop skills of analysis and critical argument, and a broader sense of context and empathy.

Geography deals with **real and often controversial issues**. Good geography teaching helps pupils to get "under the skin" of such issues, using a range of techniques. The skilful use of role-play and debates, for example, provides appropriate opportunities for teachers to stimulate discussion of issues and to develop pupils' ability to **develop and express opinions** as well as other skills.

> *In a Year 10 class with a high proportion of pupils with English as an additional language, the teacher gave pupils role cards, which they used to structure discussion in small groups. The pupils were asked to assume the role of groups interested in developing the Brazilian rainforest. They worked together to research the perspective of a particular group, such as loggers, indigenous peoples, ranchers or ecologists. Using PowerPoint presentations, each interest group fed back to the whole class from its specific viewpoint. The pupils argued their "case" to a panel of judges made up of representatives from other classes in the year group. The skilful intervention of the class teacher, as devil's advocate, raised the level of challenge and maintained the pace and focus of the debate, ensuring that all pupils' views and opinions were expressed. This activity subsequently proved to be effective as a stimulus for further research as well as supporting the development of pupils' planning skills.*

A feature of good geography teaching is that teachers exploit the **topicality** of geography to deepen understanding and to **engage pupils' interest**. Events in the news, on a local, national or international scale, create opportunities for good teachers to bring to life the National Curriculum programme of study and develop it.

> *Year 7 pupils collected newspaper articles related to the expansion of the nearby regional airport. At this time, media attention focused on protesters who had occupied land intended for the airport's second runway. This occupation had prompted much discussion in the school and the community. The geography teacher was aware that the issue affected some pupils in particular because they lived close to the proposed site. She divided the class into different groups based on levels of literacy, and provided each with several newspaper extracts, with the more able pupils given the longer and more challenging texts. The groups were asked to read the texts and highlight in green the statements that were against the runway and in red those that stressed the advantages of the second runway. The newspaper extracts were collected and the teacher used the pupils' work to produce "statement cards" relating to the issues they had identified. In the next lesson, the pupils used the cards to build up an argument for and against the runway and to debate these issues. This provided the basic information to enable the pupils to write a reasoned analysis expressing their own views. The pupils who found difficulty with setting out their opinions were provided with writing frames to support them in structuring their views.*

National Curriculum geography and examination specifications include a substantial amount of **factual content about people and places**. Good teachers ensure that the content is fully exploited, enabling pupils to apply their wider geographical knowledge to deepen understanding of an event, process or issue.

> *In a Year 9 lesson the teacher made effective use of a wide range of resources and approaches to develop pupils' research and analytical skills. The teacher provided a substantial range of interesting and relevant background information on the characteristics of rainforests and the impact of deforestation for pupils to study, including text books and newspaper articles. Following this initial study, the pupils found additional information about rainforests on the Internet. They used their well-developed reference skills to skim and scan for relevant information and selected appropriate material. Text was used selectively by highlighting, copying and pasting from the Internet or in note-making from books. Some pupils used e-mail to send information for use at home.*

> *In another Year 7 lesson, the teacher provided each pupil with an aerial photograph, part of a set, which together traced the route of a river from source to mouth. Pupils were given ten small oblong pieces of blank paper. They were asked to look very carefully at their photograph and to think of words or phrases that described the landscape and human features, and to write them on the pieces of paper to be used as "labels". They then exchanged photographs and papers with their nearest partner, who had to establish the correct location for each word or phrase. These words were then used to compose a paragraph describing and explaining the human and physical features of the landscape in the photograph. Lower attaining pupils were provided with a 'word wall' of a hundred possible phrases and words to help them to select and use the appropriate vocabulary. Pupils who normally found difficulty with writing at length were able to complete an extended description.*

Post-16 geography students are often expected to use an extensive amount of data and resource materials which they need to assimilate, prioritise and edit as the basis for developing reasoned and valid argument. Visual rather than oral instruction, linked to **modelling**, often clarifies the task for students, enabling them to focus on the key points and criteria.

> *In a Year 13 lesson on "Hazardous environments", students were given the task of writing an essay explaining 'Why natural hazards can result in a greater loss of life in some areas than others'. The lesson focused on asking students to create an individual sequenced outline plan, to enable them to complete the written task for homework. They needed to access a vast range of information, sort it, classify it and produce a logical sequence of key points. To facilitate this the teacher, using an overhead transparency, clarified the focus of the lesson visually by identifying the sequence of tasks. He used a statement from Karl Marx ("Earthquakes don't kill people, buildings do!") to stimulate discussion. Rather than just talking about the evidence, he used an interactive whiteboard to access relevant geological websites to demonstrate the variety and intensity of earthquakes. As a result, the students had a clear grasp of the key concepts and the strategies they needed to employ to develop their essay plan. The resultant research was focused and relevant to their homework task.*

Such use of **visual or sensory resources brings geography to life**. Some excellent lessons draw on pictures, film or text as stimuli for creative writing, encouraging pupils to think deeply about the subject and thus to develop their **language competence and communication skills.**

Before writing a rainforest poem, pupils in a Year 9 lesson responded positively to involvement in a "mind movie". With eyes closed, they listened to a description of the rainforest, beautifully read by the teacher and backed by an audiotape of rainforest sounds. This enabled them to visualise the rainforest and remember the characteristics in considerable detail. Working in pairs, they were able to exchange ideas and develop a clearer understanding of the features of the rainforest, describing the climate, vegetation and wildlife in the eco-system. The resulting poetry was both vivid and detailed.

In the best lessons teachers develop pupils' **empathy** and enhance understanding through **comparisons between the lives of their pupils and those of young people in other localities and countries**. This is frequently done well where teachers are able to relate pupils' own knowledge and experience to new situations.

In a Year 9 class on the disparities between the rich and poor world, the teacher initiated an excellent discussion about how people in rich and poor countries view objects and events in their daily lives, such as a good meal, a glass of water, or a dry bed. The pupils were challenged to think about things that might be taken for granted in their own lives, and to share their ideas. The teacher was careful to avoid stereotypical views and encouraged extended oral contributions from pupils. He ensured that all pupils were involved and also that they listened and responded to each other's ideas.

The use of **fieldwork** by teachers often makes a significant and positive contribution to pupils' progress, as in the following Year 7 lesson on flood management in York.

A very clear introduction by the teacher established the focus of the lesson, followed by a quick recapitulation of the flood hazard fieldwork recently completed in York. A well-selected video clip and a good range of questions stimulated a broader discussion of pupils' understanding of the environmental issues related to flooding. Excellent links were made between the video clips of earlier flooding in York and Selby and the fieldwork and digital camera images displayed around the classroom.

Good teachers use fieldwork to raise levels of knowledge and understanding. Where they plan to integrate fieldwork into the curriculum and where pupils are given substantial fieldwork experience each year, pupils achieve a better understanding of key geographical concepts. Pupils have a better sense of place, understand geographical issues such as flood hazard management in an informed way and have a clearer **appreciation of the values and views of others**.

History

Successful teachers of history have addressed the central issue of progression in pupils' knowledge, skills and understanding. In particular they help pupils to acquire and develop:

- an overview of the past;
- an increasingly firm understanding of organising concepts;
- more purposeful and increasingly analytical enquiry;
- a grasp of the importance of historical interpretation.

The survey sought to identify examples of good practice in these respects; and also how history teachers involve lower attaining pupils and help them to communicate what they know, and extend the most able.

It is particularly important that history teaching is motivating and that the significance of what is being taught is clear to pupils. The **teacher's command of historical content and process** is a precondition for arousing and maintaining pupils' interest and for the development of knowledge, understanding and skills.

To develop pupils' knowledge and understanding, it is essential that they are taught in a way that **links new work to prior learning**, taking the opportunity to strengthen their overview of the past. This is important in making sense to pupils of National Curriculum history in Key Stage 3 (and building upon Key Stage 2), and also in demonstrating the rationale for the choice of options in GCSE and, ultimately, the synoptic links required by A-level specifications. In the following example of an upper set Year 10 group, the teacher's excellent subject knowledge and economic use of time and resources ensured that pupils' contextual understanding was firmly established.

> *The teacher made very good use of a Key Stage 3 textbook to introduce the Renaissance through developments in art. The teaching displayed very good subject knowledge, with well-paced explanation and questioning, based on high quality illustrations, to draw out specific points. Pupils' ideas were then used to build up a pattern diagram that effectively captured the spirit of the Renaissance. In the second phase of the lesson pupils read about the medical developments of the Renaissance in order to be able to make links between this broader context and medical change. Effective questioning and use of the whiteboard drew out the key information. Pupils were then set tight time limits to write a summary answer to the question "How did the Renaissance affect medicine?" Pupils wrote at length in the limited time available, drawing on what they had understood from the initial discussions and using the textbook for reference. This resulted in some excellent summaries of main issues, and provided a very good foundation for subsequent, more detailed study of the period.*

Excellent teaching to develop conceptual understanding requires that teachers constantly raise the stakes, selecting material and learning strategies that provide ever more complex challenge. **Exposition, questioning and review** reveal, explore and deepen understanding. Such excellent teaching was demonstrated in another school using the same syllabus, but with a middle ability group studying change and causation.

> *The lesson was magnificently conceived by the teacher, with a very clear focus on the key facts and the use of activities that motivated the pupils. Building upon the teacher's introduction, pupils first worked in groups to identify the factors aiding Pasteur's developments (such as chance, genius, observational methodology). Then individuals gave impromptu presentations to the class, analysing those and other factors provided for them by the teacher, whose key role was in engineering the subsequent whole-class analysis. This led to a very high level of historical discourse - more than generally seen from a middle ability group such as this.*

In attempting to establish progression in the understanding and use of historical evidence, good teachers are aware of the many variables that come to bear, including the number, length, degree of difficulty, and potential for **evaluative work on the sources** that they are using. They are also aware of the dangers of low level and formulaic approaches that can serve to reinforce pupils' misconceptions, for example simplistic notions of primary and secondary evidence. Good teaching begins with a clear view of what the sources are best used for. In these two examples, teachers use sources in appropriate but different ways. In the first, a Year 10 lesson, an array of sources was used for the sole purpose of **gathering information to support a particular case**. In the second, a mixed-ability Year 9 class, two demanding sources were used to develop skills in evaluation, **establishing their usefulness for a particular enquiry**.

The teacher had excellent command of his material; the lesson was well organised and very well resourced with contemporary evidence and a diagram showing losses from conventional and A-bomb attacks. The opening good quality discussion tested pupils' understanding of a homework task about why the US and Japan went to war. The teacher provided a brief, cogent outline of the course of war, illustrating the nature of the war with reference to the Battle of Midway, followed by scrutiny and discussion of the time line leading to Japan's surrender. Then, in pairs, pupils used well an impressive range of sources to identify factors which favoured or militated against invasion, blockade and conventional bombing as ways to defeat Japan. Finally, pupils prepared a brief for President Truman on the implications of dropping the A-bomb, to be presented to the class next lesson. The homework task was to answer key questions. The lesson throughout was conducted in a lively pace,with effective transitions, and was brought to a crisp, coherent conclusion.

The lesson began with very effective reading by the teacher of Rupert Brooke's The Soldier *and Wilfred Owen's* Dulce et Decorum Est*, capturing the intentions of the poets at different times of the war. It was followed by good questioning and reward for answers, setting high expectations, teasing out understanding of the value of poems as evidence, and introducing the idea of provenance. Pupils quickly grasped the purpose and imagery of Brooke's and Owen's poems, and the attitudes they convey, and provided good, extended oral explanations, with effective use of poetic images. Pupils demonstrated understanding of the usefulness and limitations of poems as evidence of the attitudes of people at the start and end of the war, and contrasted them with the recruitment posters they had studied in a previous lesson.*

Good history teaching leads pupils to think about interpretations of people, events and developments in history, working out, for example, the implications of textual and other evidence, making **inferences** and establishing **hypotheses**, as in an excellent Year 8 lesson where higher attaining pupils followed up their work on 'Oliver Cromwell, hero or villain?'

Lesson objectives had been made clear to pupils, who came well prepared. As well as developing very good subject knowledge and understanding, the lesson involved excellent development of oracy and literacy, and made a major contribution to citizenship by considering issues such as kingship, toleration, political decision-making, and the relationship between religion and politics. As a stimulus for discussion, two excellent essays were read out by pupils selected by the teacher. The teacher then chaired a class analysis, considering in turn a range of significant factors. Pupils articulately addressed evidence to support particular points of view, basing their judgements on well-understood facts. A genuine debate took place in which pupils' ideas were refined.   In conclusion, good teaching points were made about interpretations of history.

The difficulty with such high level work is, of course, in ensuring the **engagement of all pupils**, and not just higher attainers. In some good lessons, teachers ensured this involvement through paired or group activity, though such strategies are by no means always successful, and group work can be diversionary. In the following lesson, **role-play** was used to involve all of the pupils in a Year 9 group studying the Battle of the Somme.

> *Pupils in groups had devised playlets on the preparations made by soldiers before going over the top, using information to analyse the attitudes of frontline troops. Each presentation was followed by a critique by the whole class. This drew well on previous lessons' work and every pupil had an important function. Very good levels of oracy and high standards of knowledge were demonstrated in all presentations seen – with much reference to details of trench life, but also to wider issues such as loyalty and cowardice. Critiques were based on very appropriate assessment criteria including use of information and characterisation. The teacher was very effective in encouraging reflection on the qualities of each presentation and the exchange of views, including characterisation and the level of information used, ultimately helping pupils to reach reasonable conclusions based upon appropriate criteria.*

If such lessons are to be effective, all pupils need to be well prepared. In a Year 10 lesson on the American West, good teaching made the activity successful for all pupils in a mixed-ability group.

> *In this whole-class lesson, groups of pupils prosecuted or defended Custer on the charge that his incompetence caused the defeat at Little Big Horn. The role of the teacher was crucial in providing additional information to help pupil witnesses when they got stuck. However, the teacher made it clear when, rightly, he thought a group was poorly prepared. He summed up after each witness to ensure that the whole class understood.*

Good history teachers ensure that **sixth-form students** learn to work with complex historical material, developing their confidence in **analysing and arguing**, as in the following Year 12 lesson.

> *The teacher was intellectually provocative, lively and communicative. She deliberately provided an exaggerated hypothesis, that Baldwin could have avoided the General Strike quite easily and that it was doomed to failure, urging students to contest her analysis. She demonstrated good subject knowledge, made very extensive references to support the hypothesis and drew on the work of historians of the period. Students, working in groups, were then confronted with a useful range of sources to analyse, discuss and draw upon in support or refutation of the hypothesis. This created very good opportunities for advancing understanding. Students had a good grasp of the task and benefited from talking through the issues before contributing to a summary whole-class session.*

Information communication technology

Effective teaching develops pupils' information and communication technology (ICT) skills and helps them to apply these for specific purposes and improve the quality of their work. As a result pupils are involved in their own assessment and can articulate how they use ICT to improve their work. Good practical lessons achieve a balance between the use of ICT resources and work away from computers in order to plan, reflect and evaluate. They include plenaries, which enable the pupils to consider the progress they have made, and possibly to demonstrate to others what they have achieved. Where ICT or computing is taught as an examination subject, good teaching builds on pupils' existing experience of using computers and relates this to theoretical understanding and to the use of ICT in the world beyond school. Examination requirements are communicated to pupils in the context of specific tasks and coursework.

Good teachers of ICT are able to use their **subject knowledge** to provide clear explanations to pupils, providing good coverage of the underlying concepts and applying the correct technical vocabulary.

A Year 11 short course GCSE lesson involved a control system case study linked to examination requirements. The teacher provided a clear exposition of the purpose of the lesson and ensured a high level of engagement with the pupils through searching questioning. His high expectations were made explicit at the start of the lesson. The teacher used his good subject knowledge to give a strong emphasis on detail to enhance the pupils' knowledge and understanding. For example, his description of closed/open systems and flowcharts was detailed and pertinent. He identified relevant websites and pupils made effective use of these to gain information of the topic. Pupils quickly settled to work on ICT and were confident users, with well-developed skills evident in drawing flowcharts and diagrams. They had good knowledge of control applications and of the concepts of input, process, output and feedback. They used and understood the correct technical terms.

Teachers' good subject knowledge also enables them to ensure that their **questioning of pupils**, both as a whole class and individually or in groups, elicits pupils' understanding (or reveals their misunderstanding), and provides a clear focus for the development of their work.

Year 8 pupils were extending their use of features of a computer graphics package. Pupils worked independently, showing good levels of concentration. They were keen to learn, to reinforce skills and explore new learning. They drafted their designs directly to screen, which were appropriate to the greeting card topic. Good intervention by the teacher enabled her to question pupils' design decisions, encouraging them to evaluate the quality of their own work. A plenary session at the end of the lesson enabled all pupils to look at and evaluate each other's designs and the teacher to draw out skilfully the criteria for such evaluation.

> *In a Year 12 Advanced Vocational Certificate in Education course on advanced spreadsheet design, the teacher's questioning was thorough and probing. For example, rather than just accepting the students' first answers, he asked secondary questions which extended their thinking. This provoked a more developed discussion and helped develop the students' analytical skills.*

Appropriate intervention by teachers is particularly important where pupils use on-line materials, such as those now being widely used for the General National Vocational Qualification (GNVQ) in ICT. Teachers need both to check pupils' understanding and ensure that they encounter a range of methodologies.

> *Year 10 GNVQ pupils made good use of on-line materials, working methodically through an exercise on the use of spreadsheets to present information in columns and tables and to employ formulae. Their progress, however, depended crucially on the teacher's effective monitoring of their progress and appropriate interventions to ensure they were developing their skills securely. The pupils clearly enjoyed this way of working and maintained very positive attitudes.*
>
> *In another Year 10 lesson, using the same on-line resources, pupils explored a currency converter program as a spreadsheet application, answering questions about modelling. The teacher's intervention was again important – she used an interactive whiteboard to recap the work learnt, complementing the on-line work with good direct teaching.*

In **well-planned lessons**, teachers ensure that pupils make good use of the time available, and are well occupied and absorbed in the task in hand. Pupils know at the outset what is being taught, what they have to do and how to finish. Lessons are pacy and have identifiable beginnings, middles and ends. The tasks set are challenging and interesting to pupils. Particularly successful tasks, such as the design of web pages, enable pupils to show flair and inventiveness.

> *In a good Year 7 lesson, pupils worked in small groups to develop pages for the school's website, based on work they had undertaken on a field trip. They searched the Internet for relevant images and used a variety of software with confidence. At the end of the lesson, each group spent a few minutes using the digital projector to demonstrate to the rest of the class what they had produced during the lesson.*

Good ICT teaching achieves a balance between the **pupils' evaluation of outcomes and their understanding of the scope and nature of the application being learnt**. Pupils are provided with sufficient opportunities to reflect on and evaluate the quality of their work and to discuss evaluation criteria with others. Well-designed computer rooms aid good lesson planning in this respect, by providing space for work away from the computers.

> *A Year 11 GCSE class were set an effective desk-based practical task as part of a lesson on verification and validation, in which they identified the source of data errors and their consequences. They then worked through a practical task on buying gifts and completing an order form designed for computer entry. This was relevant to the pupils' experience. The teacher led a good discussion on double entry verification systems and had good subject knowledge.*

Good **direct teaching** to the whole class is an effective teaching strategy for preparing pupils to develop their own skills. The timing of this approach is critical as teachers need to convey sufficient information without speaking for too long. The growing use of digital projectors and interactive whiteboards is improving the general quality of teachers' presentations and provides an opportunity for the teacher to act as a good role model in terms of quality. Pupils are generally well motivated by work with ICT and keen to try things for themselves, especially when the task demonstrates the power of the technology.

> *The teacher of a Year 10 ICT GCSE short course provided a very clear explanation of mail-merge, using an interactive whiteboard, and quickly identified the skills needed with the whole class before allowing them to prepare their own mail-merge. All pupils made improvements in their ability to use this application. They were then able to create business letters and personalise these for clients.*
>
> *Pupils in Year 7 class were excited when they were shown how hundreds of letters could be created from one using a mail-merge facility. The teacher demonstrated this and the pupils tried for themselves. They reinforced the skill by producing their own mail-merge manual to help them remember how to do this.*

The **ability to steadily refine and improve work** is central to ICT: due emphasis on the quality of outcomes, combined with the teaching of ICT skills, are often important features of good ICT teaching. Good teachers not only need to teach technical skills, knowledge and understanding, but also to enable pupils to reflect on and evaluate the outcomes of their work.

In a GCSE lesson on storyboarding Year 10 pupils prepared their multi-media presentation using pen and paper to create links and series between different sets of information on screen. Pupils evaluated their storyboards, first creating the evaluation criteria. Objectives for the lesson were made clear to the pupils. The teacher made very good use of pupils' four-block storyboards to look at what constituted good quality multi-media presentations. He provided a clear summary of this. Pupils made clear progress in understanding what makes good multi-media material, for example the use of "links" and "hot spots", as well as the importance of text, graphics and sound.

Teaching pupils to develop their work for a **particular audience and purpose** is particularly important and links between ICT and other subjects can be productive in this respect.

Year 7 pupils were taught how to use the features of presentation software in ICT lessons, but, when they applied this in English poetry work, they were able to develop their understanding of how best to use this medium as an effective means of communication.

It is important that teachers in other subjects provide appropriate opportunities for pupils to consolidate and extend their skills and understanding of ICT.

A Year 7 English lesson on the characters in a novel was taught in an ICT room. The teacher asked the pupils to think about how an author conveys to the reader what a character is like. The pupils then worked on the computers to write notes on their characters. The English content of the lesson stressed the development of ideas, while the ICT focus was on text editing. The teacher reminded the pupils how to move highlighted text and the pupils organised their notes into a logical order. This helpfully reinforced specific skills in a fresh context.

Good ICT teaching often includes some reflection on issues of **ICT in society** and the workplace, for example using the industrial and commercial experiences of ICT staff to ensure the relevance of tasks in Key Stage 4 to the world of work.

Year 11 GCSE pupils were revising the effects of ICT on society in preparation for their examination. Well-structured questions were designed to extend pupils' responses and demonstrate how to produce reasoned answers. Pupils debated a good range of moral and legal issues with conviction. They were well informed about techniques for the protection of data, for example passwords, and encryption. Frequent feedback to pupils, based on their responses to examination questions, extended their ideas and increased the complexity of possible answers through discussion.

Modern foreign languages

Successful modern foreign languages (MFL) teachers meet the challenge of providing over the key stages balanced coverage of language skills and ensuring progression, in particular in speaking and writing. They see fluency and accuracy as complementary aims in the programme of study. Their success is underpinned by thoughtful planning and assessment geared to the development of understanding and skills in MFL.

Good MFL teachers have a fluent command of one or more teaching languages and provide **a consistently accurate model for pupils to emulate**. They use the target language very well, for example in rephrasing statements in different words in the foreign language to support pupils' understanding. Where English is used, the teachers have a clear rationale for doing so, such as to explain a particular point of grammar. Pupils benefit in this way on the one hand from **sustained exposure** to the foreign language and on the other from **clear understanding of structures** and the way language works.

With a secure command, the teachers are able to plan lessons with confidence. Their **planning** is underpinned by very good understanding of the demands of the National Curriculum and of examination requirements. Objectives are clearly identified, made explicit to pupils and recapped at the end of lessons. As lessons and homework are planned within the context of the scheme of work, it is possible to make effective links to previous and future lessons and build in **progression**. There is **balanced coverage of the four skills**.

Lessons are well timed and use a variety of classroom organisation including plenary, group and individual work, so that pupils are fully engaged. Lessons are appropriately challenging for all ability levels. Teachers use their knowledge of the pupils to direct and pitch questions very effectively. They have **particularly high expectations of pupils' listening comprehension, their pronunciation and their grammatical accuracy**. The teachers use a range of simple resources very effectively, notably audio recordings and the overhead projector. The **textbook is used selectively** so that it underpins learning and provides a stimulus matched to the objectives of the lesson, but does not dictate the course of the lesson inappropriately or distort the match of material to pupils' needs. Pupils are given considerable responsibility in speaking tasks, for example in conducting surveys, asking questions, operating in 'teacher mode', and doing sustained presentations to the class. They usually respond in a mature manner, develop greater confidence, and set their own sights higher through involvement in these tasks and as a result of the teacher's high expectations.

When the teaching is good, pupils generally are attentive, remain on task, make useful notes, volunteer readily in class, persevere with demanding listening comprehension tasks, and concentrate well on speaking tasks. Such situations arise largely because the **teachers make clear their expectations of what the pupils should contribute to their own learning**. Pupils consequently arrive at lessons ready to listen and learn with a minimum of fuss.

> *In a Year 9 French lesson, pupils learned well because they were prepared to listen to the teacher and to each other. Good habits had been established so that, for example, their exercise books have well-structured notes to which they are expected to refer, and they do. They made a good effort in class to recall material and emulate the teacher's pronunciation. In pair work they did not 'crib' or use English to avoid the foreign language. Able pupils accepted that some others might need prompts but they themselves should operate without them.*

As a consequence of good planning, lesson time is used fully for learning and this is supported in turn by conscientiously done **homework**. Thus, pupils' **grasp and retention of vocabulary and structure** are strong and teachers can move on to more demanding tasks without backtracking to plug gaps in knowledge.

> *Year 11 pupils were well prepared and showed a high level of commitment. One pupil confidently sustained a demanding five-minute conversation in German with the teacher. He used* weil *with correct word order, could make up compounds and handle separable verbs, used the perfect with* haben *and* sein *and expressed the future with* werden, *used a wide range of adjectives accurately, employed time expressions, and expressed likes/dislikes in a variety of ways.*

Well-judged teaching strategies and well-chosen materials are used to develop **progression in speaking and writing skills**. For example, some departments target during Key Stage 3 a range of time expressions and conjunctions in French, so that by the start of Key Stage 4 able pupils can put together complex sentences involving phrases such as *avant de …, après avoir …* and subordinate clauses introduced by *si, quand* or *parce que.*

Just as people are put on the spot in conversation in real life, good teachers do not over-protect pupils in the classroom. They expect pupils to remember material to use in other situations, they disrupt the set piece response, string together supplementary questions to test able pupils, and revisit key structures frequently. They see the value of **quick-fire question and answer** work in plenary and do not convey to whom the next question will be directed. These factors were demonstrated in a Year 11 French revision lesson, on the topic of holidays, which successfully reinforced and enhanced pupils' grasp of a wide range of structures involving five tenses, relative clauses, pronouns including "y" and "en", a variety of adverbial phrases and a range of vocabulary for expressing opinions. Because of earlier attention to progression, pupils were able to handle this demanding material fluently and accurately and engage in confident expression of their views.

Teachers in another school use **gradually more open-ended writing frames** to build pupils' confidence in sustaining their writing, so that able pupils in Year 8 are already able to write a 300-word letter to a penfriend drawing on all the topics covered since starting

French and exploiting their grasp of grammar to write complex sentences using several tenses.

Based on their clear understanding of the National Curriculum, effective teachers ensure that **assessment tasks cover the range of the programme of study and the balance of skills in the four attainment targets over the key stage**. They base assessment decisions and the planning of lessons on a clear understanding of the level descriptions. They use published end-of-unit tests selectively: they apply their professional judgement of the Level descriptions to the strengths and weaknesses of their pupils and do not allow their practice to be dictated by the published scheme. Good practice in assessment provides essential underpinning for effective learning. Features of such good practice include clear policies delivered through practical procedures, such as regular marking; continuous feedback to pupils on both oral and written performance in MFL; **target-setting based on meticulous record-keeping**; and analysis of a range of evidence and data; the involvement of pupils in assessment; and the use of this information to inform the planning of sequences of lessons.

The best departments seize the opportunity to shape pupils' expectations in MFL from the start of Key Stage 3. They have a rigorous but formative approach to routine marking and to the assessment of oral work during lessons and a focus on developing an accurate grasp of structure, and they make it clear why and how pupils need to improve.

Assessment of **oral work** in lessons takes account of what pupils can do, and provides **encouragement but not false praise**. Such assessment takes place in a range of contexts including whole class question and answer work, pair work, pupil presentations, but always with clearly targeted outcomes, such as learning new structures or vocabulary. These assessments raise pupils' sights, for example using new idioms for the more able, while at the same time giving credit for "being close" to a pupil who has not fully grasped a point, and guiding pupils to a fully correct response.

Well-judged teaching and assessment strategies together lead to the effective development of **language skills across the ability range**, as in this example.

> *Pupils were confident speakers. They had a sound understanding of the grammatical framework of French, which they used accurately in speech and writing. Listening skills were generally good: pupils were able to grasp the gist of French played at normal speed on tape, and select the key details. They had a good vocabulary and grasp of structure that enabled them to make sense of a written passage. By the first term of Year 9 the higher attaining pupils could speak confidently and convey effectively their ideas about their family, friends and school life. They used accurately present, future and past tenses in the appropriate context, and their writing covered a good range of topic-related vocabulary and expressions, including reflexive and negative verb forms, and adjectival agreements. Average attaining pupils demonstrated a similar range of vocabulary, expressions, and tenses, but were less accurate overall. Lower attainers also achieved well, showing good understanding of written texts in particular, even though they remained inaccurate in their own speech and writing.*

Music

The characteristics of good teaching in music which go beyond general teaching skills include:

- effective musical skills for demonstrating and participating with pupils;
- the provision of a continuum of music learning, not merely a series of practical workshop activities;
- using effective visual and aural observation skills during lessons to monitor progress and achievement;
- giving all pupils equal access to a range of musical experiences and providing well for those who need individual learning support;
- using all resources effectively in the provision of a broad and balanced music curriculum, including acoustic, electronic and computer-based equipment.

Good teaching occurs in music when teachers provide effective and sustained opportunities for all pupils to acquire and develop skills, knowledge and musical understanding. These are best acquired in practical workshop sessions, where time for **music-making** is maximised and where there is a clear focus on musical development. The use of visual stimuli, for example **notation**, needs to be considered for their potential to develop and support the practical and aural musicianship of individuals and groups of pupils and not as ends in themselves. Resources selected by teachers address these musical priorities. In many cases, **good teachers create, or adapt, materials and resources**.

> *In a Year 8 lesson that was part of a unit of work on African music, the teacher led the whole class in improvising complex rhythm patterns, each pupil maintaining an independent part. This was followed by an African song, which the pupils accompanied with some of the rhythm patterns, also as a whole class. Pupils were then taught to sing the song in four-part harmony, the teacher skilfully matching groups of voices to each part. This gave pupils first-hand experience of characteristics of this tradition, as well as improving their singing and listening skills. Pupils were uninhibited in the singing, boys using their changed voices without embarrassment, because of the clear model given by the teacher. The activities were well sequenced and increasingly complex, with high standards reached by all participants. This gave pupils confidence for the paired and group work that followed, where they undertook a composing task, using ideas from the song and rhythms.*

In order to build on this high quality activity, very good teaching ensures that pupils are able to **reflect** on their singing, for example using an audio or video **recording**.

Good teachers have a secure **overview of what can be achieved in music by individuals and groups in a lesson, in a unit of work, in a year and across a Key Stage**, and plan accordingly. A well-planned unit of work is often a complex **integration of new and**

familiar concepts. This involves: opportunities to acquire or develop practical skills on acoustic or electronic instruments as well as vocal work; a range of stimuli for improvising and composing; and the parallel strand of listening to their own music, or that of other composers, to ensure secure aural development. In music, in particular, this requires thorough preparation on the part of teachers because they often need to teach the content of the lesson "from memory" in practical sessions.

> *In a Year 9 class, all pupils worked independently. They composed individual pieces using music technology and each had a work station in the school's specialist ICT room. All pupils had both the musical and IT skills to input their own ideas, edit and refine them and discuss them with other pupils or with the teacher. The teacher supported individuals, and intervened so that pupils could demonstrate aspects of their work to the whole class. They discussed the structure of their pieces, as well as how some might add more variety using additional musical ideas, or facilities of the music technology. They had good skills to undertake sequencing, structuring, editing and quantising independently. Their compositions showed individual initiative and some were inventive.*

A key feature of good music teaching is the use of **observation skills – both visual and aural – in classrooms**. This ensures that teachers monitor pupils' progress and that they know whether they have the skills and knowledge to carry out the complex tasks that they usually allocate to individuals or groups. Good teachers intervene by using their own musical skills to **participate or model for pupils**, rather than halting the activity for unnecessary verbal explanation. This sustains the musical focus on important aural aspects of practical work.

> *A Year 10 GCSE group was introduced to music that used an unusual time signature and unusual rhythm patterns. The whole group invented a complex rhythm piece, using only clapping. The teacher extended this into a four-part popular song using some of the patterns, with all pupils participating and reading from the music notation. Each group was then given time to rehearse and was required to prepare improvised extensions to the sections. When the whole class reconvened, the song was rehearsed with a new section from each group. This demonstrated several features of the style, as well as good structures for song-writing. The performance was recorded so that further work could be undertaken in the next lesson.*

Such features of very good lessons challenge each pupil in the group with new material. The teaching ensures that pupils also **consolidate their skills** and knowledge of complex and irregular rhythm patterns and how these can be used in **extending musical structures**. Aspects of rhythm and notation are introduced which are new to pupils, for them to use in their compositions. The recordings ensure that pupils can refer to the initial ideas again, to give more options for extending the **musical ideas in their own songs**.

Good teachers ensure that strategies for **monitoring pupils' progress** and assessing their achievement are integral to their lesson planning for classes in Key Stage 3. These are carefully aligned with the intended learning within and across topics and units of work, as well as the end of key stage descriptions. Effective teachers use their **observation skills** well during lessons and have a range of ways in which they store information; for example, they use audio and video recordings and pupils' oral and written comments, together with their own written comments. Each unit of work has specific intended learning, as well as assessment strategies which address music skills, knowledge and understanding. Good teachers often assess pupils in small groups in Years 7–9, targeting these carefully within the units of work and assessing chosen groups in different lessons.

Secure judgements are expressed in musical language, so that it is clear what pupils are achieving within the music curriculum. In devising effective assessment strategies, **good teachers focus on what pupils can do in music**, avoiding using only generic learning skills such as "follows instructions carefully" or "works well in a group", which describe the desirable behaviour, but not the musical achievement of pupils. They also carry out assessment when the pupils agree that they are ready – often working in pairs or small groups – and avoid end of unit assessment sessions for the whole class. This allows teachers to give pupils appropriate – though not necessarily identical - time to complete the topic, and to give learning support to pupils who need it. Good learning **support** can include large print music notation or printed materials; adapted resources; and fewer, or simplified tasks for pupils who need to work more slowly. High-achieving pupils, or those who work more quickly, are given extension activities within the same topic.

It is important that, whenever possible, teachers provide opportunities for pupils to practise and to consolidate their skills and knowledge between lessons. For some, this can mean **work at home** on a computer, electronic keyboard, or acoustic instrument. For those without these facilities, good teachers give pupils supervised **access to music workshops and ensembles** during the school day. In Key Stage 4, teachers can set a range of tasks for individual pupils, which can be shared across the group in the next lesson.

A good example of task setting for **post-16 pupils' homework** included each of them using a CD-ROM to research a different aspect of a piece of music from a famous composer. The range of tasks included the biography, music history and stylistic aspects through the retrieval of information with examples. Each pupil gave a short presentation during the following lesson, together with a copy of their own written summary for each member of the group. This enabled homework time to be well used and maximised, in a different task for each pupil. It also allowed the teacher's planning time to be devoted to work which pupils could not be expected to undertake at that stage, namely, the musical analysis of the piece of music. The next lesson, therefore, took the form of a **well-organised seminar**, where each member of the group had responsibility for part of the session, this gave a good model of teaching older pupils.

Physical education

Good physical education (PE) teachers are knowledgeable, confident and competent in the activities they teach. They use this knowledge to plan **a clear programme, offering pupils a balanced range of experiences that make increasing demands upon them**. Planning for individual lessons also ensures that tasks are interesting, varied and closely linked to specific, systematically-developed learning objectives.

The **skilful management** of pupils is a key feature in successful teaching of PE. Clear demonstrations and explanations keep pupils interested and motivated. Teachers have well-established routines, manage pupils sensitively and firmly, and have good relationships which create a positive learning environment. In these lessons pupils work hard, show confidence and use equipment safely and responsibly; they listen attentively to instructions, readily answer questions, think about what they are doing and make efforts to improve. When given appropriate opportunities, pupils are willing to make critical comments about their work and to accept the comments of others; they have an awareness of fair play and sportsmanship when taking part in competitive activities.

Very good teaching encourages **independent learning skills** that develop pupils' understanding, knowledge and competence in the activities in which they are asked to engage. This often involves giving pupils structured opportunities to undertake their own warm up, design motifs and sequences, plan skill practices and tactical movements, and make presentations.

> *The purpose of a Year 11 basketball lesson was clearly explained to pupils at the start and was referred to throughout the lesson to discuss and check with pupils their understanding and progress. Pupils clearly understood the objective, to score in particular situations when the defence was applying pressure. They planned skill practices to help them improve and worked to apply their ideas in the game at the end of the lesson. Such involvement ensured good attitudes and behaviour because they were motivated and wanted to improve their game.*

Often, in the best lessons, teachers maintain **a balance between developing pupils' performance and their planning skills**, with opportunities for them to show their skill in observing and analysing movement. Where teachers make the criteria for observation explicit and manageable, pupils often show the ability to select movements of quality that are a good fit for the task set, and provide reasons why they consider these movements to be good.

A thoughtful balance of tasks enabled girls in a Year 10 netball lesson to develop their passing skills and apply them in a game-related situation. They were given responsibility for small team warm-ups and the planning of their own team's tactics around the attacking circle. These were later developed throughout the game. The development of skills was an integral part of the lesson. Non-participants were actively involved in officiating. The pupils responded well to the high expectations and challenging pace set by the teacher.

In a Year 11 GCSE dance lesson, pupils were taught a complex sequence of movements. The teacher used her subject knowledge to correct technique, challenging pupils to pay attention to detail in the repetition and refinement of their movements. The content was both physically and mentally demanding as pupils worked in pairs using video to analyse how they could improve their sequences. As they discussed their movement, pupils showed an understanding of the criteria set by the teacher as well as drawing on previous work about effective use of space.

In **gymnastics** the best teaching extends pupils' learning of specific skills and of the common elements of different movements, as well as providing opportunities for creating sequences individually and in small groups, both on the floor and using apparatus.

In a Year 7 gymnastics lesson, pupils set out their own large apparatus with ease and an awareness of safety. The teacher monitored its placement and intervened as appropriate. Pupils practised and refined individual techniques on the floor and the teacher moved around, offering guidance and corrective feedback and questioning pupils about how they would link different movements together. The importance of key points, such as a sound base and body tension in the handstand and headstand techniques, was shared with the whole class as they attempted the movements on apparatus. The pupils were encouraged to use these movements as they refined and developed more complex sequences as part of the end of unit assessment, the criteria for which were shared with the class.

The use of **skilful questioning** is effective in checking pupils' knowledge and understanding; at its best it challenges thinking and requires explanation and justification from the pupils. This, coupled with careful and well-timed teacher intervention, ensures pupils' involvement and assists the teacher in monitoring progress.

At the beginning of an A-level lesson on skill acquisition, the teacher targeted questions at individual students to check their understanding of previous work on concepts of skill development. Questions were carefully differentiated to challenge each student and the teacher's additional probing ensured that students used appropriate technical language in their explanations.

In a Year 9 games lesson, pupils working in a 3 v 4 games situation showed poor understanding and use of space. The teacher's well-timed interventions allowed for good levels of activity but also directly challenged pupils to consider how they work together in attack and defence. Through focused questioning, pupils thoughtfully analysed their own positioning as well as that of the team, for example considering when and when not to dribble the ball, how to use the pivot and options in passing.

Another good feature of this lesson was how the teacher encouraged learning from other contexts such as the use of space to other "invasion" games. This is a particularly important feature as it promotes a more integrated approach to the teaching of games. A similar strategy was observed in the best teaching of athletics. In a Year 7 lesson, careful planning ensured pupils had well-structured opportunities to develop their understanding of the principles of throwing. A variety of equipment allowed pupils to practise their throwing technique and as they gained confidence the teacher refined individual tasks to link more closely with events such as the shot-put, javelin and discus.

Good PE teaching can also make significant contributions to the development of pupils' **language and literacy skills**.

Teachers displayed key technical words and phrases in teaching areas and by reinforcing their use in lessons encouraged pupils to use and spell these words correctly.

In a Year 7 dance lesson, the teacher examined the meaning of technical language. For example, words such as weight and speed were unpacked and pupils were challenged to consider how to make movements "stronger". The teacher prompted the pupils to reflect on how to prepare for movements ahead of time, making excellent use of language in order to capture the qualities of the movement; for example, "crisp and clear". Throughout the lesson the teacher intervened to develop the quality of movement and of pupils' understanding of what quality movement entailed.

In a Year 8 gymnastics lesson, pupils were asked to undertake a task that involved creating a sequence concerned with writing a story and the use of punctuation. The teacher encouraged the pupils to "punctuate" their sequences to show changes in speed and direction, linking commas, explanation marks and full stops to different types of movements such as balances, jumps and turns.

This focus on language and literacy is also evident in **sixth-form teaching**. For example in a Year 12 lesson focusing on the development of sport in public schools, well-structured tasks employed and extended students' note-taking and speaking skills. Individuals prepared an analysis of the changes that took place across three stages of sport development and some presented these to the whole class. The teacher provided

guidance on how effective notes should focus on key issues, and good presentations included clear and concise information for listeners.

An increasing number of departments are providing good opportunities for Key Stage 4 and sixth form students to develop **leadership skills** through structured opportunities to lead activities for younger pupils in their own school or local primary schools.   Good teaching of leadership skills ensures that students are taught how to communicate effectively and to take responsibility for planning, delivering and evaluating activity sessions.

Teachers' **assessment of GCSE and AS/A2** examination work is usually systematic and closely linked to syllabus requirements. The best departments use assessment to inform planning and ensure that students are fully engaged in the assessment process, with clear targets that extend students.

In general, **assessment in Key Stages 3 and 4** is less well developed in PE than in other subjects. There is a tendency for teachers to make judgements about pupils' effort and behaviour rather than their knowledge, understanding and skills. Only a minority of PE departments have well-structured assessment criteria linked closely to learning objectives and units of work.   In the best lessons, teachers look at the outcomes of their lessons in relation to pupils' performance and on a week-by-week basis make constant adjustments to their teaching in order to meet pupils' real needs accurately. This ensures that the curriculum is always relevant.

Religious Education

The key challenge facing secondary religious education (RE) teachers is to create from their agreed syllabus **a curriculum that is thought-provoking and meets the interests and concerns of young people**, most of whom have no allegiance to formal religion. For such pupils, the best RE teaching goes beyond the traditional RE content of religious people, places, buildings and books, concentrating additionally on theological, moral and philosophical questions and, in consequence, contributing significantly to pupils' spiritual, moral and personal development.

Teaching in RE is most effective and learning most successful where both the curriculum and the teaching approach ensure that pupils engage with concepts and ideas in a way that develops their **analytical and evaluative skills, as well as their knowledge of religions.**

The most successful Year 9 teaching introduces pupils to aspects of **moral philosophy and the philosophy of religion**, when included in the agreed syllabus, to stimulate their thinking, providing a suitable foundation for the GCSE short course in Key Stage 4. This approach does not abandon religions as the principal substance of the RE curriculum, but appropriately focuses on theology and moral philosophy as in this comprehensive school.

Year 9 pupils were able to analyse and evaluate Aquinas' proof for the existence of God. The teacher posed interesting and complex questions to promote learning and positive attitudes concerning, for instance, how Aquinas might have responded to modern theories about the universe. Pupils completed detailed work on Feuerbach and most made a good attempt to explain the notion that "What man wishes to be, he makes his God", and, in addition, completed a critique of Marx on God. They understood and made use of terms such as "theological paradox" with reference to suffering. This was very sophisticated work for Key Stage 3 and most pupils managed it well.

By introducing theology and moral philosophy, teachers automatically increase the level of challenge through the nature of the subject content. **A more difficult task for RE teachers, however, is to raise the level of challenge of a more traditional curriculum**. Good teachers achieve this, usually by developing pupils' skills of application, interpretation, evaluation and reflection. They also do so by using the curriculum content as a spur to pupils' understanding of contemporary and personal issues.

In one school, while pupils learnt about the basic elements of Sikhism such as the "5 Ks", teachers set unusually **sophisticated tasks** to extend pupils' understanding, as in this example.

Year 8 pupils were required to use their knowledge of Sikhism in evaluating whether the laws of the country should take precedence over religious laws. This task both demanded a high standard of thinking and was relevant to issues in citizenship education.

This was also exemplified in another school.

Work on Hinduism in Year 8 included the usual descriptive writing about worship, scriptures and stages in life. But this was balanced by analytical and evaluative work on key questions as to why Shivais was present at death. When working on Hindu beliefs about death, pupils reflected on their own beliefs, compared cultural attitudes to death in East and West, explored their own and other's feelings associated with death and considered how Hindu funerary rites addressed those feelings. These principles continued in Year 9 where pupils evaluated theories, for example "Suffering is how we learn"; and tackled questions such as "Why do Buddhists feel that facing up to death makes them more positive about life?" and, with regard to salvation, "Is it a gift or something you have to work for?"

In both Key Stage 3 and 4 good RE teachers develop pupils' understanding of **diversity within religious traditions** by regularly reinforcing the principle that it is impossible to generalise when speaking of Christians, Muslims, and so on. They achieve this, in particular, through spontaneous questioning. For example, "Do you think a Conservative Jew might respond in the same way…?" Or "How does this compare with the Roman Catholic perspective…?" They also achieve understanding through the judicious use of texts.

> *Year 10 pupils demonstrated particularly impressive understanding that in all religions there operates a continuum of traditionalism, from fundamentalism through conservatism to liberalism. Pupils understood how this scale operates independently of denominational differences and were aware that there are many shades of interpretation and practice within religions. Their study of Judaism was enriched by reading the novels of contemporary Jewish authors such as Chaim Potok's* The Chosen*, through which they analysed relations between Orthodox and Reform Jews. They compared the lifestyles of the different groups, understanding that reasons for these differences often lie in the extent of literalism in attitudes to the Torah. Work in this area was of an exceptionally high standard and in unusual depth; for example, pupils charted the history of the Hassidic movement and compared the teachings of the Rabbis.*

In many schools, the introduction of the **GCSE Short Course** has stimulated interest in the subject among both girls and boys. It has also provided RE teachers with much greater scope to raise standards by providing more challenging, interesting lessons, and lessons that relate much more to contemporary living.

> *In a Year 10 lesson based on the unit, "Religion and the media", the teacher set pupils the task of researching religious and moral issues in television drama, such as* Ballykissangel *and* Eastenders*. She produced a helpful proforma for completing notes, which included a space for the analysis of main issues, how they were resolved and "What I have learnt". The teacher was good at organising plenary sessions where pupils compared case histories. As a result of careful teaching, pupils could distinguish between a moral and a religious issue and some produced mature evaluations of the treatment of euthanasia in* Eastenders*. In addition, pupils were required to analyse specifically religious programmes such as* Kingdom Come*,* Morning Worship*,* Songs of Praise *or* Sunday Morning*, comparing different forms of worship, the ages of the congregations, the buildings, and the styles of worship. Alongside their work on television, pupils were expected to keep a personal record of religious issues appearing in the press, how they were resolved and their own evaluations.*

As a result of the success of the short course, some schools have recently introduced GCE **AS and A2 courses in RE**. The best sixth-form teaching exploits challenging and provocative stimulus material by demonstrating its relevance in the wider subject context. In particular, teachers help students develop the necessary skills to:

- identify, investigate and analyse questions and issues arising from the course of study;
- use appropriate language and terminology in context;
- interpret and evaluate religious concepts, issues, ideas, the relevance of arguments and the views of scholars;
- communicate, using reasoned arguments substantiated by evidence;
- make connections between the area(s) of study chosen and other specified aspects of human experience.

The most effective teachers are highly skilled at asking ever more demanding questions to extend students' understanding, as in the following lesson on Utilitarianism.

> *To enhance students' understanding of the writings of Mill and Bentham, the teacher asked taxing questions such as, "How do Christian teachings compare with Bentham's teachings?" Once students grasped the basic theories, the teacher increased the level of challenge by posing more difficult questions requiring the comparison and application of knowledge. For example, questions such as,*
>
> - *"Why might a Christian disagree with Utilitarian theory?"*
> - *"What are the implications of utilitarianism for a democracy?"*
> - *"Based on utilitarian theory, would a bar of chocolate or learning a foreign language be more pleasurable?"*

In one very good lesson on Buddhism:

> *The teacher exemplified "impermanence" with reference to areas of human experience such as the dangers of getting too hopeful about the weather or desire for chocolate cake. As students worked on each Noble Truth in groups, the teacher moved among them, suggesting new avenues of enquiry. For example, he offered an allegory for consideration by the group investigating the importance of discovering the path as an aid to understanding the Noble Truths: "A poem about honey gives you no idea what it tastes like – you have to eat (experience) it". These are very difficult concepts but the teacher's recommendation that students look to the early experience of the Buddha in order to understand his later teaching proved helpful. Consequently, one group analyses the first Noble Truth with reference to the Buddha's own experience of unhappiness in spite of his rich lifestyle based on the principle "More is better". Another group related his discovery that all life is suffering back to his three experiences outside the palace.*

Here the use of human experience was used to build on students' skills of analysing difficult concepts. These students already have extensive knowledge of Buddhism and are able to relate new knowledge to existing understanding, cross-referencing and comparing as they learn.

Business studies

Good teaching in business studies provides a strong conceptual framework within which young people can reach **an understanding of the nature of the economy and the fundamental role of business** within it. However, in addition, because of the strong and distinctive vocational dimension of business studies, the most effective teaching emphasises the practical nature of the learning process and **relevance to the world of work**.

Practical investigation of a range of business environments outside the classroom is a major teaching strategy used by good business studies teachers. These investigations can take several forms, including assignments, tasks, projects, activities or investigations designed to link work in the classroom with local business. For example, investigations of aspects of the local business community, such as the siting of a new supermarket or the closing of a local factory or shop, allow students to collect and organise **primary data**. Evidence may take the form of statistics, taped interviews or photographs, which are then analysed and evaluated so that conclusions may be drawn. The best investigations **place local evidence in a wider national or international context**.

Year 12 A-level students were asked to investigate the car market, involving an analysis of relevant data to identify national trends, and then to carry out a local study. This involved an examination of the type of market in which cars were produced and sold.   The investigation was very well sequenced to develop understanding, beginning with measurement of the market shares of the "top" five car companies in the UK, and investigating the extent to which their cars were assembled in the UK and how many were imported. Students were then directed to research consumers' overall expenditure on vehicles in the UK, the price trend, car production by engine size and total employment in car manufacturing. Finally, the teacher organised the students into groups in order to undertake a local study. This was organised to establish how many dealerships were operating locally and how they competed, what were the car buyers' perceptions of the prices and quality of service provided by the dealers and the extent to which dealers' performance and marketing strategies were affected by market conditions.

Often, the best teaching in business studies occurs when teachers provide interesting and informative **expositions** followed by helpful **support** to students.

In a Year 10 lesson about of the various ways in which business enterprises are organised, the teacher first provided a clear explanation of the various structures of business organisations followed by the importance of departmental functions and their interdependence. The teacher was knowledgeable and interesting, and made good use of both the overhead projector and the whiteboard to illustrate key ideas and to work through various models. He ensured that students captured the essential points in their notes and used a short written test to establish that understanding was secure. Once the teacher was satisfied that the students understood them sufficiently, they were given a number of written questions to apply these principles to practical examples. As the students worked through the questions, the teacher moved around the class providing help and support to individual students.

Work-related learning, in particular **work experience**, is a key feature of the business studies curriculum. When it is well planned and organised, work experience not only bridges the gap between school and work, but also provides an effective context for young people to develop personal and social skills, to explore career options, and to work independently and in co-operation with others. At best, teachers use work experience as an extension of studies carried out in the classroom. Properly structured, it ensures that discussions with managers, workers, trade unionists or customers in a local business setting enable students to clarify business principles, and to weigh-up at first hand economic arguments and business tactics concerning price levels, wages, advertising, marketing and consumer satisfaction.

Other effective, shorter-term, **business links** enrich students' learning in many ways. For example, when used to reinforce concepts previously discussed in the classroom or to link classroom projects to business problems, short visits to local factories, shops and offices provide a meaningful "real-world" insight into the business world. When time permits, good business studies teachers develop close ties with the local business community, inviting business people into school to help students research and investigate business organisation, problems and issues, to evaluate students' assignments, and to undertake **consultancy and mentoring** roles, which are a growing feature of effective business links.

In one school, a local bank manager advised GNVQ advanced students on business planning and finance. Local business representatives judged the quality of students' presentations on business strategy and provided them with feedback on aspects of their completed assignments.

Business games and, in particular, the use of **case studies** are common features of good business studies teaching. These range from short brainstorming of ideas about starting up a new business to an in-depth consideration of current strategies of existing businesses. When directly related to specific concepts, business ideas or processes, **enterprise projects or mini-enterprises**, although time-consuming, provide excellent contexts for

pupils to develop relevant skills making decisions, leading and managing people, taking initiatives and risks, and communicating ideas.

Good teaching also makes appropriate use of **role-play and simulations** to create a range of realistic practical work situations and to add a strong vocational element to the learning. For example, role-plays are sometimes used to create a variety of work situations such as a trade union representative negotiating with a manager to agree a wage rise, or a prospective employee being interviewed by a job selection panel. Simulations are also used to recreate factory production or to provide a financial system to record business revenue and expenditure, and profits and losses.

In a Year 13 A-level business studies lesson, students took part in a simulation based on an industrial relations dispute arising from an injury in a factory. Prior to the lesson the students had gained an understanding of key ideas associated with industrial relations and knowledge of aspects of legislation concerned with health and safety at work. At the start of the lesson the teacher explained the background of the dispute and the key players involved. The students were organised into two groups representing the main parties involved. Each group was instructed to prepare its case for presentation to an industrial tribunal hearing: the two groups were given useful briefing notes to help them with this task. Throughout their preparation period the students analysed the causes of the dispute and explored through discussions in their groups, a range of possible strategies for their resolution. A third group of students together with the teacher, representing the tribunal members, cross-examined representatives from each of the groups following their presentations. During the tribunal hearing, students clearly demonstrated a good understanding of the health and safety principles stemming from the most recent legislation. They were also able to relate this understanding to the case provided by the simulation.

Business studies is a subject that not only plays an important part in preparing students for the world of work, but also provides an important means by which they can develop the **key skills of communication and ICT**. Many effective business studies teachers use IT to a considerable extent to develop such skills but also to benefit from gaining access to the curricular and other support it provides for planning and teaching.

The business studies department had its own Intranet web page with direct links to key Internet sites and other sources of information. The site was also used to provide students with departmental information such as syllabuses, assignment deadlines and examination dates. In another school, excellent use was made of Internet and institutional Intranet facilities for A-level students. Assignments, case studies and course notes were issued through this Intranet. Students were directed to a series of Internet business sites to research their assignments. Students had access to Intranet resources from home via the school's Internet page and they used e-mail to contact each other and teachers. Teachers also drew on students' Internet work in lessons.

Classics

Good teachers are successful in bringing classical subjects to life by showing the **timeless elements of human character and circumstance and encouraging comparisons and contrasts with the modern world and its languages**, particularly English. They bring out the richness of Latin or Greek by treating the language, literature and cultural or historical context as parts of a single whole. The best teachers of classics have a high level of **subject expertise**, with thorough knowledge of the relevant aspects. These include the writings, intentions and styles of classical authors, detailed features of classical culture and civilisation and (for the languages) the niceties of grammar, vocabulary and idiom. They are scrupulously **accurate in their knowledge and understanding of the classical world** and do justice to the rhetorical nature of the language through their representation of its sound and rhythm. Their own interest and enthusiasm are palpable and include making links with other subjects. They relate well to the pupils as learners and build on their existing knowledge to help them understand new classical work.

In a mixed comprehensive school, the teacher closely questioned a Year 8 class to see what they had learnt about Roman theatres from their homework reading. His genuine interest in the pupils' ideas prompted a very good response from volunteers, who pursued interesting similarities and differences between the theatres in their own town and the one in Pompeii. The notion of 'hearing a pin drop' in the Roman theatre was paralleled in the pupils' own rapt attention.

In working on the associated Latin text, the teacher cleverly reinforced the concept of singular and plural through English usage and made selective use of a worksheet with references to French. The pupils volunteered answers to his questions, with a forest of raised hands. In these ways, they gained a firm grasp of the Latin vocabulary and grammar.

The teacher's reading of Latin was excellent, with complete accuracy and Italianate value for double consonants. The pupils picked up the rhythms and read very well in chorus (clearly something familiar to them).

Good teachers have a strong sense of purpose, based on a clear appreciation of the learning needed and the **methods suited to the linguistic, literary or cultural objective in mind**. They have ways of maintaining interest. For example, they may pose an intriguing question for the pupils to answer in the course of the lesson, or ask them to support their work with dramatic or visual representations. They vary the ways of working, including written and oral activities for the class, individuals or pairs.

> *A Year 9 class in a selective school was working on translation, comprehension and rehearsal of the new grammatical item, the genitive case. The teacher called on pupils to translate and interjected quick comments and questions on the grammar, without disturbing the flow of meaning and interpretation. She introduced variety and extended the work by asking the pupils to read the information on the religion of Isis in the course book. They consulted together very productively to identify reasons for the popularity of Isis – for example, the hope of an after-life for the worshipper.*
>
> *Throughout the lesson, the pupils had very good concentration and attitudes to the work. They demonstrated considerable interest, which the teaching had accentuated by requiring the use of illustrations – in the course book, on the wall display, and drawn by the pupils themselves.*

One of the most significant features of good teaching lies in the **high expectations** that the teachers have of their pupils. These may involve careful preparatory homework, so that progress is rapid in class. The demands for accuracy and idiom are considerable, to emphasise differences between English and Latin or Greek. There is an insistence that pupils relate current work to previous knowledge and consolidate their learning, so that it is coherent and applicable to new contexts. **Homework includes extension activities in addition to learning and preparation**.

> *In a Year 11 class, the pupils revised earlier work before reading a new Latin passage. Their understanding was good and they recalled a class visit to Aquae Sulis, the scene of the earlier narrative. The teacher read the Latin accurately and helped to bring out the sense through careful phrasing. The pupils had prepared well, and they rose to the challenge of idiomatic translation. For example, in chiastic and parallel word order, they translated the commas as "and". They also showed a precise understanding of previously learnt grammar – including participles and indirect statements.*
>
> *The teacher emphasised grammar, legal background and the relationship between the emperor and his minister, expecting the pupils to understand all aspects thoroughly. She used the board well in exposition and issued an interesting challenge in the form of a translated extract from Juvenal. This was to illustrate the historical parallel with Tiberius' minister Sejanus, as part of an investigative homework. Later in the day, some pupils in the computer room had pursued the task and were using an Internet site with relevant information.*

In classical civilisation, the highest performing departments realise their expectations by giving the pupils **sufficient guidance** and also providing good **scope for their own ideas**. In the study of source material, including literature, there is a strong emphasis on the use and **interpretation of evidence**, which leads to high attainment.

Year 12 students were working on a section of Euripides' Electra. They read aloud from the translation, bringing out the meaning well. The teacher helpfully asked for the identification of quotations which might raise interesting questions of character and motivation. The division of the class into three groups made for good variety of working, to pick up the questions and reach conclusions about the respective characters of Electra, Orestes and the chorus. The report back to the class revealed interesting appraisals. Electra was self-pitying, romantic and even unbalanced. Orestes was reflective and reluctant. The third group touched on several of the features characteristic of the chorus. The students identified good quotations to support their views.

Similarly in ancient history, good teaching challenges pupils by requiring individual interpretation in the **use of sources**.

Students in Year 13 studied well-chosen material illustrating Greek and Roman historical topics. The teaching challenged them to form their own judgements. They had good ideas for the interpretation of the sources – for example, the likelihood that 6,400 Persians were killed at Marathon, as compared with 192 Athenians. They contributed well in identifying the use of innuendo in Tacitus through the clues presented by "some say that" and the citing of an individual opinion.

Assessment has an important part to play in effective teaching. Pupils enhance their achievement when they can see clearly the work to be covered, and can measure their progress in easy stages. In several of the departments visited, new work had resulted from relative weaknesses identified in trial examinations. During lessons, and in tests, good teachers take care to weigh the effect of easier and harder questions to suit different pupils, to boost confidence and to challenge fuller understanding. For example, in a mixed selective school, a written test on Virgil, Aeneid II, was very successful in grading the revision questions for a classical civilisation examination. To **challenge the ablest pupils**, vocabulary and grammar tests include features such as grammatical manipulation or less obvious word derivations. In several of the best departments, the return of papers was very helpful in showing how to meet higher demands.

The teacher returned examination papers in classical civilisation and ancient history, with marks and annotations. He explained the banding for the various grades and showed how relatively small improvements in quality might lead to higher grades. He gave advice on examination technique and warned against answers with insufficient scope, vagueness or lack of supporting evidence.

Systematic planning and lively teaching are important for effective learning. In the best practice, they not only provide pupils with systematic material for revision but also relate closely to assessment, giving evidence of progress in the course. This is an effective way of managing the complex range of work required for examinations.

In a mixed comprehensive school, it was possible during the course of one lesson to see the quality of the teaching, planning and assessment for the Year 11 course. The main part of the lesson was the study of the hunting scene in Virgil, Aeneid IV. For this, the excitement of the teacher's presentation ensured pupils' close attention. The many valuable elements in the lesson included the following. There was a thorough discussion of the "golden line" aurea purpuream subnectit fibula vestem. The teaching made very good use of a map for Lycia, Xanthus, Delos, and Cynthus to clarify the significance of the simile. The pupils showed their clear understanding of the propaganda element in the poem: Ascanius = Iulus (connection with Julius Caesar). They contributed well to a consideration of Ascanius' likely age. Reference to English words ("associate" and "mollify") strengthened language awareness.

Perusal of the pupils' files revealed that such work formed part of a systematic plan leading to a record, which supported revision and gave a sense of progress. Apart from the pupils' notes on the text, there were bridge passages, grammatical work, exercises, examination practice, and "progress tests" on grammar and vocabulary. All marking included encouragement, points for improvement, and evaluation of standards achieved. Achievement showed up clearly in the increasing sophistication of the work and its quality.

Personal, social and health education

Good teaching of personal, social and health education (PSHE) contributes to the physical, moral and emotional development of pupils and, as such, is concerned with more than developing a body of knowledge. Effective PSHE teaching, in a supportive atmosphere, also helps pupils to develop their values and beliefs and to have these challenged.

Good teaching of PSHE at both key stages 3 and 4 shares many of the characteristics of good teaching in any subject, such as good planning, high expectations, a clear sequence to learning and effective assessment of pupils' progress. More specific to the subject are characteristics such as:

- teachers' knowledge and understanding of the aspects of PSHE they teach, which extends beyond that of all educated adults;
- the creation of a climate that allows and encourages pupils to express their feelings and concerns;
- the establishment of clear boundaries for confidentiality;
- the promotion of respect for the views of others;
- opportunities for pupils to assimilate their learning and relate it to their existing experience;

Secure knowledge and understanding are vital.

The Year 7 science lesson formed part of the unit "growing up". The lesson was extremely well planned with learning objectives clearly identified, shared with the pupils and linked to work in PSHE.

Through very good use of question and answer the teacher determined pupils' understanding of the process of conception. Throughout, pupils used correct technical vocabulary. The pupils were then asked, in pairs, to determine what mothers needed for a healthy pregnancy. Pupils raised many questions about pregnancy. All these were noted and most addressed during the course of the lesson.

The lesson ended with some of the pupils' individual questions answered and with a general discussion of the main learning points.

It is particularly important that teachers have the confidence to create a **climate** that allows and encourages pupils to express their feelings, establishes the boundaries for confidentiality, and promotes respect for the views of others.

In a Year 10 lesson, pupils were considering relationships in society. In particular, the teacher led the pupils in a discussion of when sex might enter into a relationship. This included a discussion of the reasons why young people might or might not have a sexual relationship. The teacher was very relaxed about leading the discussion of sexuality and sexual issues. This, in turn, made the pupils feel safe and open in expressing their own opinions. A card game was then used to very good effect to make pupils think and talk about what was appropriate sexual activity in a relationship in terms of the length and nature of that relationship. The pupils provided very thoughtful and considered answers during the debriefing session. The lesson was well summarised by the teacher, with an appropriate emphasis placed on pupils' taking actions in their lives within an agreed moral framework.

Good teaching of PSHE makes a significant contribution to the development of pupils' life skills: for example to develop their **social and communication skills, and maintain relationships, and to make informed choices and decisions** regarding their health and emotional well-being.

The most effective teachers of PSHE are those with a particular **commitment** to teaching aspects of PSHE, such as **health and sex and relationships education**, and who have undergone appropriate in-service training in relation to both subject content and teaching and learning. In some schools, teachers combine their efforts to create a "specialist" team, with a common teaching and learning approach to PSHE.

There is a very strong, common style of good teaching among the members of the small specialist team. Based on the teaching of diverse topics and activities of PSHE, the clear expectations of behaviour, the excellent pace of lessons and the expertise of the teachers, the team creates a framework within which pupils apply themselves enthusiastically to the work. The use of high quality resources, the priority given to talk and to purposeful writing and, the excellent learning environment created by teachers, bolsters pupils' view of PSHE as a worthwhile subject.

Effective teachers employ a **variety** of teaching methods and organisational strategies that match the curricular objectives and meet the identified needs of all pupils.

In a Year 8 drug education lesson, the teacher asked the pupils to work in groups and to classify drugs as legal or illegal. The pupils went on to brainstorm why people used drugs. At the end of the lesson they identified what they wanted to know about different drugs. The lesson was very effective in determining the pupils' existing knowledge of drugs as well as establishing why they thought people took drugs. It provided a good foundation upon which the teacher would plan subsequent lessons based on the identified needs of the pupils.

Similarly, **role-plays** provide very good opportunities for pupils to work together, to recognise and value the views of others and to **negotiate**.

Year 8 pupils were considering aspects of personal safety. They were set a number of possible scenarios and in groups had to role-play what they thought could happen when personal safety was threatened. They also had to role-play a possible solution. The tasks were well timed; pupils received appropriate support with questioning to test approaches and to help to improve techniques. Their contributions to the discussions on personal safety were excellent. The lesson was very effective in helping the pupils to formulate strategies to improve personal safety.

Part 2:
Effective departments

The survey made it possible to draw out a number of factors that tend to be associated with consistently effective practice. These are often common to all subject departments and reflect the clarity of policies and leadership of the school as a whole.

The whole-school dimension

This inspection survey was not designed to look at senior management, but in looking at the work of individual departments there was clear evidence of its impact. In schools where, as suggested by examination results and inspection evidence, consistently high standards were maintained, departments were able to succeed within a common framework of aims, strategies and procedures, as in this rural high school.

School-wide expectations of middle managers and systems of planning and review combined with strong departmental leadership to produce excellence. A range of particularly helpful features was noted.

- *Regular calendar fortnightly department meetings in which the agenda focused on improvement and comparison of classroom practice, with minutes passed to the linked member of the senior management team, who sometimes attended.*
- *A first-rate departmental development plan that used the school format and incorporated whole-school priorities in a subject context to produce a manageable number of clear, measurable targets.*
- *Job descriptions that delegated specific responsibilities to each member of the department, drawing on their strengths.*
- *Detailed resources of work at each key stage linked to rich and well-organised resources to give full support to teachers, especially new members of staff.*

- *High-quality data collection and analysis at whole-school level, which were used and refined by the department to monitor their performance and set curricular and numerical targets. The analysis was given to the senior management team and debated in regular review meetings between the linked deputy headteacher and the head of department.*

Exemplary leadership

In almost all schools visited, the subject departments are efficiently and effectively managed, with aims and policies clearly set out in a departmental handbook and supported by well-ordered planning and administration. By and large, however, it is the very good leadership of the head of department which distinguishes the outstandingly successful departments from others.

These very good leaders provide a stimulating and professional working environment in which teachers are highly motivated and enthused by their work, and where they strive continually to improve their performance. They promulgate their vision of what they want to achieve in a variety of ways. For example, they set out their aims and strategies in a considered and realistic policy document that articulates the department's purposes and systems, subsuming National Curriculum and other requirements within a framework that remains distinctive. Moreover, good leaders ensure that the conditions are in place for these ambitions to be achieved and sustained.

The vision of the head of the English department centred on establishing an intellectual and aesthetic community in which literature, language, media, theatre and other performing arts were constantly discussed, practised and valued. This was associated with the provision and development of rich extra-curricular activities, such as theatre visits, writing magazines, reading groups, and drama or media productions. A close link with nearby literature festivals led sixth form pupils to write published reviews of poetry readings and encouraged their own writing of poetry.

This vision also affects the type of professional development undertaken by staff, with regular attendance at lectures or workshops on set texts with sixth formers, or collaboration with higher education and professional theatre by drama departments complementing the more conventional courses attended by teachers. This professional development is geared to keeping up subject expertise and enthusiasm alongside teaching skills.

A significant feature of the most effective departments inspected in this survey is that the lessons taught by the head of department were generally judged to be very good or outstanding. The impact on other members of the department of such examples of very good teaching is considerable. Just as pupils require models of good performance to

emulate, so teachers respond to expert practitioners within their department. By seeing what is possible, expectations are raised.

A strong feature of the best departments is thorough and systematic self-evaluation. As a starting-point, heads of department, or senior managers in their schools, undertake detailed analysis of test and examination data, looking for strengths and weaknesses. Data are analysed by gender, ethnicity, teaching group, and in relation to prior attainment. Its analysis reveals where teaching has been most or least successful in adding value and prompting progress. Based on this, but also drawing on lesson observation, work scrutiny and other data, good heads of department frame curricular or teaching targets rather than merely numerical targets or aspirations.

> *In the science department a particular focus on deduction from evidence was evident in the teaching, based on a close analysis of the previous year's test papers. In the English department, a concentration on cohesion in writing had followed an analysis of school results alongside the QCA's analyses of writing development and national test performance. This department has an internal document called "Evaluation of external examination results in order to ensure improvement". Their outstanding results testify to the value of this approach.*

The most effective departments find time for teachers to observe each other's lessons and use this well for different evaluative purposes. Centrally, it provides the head of department with information that can be used to address specific issues, as in the following modern foreign languages department.

> *Monitoring took place within an agreed agenda, for example observing styles of teaching to follow up differences in the performance of boys and girls identified through data analysis. The confidence of teachers in the process was stronger and the exchange of ideas more productive as observation was two-way, with an opportunity for colleagues to observe the head of department's lessons as well as be observed or to participate in paired observations.*
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> *Key features of the monitoring were that observation took place within each language (to monitor subject knowledge) and across languages (to promote sharing of ideas and methods). It had a declared focus linked to individual needs (for example, using the target language) or departmental development themes (for example, improving the assessment of oral work). Outcomes were recorded and action was agreed for the benefit of the individual (for example, targeted in-service training on a new area of work such as AS) and the department (for example, presentation to the whole team of an identified aspect of good practice such as reading skills).*

Monitoring is of little value unless, as in this example, it provides a means to improve. Outcomes might include reciprocal observation, or a course of training, or a specific focus to departmental meetings. Good heads of department ensure that the action taken is appropriate and has a positive impact.

Evaluation identifies the strengths of departments that need to be sustained, and the weaknesses that need to be addressed. Often, though not always, a new head of department brings about productive change on the basis of detached review of the work of his or her new department. The impact of a new head of history department in an inner-city comprehensive school is highlighted in the following example:

The department was well managed and led. A collegiate approach was encouraged in the department, which included joint planning, observation of each other's teaching and regular moderation of work produced by pupils in various year groups. The departmental plan was linked to the school's priorities and included a number of important initiatives, such as developing baseline assessment data and introducing strategies to encourage the further development of thinking skills, in Years 8 and 10 initially. There were regular departmental meetings addressing relevant issues, such as history and literacy, ICT, challenging the gifted and talented, monitoring of grouping by ethnicity, inclusion, and developing thinking skills. There were increasing numbers of pupils opting to take history at GCSE and history was developing as a popular subject in the sixth form. There was clearly a strong commitment across the department to develop and improve further the teaching of the subject.

In some departments with very long-serving, stable staffing, teaching can become stale and innovation more difficult, with a tendency to respond to what has to be done rather than a continuing search for improvement. Good leadership keeps such departments fresh so that the opportunities for innovation are grasped. Sometimes the necessary leadership comes from outside the department, from the senior management team or from a specialist LEA adviser. Responsiveness to such prompting can be as important as innovative ideas from within the department.

Much of the stimulus for steady development and refreshment came from the LEA adviser through the monitoring and support programme. He had told the D&T department about good practice at other schools in the area – for example, a good assessment scheme. He had also encouraged visits between schools – for example, to share emerging practice using computer-aided design and computer-aided modelling (CADCAM). There was a good annual programme of meetings for heads of department. Particular departments had been encouraged to introduce a systems and control option for GCSE, and to evaluate and discuss their Key Stage 3 scheme of work as the start of a programme of re-organisation.

A secure curriculum

Consistently good teaching is almost always underpinned by an agreed curriculum for each subject, carried forward in a scheme of work that establishes what is expected of every teacher. The degree of specificity may vary between school and subject. In English, for example, a well-established curriculum and scope for individual teachers' creativity are not mutually exclusive. The most effective departments do not have necessarily any more detailed or thoroughly documented schemes of work than other departments – indeed the volume is sometimes less. However, there is a concentration on what knowledge, skills and understanding should be covered with each class in each unit of the course, often with a common assessment task used to monitor and record progress.

In an excellent English department the curriculum was defined in terms of progression statements in all major aspects of the National Curriculum programmes of study, such as response to the novel, poetry, media, or reading for information. This, linked to strategies for target-setting, ensured rapid progress, as both teachers and pupils were very clear as to the next steps needed.

As with pupils, staff responded best in departments that provided clear structure of this kind, but left some choice as to the detail of text or topic, with staff frequently devising their own schemes within the given parameters or objectives. However, in the best departments, monitoring systems always ensured that the head of department checked the quality of the curriculum and the standards being achieved.

The curriculum for each subject should underpin the development of knowledge, understanding and skills as pupils progress through the key stage. This is particularly important where progress is defined not in terms of subject content but in the exercise of skills, such as drawing in art and design, where the curriculum is structured to ensure that pupils make progress by returning to the same kinds of experiences at regular intervals.

In some subjects the organisation of the curriculum is more complex, and needs careful planning to make the most of available resources and ensure that pupils make good progress. In D&T, for example, work with food, textiles, electronics and resistant materials needs to be arranged so as to avoid a fragmented experience for pupils and to ensure progression in the generic skills of the subject.

After many years using a "circus" arrangement, with a steady increase in the number of elements in the rotation, the D&T department decided to start afresh. They identified clearly the aims and objectives for the key stage, recognised the physical constraints of their accommodation scattered across the school site, and discussed various possible strategies of organisation. Eventually they settled on a scheme that ensured that pupils worked with one teacher for longer. Pupils now stay with one teacher for work in both food and textiles and another teacher for resistant materials and control technology. They have found advantages in that teachers see their class more regularly. Adopting this strategy meant that initially some staff needed to improve their knowledge of some aspects of D&T but that, overall, all pupils were working with specialist teachers. Attainment is already improving in Key Stage 3 and staff are confident that results will improve considerably next year.

ICT requires particularly good co-ordination across the curriculum, mapping pupils' ICT experiences against statutory requirements and monitoring what they learn through these experiences. This involves the co-ordinator in monitoring lessons to ensure that intentions are being met and to identify where additional support is needed. Specialist ICT support for other departments helps teachers to understand how they can apply ICT to teaching and learning in their subjects as well as contributing to pupils' ICT capability. This might take the form of back-up resources, such as user guides to encourage pupils' independence in using applications, or, increasingly, to refer to websites on the Internet, or on the school's own intranet, as a rich source of background information.

In an A-level ICT lesson, pupils presented a researched case study. The teachers' prepared resources were excellent. Pupils were given references for reading, specific tasks to complete and exam questions to answer at the end of the module. The materials and resources were on the school's intranet for future reference. As a result of their work, pupils showed increased understanding of the characteristics of "smart cards" and compared these with cash and other cashless systems. They used PowerPoint and Internet source data well for their presentations to the rest of the class.

Effective co-ordination also involves the planning of pupils' broader access to ICT beyond formal lessons. This promotes a whole-school approach to access so that pupils have opportunities to develop their work with ICT outside normal lessons. This is particularly important if pupils without ICT facilities at home are to be afforded the necessary access to ICT in school: for example, by giving these pupils priority for access outside lessons or having laptops available for loan.

Additionally, effective departments understand their contribution to the wider school curriculum. In particular, teachers are aware of, and exploit fully, opportunities for pupils' spiritual, moral, social and cultural development. They are conversant with effective teaching methodology regarding the development of literacy and numeracy. They contribute towards whole school initiatives in areas such as thinking skills and creativity.

In a drama department teachers used questioning effectively to impel pupils to consider alternatives, make connections with other areas of experience (history and science in one lesson) and to speculate. "What if ?" was the starting-point for much devised drama and dance work. Pupils were also given opportunities to engage in "real-life" creative challenges, such as mounting productions for paying audiences, working to agreed deadlines, or taking part in national competitions (in which the school has been very successful), often involving pupils working with theatre professionals. Pupils' ideas, imaginative responses and perceptions are valued: brainstorming sheets, produced in pairs or individually, are displayed on the walls, and teachers actively encourage pupils to resist "blocking" or responding negatively to unusual ideas. The department has the feel of a laboratory: a creative laboratory. ICT and theatre technology are used imaginatively to support or extend the work; for instance, a recorded sound "collage" was produced for a drama set in a football stadium. The studios are open during breaks and lunch-hours and many pupils choose to use them to continue work begun in class time.

Planning for inclusion

Within the framework of the subject curriculum, and in the light of systematic self-evaluation, the best subject departments identify and respond in their plans to the needs of all pupils.

The history department was in the process of amending schemes of work to reflect a question-based approach that it had been developing for some time, and with a stronger emphasis on extended writing in order to move more pupils to the highest levels by the end of each key stage. The department also took the implications of diversity and inclusion very seriously, as well as recent initiatives concerning the progress of more able pupils and the achievement of boys. The updated history schemes of work also listed contributions to citizenship and literacy of each unit, identifying key words to be emphasised. Lesson plans also highlighted specialist terms to be emphasised during lessons.

In some subjects, such as mathematics, many teachers find it most effective to teach classes where the range of attainment is restricted to a degree by some form of setting or banding. Most of the schools visited organise pupils in mathematics classes according to their attainment from an early stage in Year 7, and most do so by year 9. Provided that syllabuses do not diverge too rapidly, that attainment is regularly reviewed, and that transfer

between sets is possible for late or slow developers, this organisation can help teachers to pitch and discuss work at appropriate levels.

In subjects where the form of organisation is more often in mixed-ability or broadly banded classes, where pupils achieve highly across the range of attainment, this is largely due to good provision by teachers who follow the departmental policy on differentiation. To differentiate the teaching approach effectively to meet the needs of a wide range of pupils is no easy matter, and approaches vary between school and subject. Some departments have invested considerable time and energy in producing sets of worksheets at different levels, and others have purchased sets of textbooks written in parallel, addressing the same content but at different levels. Where such worksheets and textbooks are of good quality and used selectively, pupils make good progress.

In other highly effective departments mixed-ability classes are taught by an agreed but flexible approach to whole-class teaching. For example, in one department teachers showed a consistency that stemmed from an expert head of department who modelled the approach for colleagues.

> *The class tackled the same text with the teacher. The teacher engaged the pupils' interest by skilful reading or by leading open discussion of the key themes to be encountered in the text pupils had read or were about to read. Lessons were punctuated by short tasks, sometimes undertaken individually and sometimes in pairs or small groups, almost always leading to plenary discussion during which notes would be made on the whiteboard to reinforce the learning, particularly with lower attaining pupils in mind. Re-grouping was common into pairs or larger groups, sometimes enabling high attainers to support others while at other times they would be grouped together to tackle a more challenging or abstract question or engage in background research. Always such group tasks would be quickly used to inform the whole class. The distinctive atmosphere was one of shared enterprise from which all would benefit, but in subtly varied ways.*

Effective provision for pupils with English as an Additional Language (EAL) is often based on partnership between mainstream teachers and specialist support staff, as in this mixed-ability Year 11 English lesson.

An EAL bilingual assistant drawn from the predominant Asian community represented in a suburban high school, worked very effectively with a group comprising both white and Asian pupils, one of whom was at an early stage in learning English. A set of photographs of modern London, taken early in the morning, was used for a speaking and listening task in preparation for a study of Wordsworth's Upon Westminster Bridge*. The teaching assistant had been well briefed, was familiar with the poem and hence was able to focus discussion, and had prepared well by finding out about the buildings and scenes represented in the photographs. She thus skilfully enriched the discussion for all pupils, while also drawing the EAL pupil into the conversation, occasionally using the home language but also through careful prompts and reinforcement in English.*

Good departments work closely with the SEN department in order to obtain the information and expertise that they need to inform planning and teaching.

Specialist teachers' knowledge and understanding of SEN were very high and this was reflected in their very purposeful approach. All teachers had an SEN file in their classrooms and had copies of the stages register and the individual education programmes (IEPs) for each pupil. They were carefully monitored and staff had a very clear knowledge of pupils' needs. This close-knit team of teachers was very aware of pupils' needs. Expectations were high, planning was effective and efficient and teaching methods were used to enable young people to access lessons. Differentiation was in evidence in lessons and staff were very aware of the need to ensure access to the curriculum for all pupils. Support staff were well used in the school, accepted as full members of staff and promoted as a source of help for all pupils including those with SEN.

Where support is available, the SEN teacher is fully involved, at best in a partnership with the classroom teacher.

In a mixed-ability lower Year 11 RE set studying divorce, the two learning support teachers allocated to the five pupils with SEN statements had been very well briefed and had copies of the lesson plan. They made careful notes of the teacher's explanations, checked that their pupils understood the arguments and re-interpreted difficult concepts (for example, spouse, and legal contract) for the pupils with SEN statements and others in need of help. They helped their pupils précis and organise their information; for example, when the class was taking notes they helped pupils present the information in a spider diagram. Learning support teachers monitored the progress of SEN pupils throughout the lesson, and made detailed written records of what they had done during the lesson on their IEPs. They enhanced the quality and pace of the lesson by setting up questions for the teacher when pupils struggled to find words or when a new question was needed to take the lesson forward.

Productive assessment

Good departments maintain an assessment policy that explains the systems and procedures that all teachers should use in order to support pupils' progress and raise standards. A recurring issue, identified regularly in Her Majesty's Chief Inspector's Annual Report, is the regression or lack of expected progress that occurs between Key Stages 2 and 3. Good subject departments have systems that provide information on pupils' prior attainment, and make use of the information in planning lessons from the outset of Year 7. This planning can be facilitated where partner primary schools and departments ensure that the best information is available. For example, some schools now co-operate to promote continuity across a range of subjects.

> *In one high school, pupils arrived from middle schools with an assigned level for RE based on the local agreed syllabus. The RE teachers in both schools had agreed a transfer task, which was begun in middle school and carried over to the first three weeks in Year 9. The task in Year 8 was to research an "exemplar of a faith" and in Year 9 to assess his/her influence. It was designed to enable pupils to reach Level 7.*

In successful subject departments significant assessments are built into the scheme of work and become part of the general teaching approach. These assessments are standardised and build up a profile of pupils' progress. They can be managed within the time available and allow for better tracking and monitoring of pupils whose strengths and weakness are identified at an early stage so that additional support or challenge can be initiated.

> *In the geography department teachers built up a profile of each individual pupil using Key Stage 3 assessment sheets on which they recorded individual pupils' progress and attainment, based on common assessment tasks. A statement supported the effort and attainment grades. The department reviewed pupils' progress four to five times a year during a 20-minute period of a lesson during which pupils recorded and set individual targets. These targets were built up over the three years of Key Stage 3 and profiles were passed from teacher to teacher at the end of the year. These formed the basis of end of key stage assessment.*

Good day-to-day assessment helps pupils raise the standards of their work, correcting mistakes, reinforcing knowledge, building concepts and developing skills.

In one art department, pupils received detailed, formative feedback on their drawing as part of a well-designed and effective assessment system. "Post-it Notes" were used to provide helpful written feedback on pupils' sketchbooks. Standards were made clear, helped by displays of good quality drawings, often with captions explaining their purpose or provenance. Increasingly, departments were considering the creation of digital portfolios of pupils' work, including their drawing.

As in the following example, such good assessment can help pupils and students to identify specific weaknesses against which they can measure subsequent progress. Here, the teacher of a Year 13 history A-level class made use of a student profile to identify strengths and weaknesses:

The teacher returned assessed work, making good use of the students' assessment profile which showed a recent dip in attainment. The teacher had prepared a very good analysis for each student, showing how far he or she had fulfilled various criteria for each essay (for example, "clear organising statements"). This provided a useful agenda for new work, comparing relationships between monarchy and parliament in 1625–9 with the earlier period that was the subject of the essay.

At an appropriate level of detail, assessment provides teachers with opportunities to set pupils precise targets that they can work towards on a short-term timescale. Good target-setting provides pupils with early information on how they can improve, not just the level or grade they should aim to reach. Targets should be used by teachers to help to feed back to pupils and are part of a process that involves monitoring of progress and early identification of under-achievement.

An urban comprehensive school with an ethnically and linguistically diverse intake achieved good results through a system of target setting for personal reading. The librarian joined the English teachers to hold individual reading interviews with pupils, to construct a "reading tree", building on each pupil's current tastes and suggesting how increased challenge (represented pictorially as higher branches and leaves) could be planned for within the chosen genre.

Generally target-setting is most effective when there is a detailed staff input, rather than when the setting of targets is left to the pupils.

Targets can be of particular benefit to lower attaining pupils.

> *The mathematics department had high expectations of all pupils but was aware that the lowest attaining might be discouraged if feedback continually suggested that they would be able to achieve only at low levels relative to their peers. For that reason pupils were set individual short-term targets for improvement as well as the longer-term goal of a particular GCSE grade. Thus they were able to experience a sense of achievement whilst still having a realistic but challenging view of their likely examination performance.*

In some effective departments, steps have been taken to ensure that pupils understand targets that relate to the requirements of external assessment.

> *In a science department, the emphasis throughout was on pupils being made aware of the standards they were achieving, what their targets were and, most importantly, what they needed to do to improve further. For example, all Key Stage 4 pupils had been given a guide that set out what is required in science investigations in order to achieve each level. They also had writing frameworks to guide them through planning and preparation. Teachers structured their own written and oral feedback to pupils so that it related to pupils' progress towards targets and the specific action needed to improve. As a result, pupils had a good understanding of how they could work to raise their own performance.*

Many of the most effective departments make good use of data to set targets for pupils' performance in external tests and examinations. In one science department, for example, these targets are based on Key Stage 2 test results, CAT scores, NFER tests results, internal "mock" examination performance or sometimes a combination of these performance indicators. The Department for Education and Skills (DfES) Autumn Package is often used as are commercially available resources for analysing and predicting performance.

Since there are no statutory tests in foundation subjects, it is particularly important that departments have procedures to promote consistent, high-quality assessment to ensure the accuracy of end-of-key-stage assessment against National Curriculum level descriptions. In good departments this is now systematic, so that each teacher operates in the same way and shares the same standards, as in this example from a history department.

> *Assessment also played an important part in keeping the department together. In Key Stage 3 all classes took two common assignments in each study unit, and a portfolio of agreed standards was maintained. In Key Stage 4, department meetings were used to moderate standards of work in the GCSE.*

Optimising staff, accommodation and resources

By no means all effective departments are fully staffed with qualified specialists. Good departments make best use of, and provide opportunities for, all staff who teach the subject. Newly qualified teachers are nurtured and given early responsibility when ready. Significant work is delegated to run the department more efficiently and provide for career development. Particular care is taken to support non-specialists, part-time teachers or teachers with significant other commitments, such as senior managers. Often, these are the people who are unable to attend departmental meetings, who have little time to observe subject specialists at work, and for whom subject INSET is seen as low priority. Some subjects, such as RE, have a higher proportion of such teachers than others. It is important that, as far as possible, these teachers are involved in the work and thinking of the department.

The use of learning support assistants alongside teachers in classes can be extremely effective, especially where they have some specialist training or experience. For example, in mathematics in one school all learning support assistants are specialist appointments, and they are used not only to support individual pupils with SEN, but also more generally in mathematics classes alongside the teacher. Their support is especially useful where classes are large or contain a wide range of attainment. Where time is available for the assistants to be involved with the teacher in planning, lessons are often very effective. The pupils, especially lower attainers, generally appreciate the presence and support of a second adult in the classroom because their queries are often answered more rapidly.

In a Year 7 class the teacher and support assistant demonstrated the use of co-ordinates by playing a game together in front of the class. Points were placed alternately on a grid and errors and strategies discussed between the two adults. Pupils learned not only how to place points accurately but to use wider reasoning to influence the outcome of the game. During the subsequent written exercise for the pupils, both adults circulated and intervened productively in the learning.

In subjects such as science, D&T and ICT the role of the technician can often be a major factor in the success of the department. In this example, the role of the D&T technicians was vital to the work of teaching staff.

> *Two technicians undertook a wide range of well-documented duties. They were involved in the planning and decision-making, acted as support teachers during practical lessons, and ensured that equipment, materials and ingredients were carefully stored, prepared and made available. This freed the teachers to plan schemes and lessons and to give more time to talking with pupils, assessing their progress. During the introduction of the new CADCAM equipment the technicians' devotion to learning the intricacies of operating both the hardware and the software gave the teachers the confidence to launch the use of such resources with their classes.*

The level and deployment of ICT resources in most secondary schools merit the use of at least one full-time ICT technician. Where a technician manages the computer network well, this means that the ICT co-ordinator and other teachers are able to make better use of their time and expertise to develop the curriculum or their teaching. Some larger schools now employ technical support teams of four or five. These are used well where some team members also provide explicit support to teachers in lessons. This works best where support staff are aware of the learning objectives in the lesson.

> *A Year 8 French lesson began with an excellent introduction in the target language, with all technical terms given in French. The network manager then demonstrated how to import a clipart image. This was completed quickly in three minutes and the class teacher took over to continue the lesson. The network manager was available to help the teacher support pupils as the lesson progressed.*

In departments with consistently good teaching, a common feature is the stimulating quality of the environment. This is as true in mathematics, for example, as it is in art.

> *There was a clear and appropriate policy in the department handbook relating to the "environment". Staff were given very clear guidance on the importance of creating a stimulating environment in the classroom (display for different purposes, presenting a good role model in terms of the organisation of resources and furniture, high expectations of how pupils should treat resources and furniture). Also, all staff had responsibility for display in the corridor area within the department. Staff put the policies into practice; the environment was mathematically stimulating in all classrooms and in the department area. A noticeable feature of each classroom was the emphasis given in the display of mathematical vocabulary – each teacher had been given 50 mathematical words to display above eye-level in the classroom, to familiarise pupils with common mathematical language and correct spelling.*

Many subject departments work hard to provide a rich curricular diet, and to provide the widest possible range of resources for their pupils. It is still the case that in some schools pupils, even in examination classes, have to share books and cannot take them home to support homework. Even where this is the case, there is evidence of good husbandry of available resources, with every attempt being made to provide variety in support of a range of teaching approaches. In some of the most effective departments, every effort is made to exploit resources that make the subject vivid and relevant.

These often involve fruitful community and business links. Carefully-timed visits to local industry, the use of visiting speakers and, especially, the involvement of consultants for work in D&T in the upper school considerably enhanced pupils' overall experience. Over many years the department had established a network of people to support the curriculum. Some were part of formal networks such as Neighbourhood Engineers but many were not. Similarly, the extra-curricular activities provided an excellent range of additional experience, particularly aimed at those pupils "most able or most interested in D&T". This included a Young Engineers' Club but also some short-duration groups aimed at entering competitions; that for food technology gained notable national success recently.

Many of the subject departments in the survey augment their resources with field work and visits. Usually, senior management recognise the importance of this resource despite the disruption occasionally caused to the regular timetable.

Study visits to museums and galleries are an integral part of the art curriculum. Successful visits are also planned carefully, with intended artistic outcomes enunciated clearly to pupils: in one example, an exhibition at the National Gallery where contemporary artists had interpreted the paintings of chosen old masters, a student had mirrored the same process in her own work, reinterpreting a painting by Tintoretto in the style of Leon Kossof. A Year 11 student who had been somewhat diffident about the art course had had his interest revitalised by a school study visit to Barcelona that focused on Gaudi's architecture, the student's visual diary becoming an invaluable resource for later work.

Part 3: Improving quality

Good support from senior management, visionary leadership, effective systems, and optimum use of the available resources characterise the best departments visited during this survey. However, not all were successful in all of these respects, and, as a consequence there were undue variations in quality within and between departments, and pupils' achievement was in some cases lower than might have been expected, and their progress uneven. In order to register strengths and identify weaknesses, this part of the report draws on the evidence in the earlier subject sections to provide checklists of questions for subject teachers, heads of department and senior managers. It is suggested that they might form useful starting points for self-evaluation and departmental or whole school review.

As a subject teacher, do I:

- have a detailed, up-to-date knowledge of the subject(s) I teach? Is this deep and flexible enough to challenge and elicit confidence in the highest attainers and to support the lowest attainers?
- maintain my enthusiasm for the subject by being a learner as well a teacher, both within the classroom and beyond it, and can I use that subject enthusiasm to motivate and inspire pupils ?
- regularly offer to my pupils models of good performance in all aspects of the subject, to clarify my expectations and raise their aspirations?
- plan lessons and units of work to ensure continuity in learning and steady progress for pupils in the required knowledge, skills and understanding by building new work onto what has gone before and balancing new material or ideas with reinforcement?
- plan lessons that are varied, starting in ways that engage pupils' interest, intellect or creativity and using a range of groupings activities and appropriate resources to maintain that interest?

- make clear the intended learning in my lessons? Do I match it to pupils' prior attainment and assessed aptitude, and both communicate these intentions to pupils and review with them the extent of their learning?
- wherever feasible, look for opportunities for pupils to undertake investigations, solve problems or analyse and evaluate ideas? Do I encourage pupils to be exploratory and critical, rather than passive recipients of information?
- use questioning skilfully to probe and extend pupils' thinking in ways well matched to their level of attainment in the subject? Do I avoid routinely resorting to questions merely to test recall, as an empty gesture towards pupils' involvement or as a substitute for exposition?
- give pupils sufficient time for reflection, thought and even puzzlement. Do I understand that it is the pace of learning rather than of activities that is the key to rapid progress?
- recognise 'practical' work as integral to learning for pupils of all abilities, but ensure that it is linked to analysis and evaluation?
- mark and assess pupils' work as helpfully as is practicable, offering informative feedback? Do I use criteria, marks or grades that are understood by pupils? Do I provide a clear indication of what has been done well and where improvement is needed? And do I use this as the basis for precise targets for individuals or groups, as appropriate?

As heads of department, working with subject teachers, do we:

- have a clear view of our aims, linked to those of the school, and are they reflected in our plans and objectives?
- have regular, minuted departmental meetings? Are these mainly about improving teaching and learning, rather than the maintenance of administrative systems?
- analyse carefully pupils' current standards and how well different groups are doing?
- identify strengths and weaknesses in the curriculum and teaching and discuss methods of improving these?
- make sure we have enough evidence to evaluate learning? Do we include the views and responses of pupils, lesson observation by a variety of people, the quality of work produced by pupils and their assessed progress in each component or attainment target of the subject?
- have agreed schemes of work which ensure that all pupils have access to the full programme of study, agreed syllabus or course content? Are these designed to secure their steady progress in knowledge, skills and understanding in the subject? Do they provide support and guidance to teachers but still allow them sufficient choice of content and approach to motivate them as professionals?
- plan our professional development with a balance between school, department and personal priorities?
- make sure that these plans maintain and develop subject expertise as well as teaching skills?
- make full use of available models of excellent teaching and innovation within the school or department and beyond (eg from a LEA adviser, consultant, or local teacher training partnership) to raise the expectations and teaching competence of staff?

- plan our contribution to the wider education of pupils, in such areas as literacy, numeracy and ICT; spiritual, moral, and cultural development; personal and social education and citizenship; and the development of study skills?
- have high, clear expectations for the regular assessment of pupils' progress and the feedback we give to them and their parents? Do we assure the quality and accuracy of marking and assessment by monitoring, moderation and, where necessary, intervention?
- maintain clear, simple records on pupils' progress (including statutory ones for pupils with special educational needs)? Do we store completed work and assessments, where appropriate using ICT, and avoid duplication of effort or unnecessary bureaucracy?
- liaise effectively with partner schools and post-16 institutions over the curriculum and the transfer of assessment information? Do we aim to ensure that pupils' progress between phases and key stages is smooth and uninterrupted?
- deploy all available resources, including support staff, to best advantage to secure the learning of all pupils, through clear planning at all levels?
- maintain a sense of teamwork (based on shared responsibility, respect for the ideas of all and mutual commitment to both the subject and pupils' progress)? Do we allocate clear responsibilities for departmental leadership, management, development and the support of colleagues, and roles of individual staff in the department?
- maintain a rich learning environment, and seek opportunities to pursue out-of-school activities where they can make a significant contribution to learning?

As headteacher and senior management team, do we:

- promote consistent quality across the different subject departments or faculties in the school?
- create an ethos and school-wide systems which promote excellence in subjects including,
    – good strategic planning through the school development or improvement plan;
    – effective policies and practice for managing pupils' behaviour;
    – securing and allocating sufficient resources to each subject;
    – clear job descriptions, allocation of responsibility, and effective performance; management;
    – well-planned staff development?
- communicate clearly enough our expectations of teachers and departments?
- give curricular leadership, based on a good overview of the whole curriculum, regular auditing of the received curriculum and planning for cross-curricular elements?
- provide clear school policies on assessment, recording and reporting within which appropriate departmental policies and practices can be developed?
- monitor and evaluate the achievement of quality by individual teachers and departments, using a range of sources of evidence, with regular, documented reviews of subject work?
- ensure that non-specialists, part-time and second subject teachers are able to be involved in the work of the departments in which they teach;
- provide support through links between SMT members and departments, giving time and other resources to secure improvement where it is needed?