

Changes in Teaching and Learning promoted by the Aiming for Excellence Programme



Rhagoriaeth i bawb....Excellence for all

Arolygiaeth Ei Mawrhydi dros Addysg
a Hyfforddiant yng Nghymru

Her Majesty's Inspectorate
for Education and Training in Wales



BUDDSODDWR MEWN POBL.
INVESTOR IN PEOPLE

The purpose of Estyn is to inspect quality and standards in education and training in Wales. Estyn is responsible for inspecting:

- ▲ nursery schools and settings that are maintained by, or receive funding from, local education authorities (LEAs);
- ▲ primary schools;
- ▲ secondary schools;
- ▲ special schools;
- ▲ pupil referral units;
- ▲ independent schools;
- ▲ further education;
- ▲ adult community-based learning;
- ▲ youth support services;
- ▲ LEAs;
- ▲ teacher education and training;
- ▲ work-based learning;
- ▲ careers companies; and
- ▲ the education, guidance and training elements of Jobcentre plus.

Estyn also:

- ▲ provides advice on quality and standards in education and training in Wales to the National Assembly for Wales and others; and
- ▲ makes public good practice based on inspection evidence.

Every possible care has been taken to ensure that the information in this document is accurate at the time of going to press. Any enquiries or comments regarding this document/publication should be addressed to:

Publication Section

Estyn

Anchor Court

Keen Road

Cardiff

CF24 5JW or by email to publications@estyn.gsi.gov.uk

This and other Estyn publications are available on our website: www.estyn.gov.uk

© Crown Copyright 2006: This report may be re-used free of charge in any format or medium provided that it is re-used accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the document/publication specified.

Contents	Page
1. Introduction	1
2. Main findings	2
3. Recommendations	5
4. Improving teaching and learning	7
Learning styles	7
Thinking styles	8
Key skills	9
Assessment for learning	10
5. Transition	12
6. Leadership and management	15
7. Impact	17
Appendix: Examples of good practice	19
Case study 1: Learning skills in a Year 7 history lesson	19
Case study 2: Thinking skills in a primary school	19
Case study 3: Thinking skills in a Year 9 Welsh lesson	20
Case study 4: Key skills in key stage 3	21
Case study 5: Using ICT to improve learning in history and geography	21
Case study 6: Pupils and parents review progress together	22
Case study 7: Improving transition	22
Case study 8: Leadership and management to improve teaching, learning and transition	24

1. Introduction

- 1 Estyn's remits for 2004-2005 and 2005-2006 included a request from the Welsh Assembly Government for an evaluation of changes in teaching and learning in schools, promoted by the 'Aiming for Excellence in Key Stage 3' programme.
- 2 In 2002, working with the Welsh Assembly Government and ACCAC, Estyn published 'Aiming for Excellence in Key Stage 3'. This was the first in a series of publications to help local education authorities (LEAs) and schools raise standards by making the work in Year 7 build more effectively on what pupils had done in primary school. In 2004, in 'Moving on...Effective Transition from Key Stage 2 to Key Stage 3' and 'Moving on...Improving Learning', we identified the improvements in transition arrangements and the quality of learning that had taken place since 2002.
- 3 In September 2005, we published advice and recommendations for the Welsh Assembly Government on improvements in teaching and learning. This advice drew on evidence from visits to schools and LEAs, education strategic plans and school inspection reports in 2004-2005.
- 4 As a continuation of the 2004-2005 remit, we visited a further 12 secondary schools and a sample of their feeder primary schools in the autumn term 2005. We visited these schools because they are:

- making significant progress in improving the quality of learning and raising standards at key stage 3;
- introducing new methods of curriculum organisation and teaching; or
- working closely with their LEA on initiatives to improve the quality of learning.

The purpose of the visits was to look at what these schools were doing to improve teaching and learning and what pupils were able to do better as a result.

- 5 This position paper:
 - provides information on further developments in teaching and learning in 2005-2006;
 - identifies key features of effective practice and illustrates these with case studies; and
 - makes recommendations for further action.

2. Main findings

- 6 The quality of teaching and learning is improving in schools that have initiatives to develop pupils' learning and thinking skills. The most effective initiatives are those that recognise that learners do not all learn in the same way. Many teachers have improved the quality of their teaching because they now explain the learning process to pupils and show pupils how to understand and use knowledge in different ways. As a result, pupils are more motivated and understand better what they are learning.
- 7 In lessons where teachers develop pupils' thinking skills, the quality of teaching is good, and teaching often has outstanding features. Pupils become critical and innovative thinkers who are able to gain a deeper understanding of subjects because they know how to:
 - analyse and weigh evidence;
 - infer and hypothesise;
 - make connections and distinctions;
 - offer and accept alternative points of view;
 - generalise and give examples;
 - draw on evidence from their own experience; and
 - synthesise and refine their findings and views.
- 8 Pupils develop their key skills best where they are taught as part of learning in all subjects. In the most effective practice, all schemes of work and lesson plans show how teachers will teach literacy, numeracy and information and communication technology (ICT) skills.
- 9 Some schools submit pupils' work for assessment so that they gain qualifications in key skills in key stage 3. In these schools, pupils learn and apply key skills well across a range of subjects and this encourages pupils to aim high.
- 10 The attention that schools give to how pupils learn improves pupils' wider key skills, in particular their ability to solve problems and to work with others productively.
- 11 A few schools use assessment well to improve learning. Teachers in these schools understand how important it is that pupils know how well they are doing. There are clear criteria that teachers and pupils use together to assess their work. Where this happens, pupils know what they have achieved and what they need to learn next.

- 12 Pupils make better progress in key stage 3 where there is planned continuity of learning between the primary and secondary phases. Continuity is most effective where primary and secondary colleagues work together to:
- produce bridging units of work that focus on teaching, learning and assessment;
 - teach and observe lessons in each other's schools;
 - moderate their assessments of pupils' work; and
 - produce portfolios of moderated work that show progress from key stage 2 to key stage 3.
- 13 However, where transition arrangements are poor, a lot of secondary teachers do not know enough about what pupils already know, understand and can do, or about the variations in provision between the primary schools from which pupils transfer. Too many pupils do not make the progress that they ought to make in Year 7 because teaching is not pitched at the right level. Able pupils spend too much time doing work that does not challenge them, whilst others have difficulties understanding the work they do.
- 14 A key factor in improving learning in key stage 3 has been the significant change in the role of the form tutor. There has been a big improvement in pupils' learning and achievement in schools where the form tutor acts as a learning mentor who reviews progress with individual pupils and their parents on a regular basis and sets targets for improvement.
- 15 The key feature in schools that are improving teaching and learning most is the headteacher's leadership and drive. In the most effective schools, the headteacher has a clear vision for improvement that is translated into planning that involves all staff according to their respective responsibilities. Senior and middle managers plan, put into place and regularly evaluate improvements.
- 16 Some local education authorities (LEAs) support schools well in their efforts to improve teaching and learning, in particular through co-ordinated programmes that share good practice with teachers at all levels, through working groups, newsletters and intranets.
- 17 It is difficult to measure the impact of the Aiming for Excellence programme as a whole but better teaching and learning in the schools visited have brought about significant improvements for pupils over the last three years. They include improvements in:
- motivation, behaviour and participation in lessons;
 - punctuality and attendance; and
 - learning and key skills.

- 18 Schools are beginning to find ways to evaluate the impact of changes in teaching and learning on the quality of pupils' work in lessons. The case studies in the Appendix provide evidence of how the quality of work is improving. In the schools we visited, those that had significantly improved the quality of teaching had also improved standards in national curriculum assessments at the end of key stage 3.
- 19 Some schools have not benefitted fully from improvements in teaching and learning because:
- improvements are not consistently in place across the curriculum;
 - new initiatives do not take account of how pupils learn in primary school;
 - teachers do not rigorously evaluate whether pupils' work improves because they are teaching in a different way; and
 - the benefits of externally-funded initiatives have not been securely assimilated into mainstream practice to sustain improvements when external funding stops.
- 20 Despite improvements in transition arrangements, few schools have begun to work on the transition plans proposed by the Welsh Assembly Government. Some LEAs have provided schools with guidance on transition plans but few LEAs have begun to help individual groups of primary and secondary schools to produce such plans.

3. Recommendations

In order to develop further and sustain the impact of the Aiming for Excellence programme:

Schools should:

- R1 give more attention to understanding how pupils learn and ensure that teachers use a range of methods, resources and tasks to enable all pupils to learn in the most effective way;
- R2 ensure that pupils continually develop key skills as part of learning by integrating key skill learning objectives in all subject schemes of work;
- R3 develop pupils' thinking skills more overtly, providing appropriate training for teachers where necessary;
- R4 use learning objectives and assessment more effectively in lessons and in oral and written feedback so that pupils know how well they are doing and what they should do to improve their work;
- R5 improve the continuity of teaching and learning between the primary and secondary phase to ensure that teaching in Year 7 meets the learning needs of pupils more precisely, particularly able pupils and pupils of middle to low ability;
- R6 work together to produce transition plans in line with the guidance provided by the Welsh Assembly Government;
- R7 evaluate whether the quality of pupils' work in lessons improves as a result of new teaching and learning methods to achieve maximum benefit from initiatives and good value for money; and
- R8 ensure that the benefits of initiatives to improve teaching and learning are securely in place across the school.

Local Education Authorities should:

- R9 share successful initiatives to improve the quality of teaching and learning through working groups, newsletters and intranets;
- R10 target human and financial resources, including advisory support and delegated Better School Fund monies, on schools where there are weaknesses in teaching and learning;
- R11 provide clear and timely information to each school in the authority about the resources, including funding from the Welsh Assembly Government, for improving teaching and learning and for transition from primary to secondary school; and

R12 provide sustained support to individual groups of primary and secondary schools to prepare and implement transition plans.

The Welsh Assembly Government should:

R13 provide, and ring fence, funding for schools from the Better Schools Fund for the purpose of:

- (a) improving teaching and learning in key stage 3 with a focus on schools where there are weaknesses in the quality of teaching; and
- (b) preparing and implementing transition plans, in line with Welsh Assembly Government guidance;
- (c) and ask local authorities for a full evaluation of the impact of expenditure; and

R14 give a high profile to the development of learning skills in the revisions to the National Curriculum orders and make provision for training and support for schools to implement the skills framework that focuses on the needs of learning and the process of learning that ACCAC proposes to publish, at the end of 2007.

4. Improving teaching and learning

21 All the secondary schools we visited have initiatives to improve the quality of teaching and learning in key stage 3, focusing on one or more of the following aspects:

- learning styles;
- thinking skills;
- key skills; or
- assessment for learning.

22 In all schools, the initiatives:

- have priority in the school development plan;
- are part of a wider programme to raise standards; and
- benefit from funding or support from external agencies or the LEA.

Learning styles

23 All the secondary schools we visited have initiatives to improve the quality of learning. These initiatives help pupils to learn about the process of learning as well as about subject matter. They benefit from research that shows that not all learners learn in the same way. Almost all of the schools invited external consultants to lead training for teachers on learning styles. These styles include:

- visual learning, where learners understand and convey information best when it is presented in the form of diagrams, pictures, charts, demonstrations and writing;
- auditory learning, where pupils learn through listening to explanations and through debate and discussion; and
- kinaesthetic learning, where pupils learn through practical activities such as experiments, construction, role play or simulations.

24 As a result of their involvement in 'learning to learn' initiatives, many teachers have improved the quality of teaching and learning in lessons because they:

- teach pupils how to learn in different ways;
- use a wider range of teaching methods that create different opportunities for pupils to understand and use information;

- use a wider variety of resources, including visual materials and ICT;
- challenge pupils to develop their understanding through practical tasks that allow them to work out things for themselves;
- set a choice of tasks that allows pupils to learn in the most effective way; and
- explain the learning process to pupils.

25 The positive gains of teaching in this way are that:

- more pupils understand what they are learning;
- there is a better match of task to meet the individual pupils' needs;
- pupils are more enthusiastic about what they are learning and remain 'on task' for longer periods of time;
- there is a marked improvement in behaviour because fewer pupils become bored; and
- pupils understand how to develop and use learning skills across the curriculum.

Thinking skills

26 A third of the secondary schools and one primary school have trained teachers to teach thinking skills. The quality of teaching and learning is good in these teachers' lessons and there are often outstanding features. The case studies in the Appendix describe some of these features.

27 Teachers help pupils to move from literal understanding to thinking more deeply about subjects. To do this, teachers make explicit the skills needed to use information in different ways, such as:

- reasoning;
- asking questions;
- thinking creatively; and
- evaluating.

These teachers set tasks that require pupils to use these skills.

28 As a result, pupils become critical thinkers who:

- give and ask for reasons;
- analyse and weigh evidence;

- see implications;
- infer and hypothesise;
- make connections and distinctions;
- offer and accept alternative points of view;
- generalise and give examples;
- draw on evidence from their own experience; and
- synthesise and refine their findings and views.

29 In acquiring new ways of thinking, pupils improve their key skills. In particular, better thinking skills enable pupils to:

- listen to each other purposefully;
- explain and support their points of view;
- consider critically the views of others;
- speak relevantly;
- solve problems thoughtfully after considering different possible solutions;
- work constructively with others; and
- transfer thinking skills into other areas of learning.

30 Although we saw lessons that developed thinking skills very well indeed in the sample of schools we visited, very few schools have trained all staff to teach thinking skills systematically or made thinking skills central to learning in all subjects.

Key skills

31 All the primary and secondary schools we visited prioritise key skills in their curriculum planning. Most have mapped out clearly where literacy, numeracy and ICT skills are taught across the curriculum. Teachers' schemes of work and lesson plans show where and how these skills are taught. Pupils develop their key skills best where they are taught as part of learning in all subjects or courses. However, this practice is not widespread enough.

32 A few groups of schools use 'bridging' units of work in literacy, numeracy and ICT that span the curriculum in Year 6 and Year 7. These units provide effective continuity in how key skills are taught in these years and provide a good basis for the development of key skills in Years 8 and 9.

- 33 The requirements for the key skills qualifications have provided a structure for teaching key skills and strengthened the teaching of literacy, numeracy and ICT in lessons.
- 34 A third of the schools visited either use accredited qualifications, or are considering using them, in communication, application of number and ICT key skills during key stage 3. In one group of primary schools, each Year 6 pupil prepares a portfolio of work that demonstrates these key skills. These portfolios provide Year 7 teachers with first-hand evidence of the standards that pupils have already achieved in areas of learning and key skills
- 35 The attention that schools have given to how pupils learn has improved pupils' ability to solve problems and to work with others. Where teachers set tasks that require pupils to develop these abilities, pupils achieve more because they understand the work better. They also understand what they need to learn next.

Assessment for learning

- 36 About half the schools we visited are improving their assessment methods and how pupils use assessment to improve their work. These schools are developing whole-school approaches. The good features in these schools include:
- an understanding of how important it is that pupils know how well they are doing;
 - a clear link between lesson planning and assessment; and
 - the use of assessment information to review pupils' progress at regular intervals.
- 37 In the most effective lessons:
- teachers share learning objectives with pupils at the beginning of the lesson and use them during lessons and at the end of lessons to make pupils aware of their learning gains;
 - pupils understand their learning goals and use criteria to assess how well they are doing and what they need to learn next;
 - teachers use criteria as part of their teaching and to provide oral and written feedback to pupils on how well they are doing; and
 - pupils work together to apply criteria to their work to help each other see how well they are doing and to suggest ways to improve.
- 38 These practices work particularly well where there is a clear focus in lessons on helping pupils to improve their own learning and performance.
- 39 Some teachers have put together portfolios of moderated work to demonstrate good practice in using criteria. This practice has helped all the teachers in the school to improve the consistency of good teaching and assessment.

40 However, in many of the secondary schools inspected in 2004-2005, assessment is not as effective as it should be. Where assessment is weak:

- pupils do not fully understand how teachers assess their work and what they need to do to improve;
- teachers do not use assessment enough to plan and improve learning; and
- oral and written feedback do not focus on what pupils should learn next.

5. Transition

- 41 Where schools have effective arrangements for transition, pupils make good progress from key stage 2 to key stage 3. Transition is most effective where primary and secondary colleagues work together as willing partners.
- 42 The main features that contribute to effective transition are:
- strong leadership of transition by all headteachers;
 - agreed, clear priorities for improvement;
 - transition initiatives that focus on teaching, learning and assessment, including bridging units;
 - teaching and lesson observation by teachers in each other's schools;
 - joint moderation of teachers' assessments of pupils' work by primary and secondary teachers;
 - portfolios of moderated work in subjects that show progress from key stage 2 to key stage 3;
 - the organisation of learning to avoid an abrupt change from Year 6 to Year 7; and
 - specific support from the local authority for individual groups of primary and secondary schools.
- 43 Many of the schools we visited had good arrangements for some secondary teachers to observe pupils working in Year 6 classes and to assess Year 6 work with primary teachers. This helped them to understand the learning needs of these pupils.
- 44 Many primary and secondary schools have found ways to share information about new Year 7 pupils. One group of schools has devised a very effective summary sheet, using a common format, to pass on information, electronically, about each Year 6 pupil to all Year 7 teachers. This includes:
- data on attendance, effort and behaviour;
 - literacy and numeracy scores;
 - levels in national curriculum assessments; and
 - information about individual talents and aptitudes.

- 45 This is a simple but effective system. It is used well to track pupils' progress and pick up underachievers through key stage 3. It has also reduced the amount of unproductive retesting that used to take place in Year 7.
- 46 In most of these schools, there are good tracking systems between Year 6 and Year 7. In one groups of schools where self-assessment and target-setting are well established in primary schools and continue in the secondary school, pupils set targets for themselves at the end of Year 6 that are reviewed with their Year 7 tutors at the end of their first term.
- 47 Quite a few secondary schools invite primary school teachers to review their former pupils' progress in the first term of Year 7. In one secondary school, this practice showed that middle to low ability pupils made much slower progress than able pupils, relative to their ability, whilst adjusting to their new school. The secondary school now gives additional support to these pupils for a short period of time and their progress has improved.
- 48 Many of the schools we visited had made significant changes to how they organised teaching in Year 7 to enable the form tutor to have more contact with pupils. In these schools, the form tutor teaches at least one subject, tutor periods and PSE. The tutor is also the mentor for pupils in the form. The form tutor has a good range of information about pupils' achievements and reviews pupils' progress with them regularly. This means that pupils have the support they need very quickly, if they do not make the progress that teachers expect.
- 49 Involving parents helps Year 7 pupils to make good progress. Good strategies are:
- arranging for Year 7 form tutors to attend parents' meetings of pupils in Year 6;
 - involving parents in part of the induction week for Year 6 pupils in the secondary school;
 - communicating with parents through the home-school diary;
 - inviting parents to attend termly review meetings with their child and the form tutor; and
 - asking pupils to lead the review meeting with an assessment of their progress and evidence of their achievement.
- 50 A few groups of schools have good arrangements for cross-phase moderation of work. Most of this is happening in the core subjects and only a little in the other subjects. A notable exception is physical education,(PE) where the Physical Education and School Sport (PESS) initiative has very significantly improved how teachers plan for progression between key stages 2 and 3, particularly in gymnastic and dance. There is a lot of cross-phase teaching in PE. As a result, there is a more consistent understanding of the features of good work and expected standards.
- 51 Despite the improvements in transition arrangements, few schools have begun to work on the transition plans proposed by the Welsh Assembly Government. Some

LEAs have provided schools with guidance on transition plans but few LEAs have begun to help individual groups of primary and secondary schools to produce them.

- 52 Where schools do not have good transition arrangements, a lot of secondary teachers do not know enough about pupils' prior learning and standards, especially in the foundation subjects and religious education, to plan learning appropriate to their pupils' needs. Too many pupils do not make the progress that they ought to make in Year 7 because teaching is not pitched at the right level. Able pupils spend too much time doing work that does not challenge them, whilst others have difficulties understanding the work they do.
- 53 Schools have benefited from funding from a range of sources to improve transition, including the Better Schools Fund from the Welsh Assembly Government. However, no school we visited knew how the LEA was using this funding to improve transition or how much funding the school received for this specific purpose. They also did not know how long this funding might be available to them at school level. This makes it difficult for schools to plan in the mid to long term.

6. Leadership and management

- 54 A key feature in many of the schools that are improving teaching and learning is the headteacher's leadership and drive. The headteacher has a clear vision for improvement that is translated into a realistic action plan that involves all staff according to their respective responsibilities
- 55 Schools make the best progress in improving transition and continued learning in key stage 3 where:
- a sustained improvement programme is part of a school development plan that everyone understands;
 - resources are allocated to support and to sustain improvements;
 - senior and middle managers plan, put into place and regularly monitor improvements;
 - middle managers commit themselves to ensuring that improvement initiatives operate consistently across the school and in all departments;
 - all teachers and support assistants understand the improvements that managers expect to see in classrooms; and
 - everyone knows the criteria to use to evaluate the impact of improvements.
- 56 In a number of schools, all teachers have a common performance management target related to improving teaching and learning. Senior managers evaluate the impact of whole-school improvement programmes through classroom observation and can share good practice or give additional support accordingly.
- 57 Some schools have not benefitted fully from improvements to teaching and learning because:
- improvements are piecemeal and are not consistently in place across the curriculum;
 - new initiatives do not take account of how pupils learn in primary school;
 - teachers do not rigorously evaluate whether pupils' work improves because they are teaching in a different way; and
 - the benefits of externally-funded initiatives have not been assimilated into mainstream practice to sustain improvements when external funding stops.

58 Some LEAs have made a very significant contribution to improving teaching and learning. Effective work that has made an impact includes:

- arranging high quality in-service training;
- supporting a network of learning co-ordinators from groups of schools so that they can learn from each other;
- providing examples of good transition arrangements;
- sustaining support for local transition initiatives and planning;
- securing external funding for three years for transition and learning initiatives; and
- sharing good practice at all levels through workshops and newsletters.

7. Impact

- 59 It is difficult to identify any one initiative as being directly responsible for changes in teaching and learning. It is therefore even more difficult to measure the impact of the Aiming for Excellence programme as a whole. However, it is possible to identify some of the very positive outcomes of schools' work to improve transition and continued learning. In particular, there are significant improvements for pupils over the last three years. They include improvements in:
- motivation, behaviour and participation in lessons;
 - punctuality and attendance; and
 - learning and key skills.
- 60 In the secondary schools we visited, those that have improved the quality of learning at key stage 3 have also made improvements to standards in key stage 3 between 2002 and 2004, as measured by end of key stage national curriculum assessments.
- 61 In these schools, the factors that have improved teaching, behaviour, attendance, attitudes and standards include:
- planning for progression in key skills between key stages 2 and 3;
 - a particular focus on the wider key skills of improving own learning and performance, problem-solving and working with others;
 - explicit teaching of thinking skills;
 - initiatives that help pupils learn better;
 - the priority given to using assessment to plan effectively for pupils' future learning;
 - regular and focused pupil support, involving parents/carers in progress reviews;
 - very strong leadership in these initiatives by senior managers;
 - clearly defined targets as the outcomes for initiatives;
 - rigorous monitoring and evaluation of the impact of initiatives on pupils' progress;
 - very good use of data by all primary and secondary teachers to track pupils' progress; and
 - prompt early support to help pupils catch up when they underachieve.

- 62 The challenge should be for all schools to work in this way, given the evidence of the effectiveness of this practice in improving the quality of teaching and the standards of pupils' work. The appendix includes detailed case studies that exemplify good practice in teaching and learning that leads to high standards of achievement for learner.

Appendix: Examples of good practice

Case study 1: Learning skills in a Year 7 history lesson

This lesson was part of a sequence of lessons on the Battle of Hastings in a unit of work on the Norman Conquest.

The teacher asked pupils to consider whether the outcome of the battle was because the Normans were better prepared, the Anglo Saxons were weaker or because luck was on the Normans' side. In pairs, groups and then as a whole class, pupils considered each hypothesis in different ways, using a range of evidence, including knowledge of events and tactics, maps of Britain and France showing currents and wind directions, battle plans, pictures of armour and slides of the Bayeux Tapestry.

Pupils developed a very good understanding of the battle and the reasons for the outcome through sorting the information, viewing contemporary evidence and challenging different interpretations. The following responses show the quality of their learning;

'The Normans used horses as the first line of defence, so if the horse went down they could fight on foot...'

'They had speed too so the horses could pierce armour...'

'Therefore, they could use horses as weapons as well as vehicles.'

and

'Harold's marching north was a mistake because the wind changed and William could invade...'

'But Harold was able to pick up more men as he marched back which was good because the original soldiers were already tired.'

The outstanding features of pupils' learning and achievement were the ways in which they could:

- analyse information and use it in different ways;
- use a range of evidence to reach reasoned judgements; and
- explain how their learning skills linked with the skills of historical enquiry.

Case study 2: Thinking skills in a primary school

In a primary school, pupils in all classes are taught thinking skills through a programme called 'Philosophy for Learning'. Teaching philosophy teaches pupils to think about subjects in depth.

The aims of the programme are to:

- enable pupils to make good judgements;

- improve pupils' critical, creative and reflective thinking skills;
- increase pupils awareness of moral and ethical attitudes; and
- make pupils feel confident about their capacity to think for themselves.

Philosophy is timetabled separately from national curriculum subjects and religious education but within each lesson there is speaking and listening, literature, the study of language and reading.

In one Year 3/4 class, after reading a story in a previous English lesson, the teacher asked the pupils to suggest issues they wanted to explore, for which there was no answer in the text. In the story, an elderly badger had said goodbye to his friends and gone down his tunnel on his own. The pupils had inferred this was significant in some way and set themselves the task of thinking about the meaning of the badger's behaviour.

The outstanding features of the lesson were:

- the quality of pupils' thinking as they put forward different interpretations, adjusting their thinking as they listened to each other;
- the length of their contributions with thoughtful and unusual reasons, often drawing on personal experience;
- the sustained searching for significance, knowing there was no easy answer;
- the very articulate and well-reasoned responses; and
- the sensitive interactions between pupils.

As a result of working in this way, pupils demonstrated that they could:

- think critically and rigorously, with enjoyment;
- produce thoughtful and well-structured writing in all subjects;
- enjoy exploring difficult ideas; and
- have excellent attitudes to learning and learning skills.

Case study 3: Thinking skills in a Year 9 Welsh lesson

The objective of the lesson was to think about how poets use imagery to make an impact on the reader and reinforce a theme.

The teacher asked the pupils to infer the image the poet was trying to convey in each line of the poem. The poem was presented in such a way that some of the words relating to the image were missing and the pupils had to think of their own words in

keeping with the theme of the poem. The teacher skilfully drew out from the pupils why they had chosen their words and images and whether their choices reflected the poem's theme.

Pupils' analyses and thinking were good. They could communicate confidently and articulate their reasons for their choices well. When the teacher proposed that some of the pupils' suggestions were possibly more effective than the poet's words, pupils looked at the poem again to question the appropriateness of the language of the original.

Case study 4: Key skills in key stage 3

In this secondary school, senior managers are developing innovative strategies to raise standards in key stage 3. The school has some particular challenges, taking only boys from at least 13 feeder primary schools. Many of the pupils have limited literacy skills.

When the English teachers visited feeder primary schools to look at work in their subject and to consider ways to improve continuity when the boys transferred to the secondary school, they were surprised at the primary teachers' knowledge and expectations of Year 6 pupils. They were particularly impressed at how much pupils knew about their work and assessments. As a result of their findings, senior managers reorganised arrangements for teaching in Year 7.

All teachers in the English department are now Year 7 form tutors and teach their own subject, PSE and tutor periods to the pupils in their form. This enables them to know pupils well and to continue to give pupils the kind of individual support to improve their literacy skills that they had in their primary school. The English teachers have also worked closely with all Year 7 teachers to help them teach reading and writing skills as part of their subject lessons. Pupils are now getting the help they need to improve their literacy skills across the curriculum.

In addition, sixth form students help with a reading challenge during the first term, when boys collect reward tokens for improvement. Pupils with low self-esteem benefit from this scheme.

The skills initiative is now working through Year 8, where teachers in the maths department are taking similar responsibilities. For example in PSE, a project on healthy eating includes numeracy work on pulse rates, decimals, percentages, scale drawing as well as work about mean, mode and median.

Most pupils are gaining key skills qualifications at Level 1 in key stage 3, which encourages them to aim higher.

Case study 5: Using ICT to improve learning in history and geography

In one secondary school, a team of teachers has worked on a project to teach pupils how to solve problems through working together using ICT in history and geography in Year 7.

The team developed tasks that required pupils to raise questions and use ICT to answer them. Pupils use ICT lessons to learn skills that they will use and apply in history and geography. These include using:

- spreadsheets to collect and analyse data for work on microclimates;
- a database to record and analyse data from a study on a local castle and its surroundings; and
- PowerPoint to organise ideas and present research findings on hurricanes.

The good features are that:

- the project has raised teachers' expectations of what pupils can do and how well they can learn independently, given the right tasks and skills;
- planning to develop the wider key skills of problem solving and working together has improved the quality of teaching; and
- pupils are developing a more thorough understanding of geographical concepts and historical enquiry.

Case study 6: Pupils and parents review progress together

One secondary school wanted to involve parents more in their children's learning and to raise parental expectations of their children's achievement.

Year 7 pupils now take responsibility for reporting their progress to parents. Pupils collect samples of their best work and assessments in a 'yellow tray' that moves with them through the school. This work forms the basis of a formal evening when pupils make a presentation about their progress to their parents, identifying strengths and areas for improvement. The school and pupils view the evening as very important. Parents are very supportive of the system and their attendance at parents' evenings has improved. If a parent cannot attend, the pupil may invite his or her teacher from the primary school so that everyone has an audience for his presentation. A full record is made of the event as part of the evidence for pupils to gain Key Skills Level 1 in communication.

Case Study 7: Improving transition

This comprehensive school set itself particularly challenging aims to improve pupils' learning, achievement and attitudes in key stage 3. The overall aim was to merge the best primary practice in teaching and learning with the best secondary practice and remove the barriers to effective learning in Year 7.

From September 2003, the school introduced new arrangements for teaching Year 7 pupils. The key features are:

- the form teacher teaches English, history, geography, religious education, personal, social and health education and ICT (50% of curriculum time);
- the timetable is 'blocked' for these subjects giving flexibility to the teacher about what to teach and when;
- learning in these subjects takes place in the form room which is refurbished as a primary classroom; and
- the form tutor acts as a learning mentor.

The Year 7 teachers undertook extensive training, including visits to primary schools, to:

- teach English and the humanities;
- teach literacy and numeracy across the curriculum;
- use ICT in learning across the curriculum;
- improve the use of display and resources in the classroom;
- teach thinking skills; and
- develop schemes of work that allowed similar themes to be developed in different subjects.

The school was able to make these ambitious changes because the LEA contributed significantly through funding, training, in-class support and a major refurbishment of Year 7 classrooms. The programme's success is largely due to the commitment of staff to overcoming barriers and sustaining changes.

The changes to teaching and learning have had an impact in improving:

- behaviour, with only one temporary exclusion in Year 7;
- motivation and attitudes to work and homework;
- punctuality and attendance; and
- standards of achievement as measured in coursework and end of year teacher assessments.

Senior managers and heads of subject departments have monitored the outcomes and noted that pupils:

- focus on tasks for longer;
- work more independently;

- use criteria to assess progress; and
- achieve higher standards.

Case study 8: Leadership and management to improve teaching, learning and transition.

In this secondary school, senior staff have introduced a number of whole-school initiatives over the last two years that have helped to raise standards at key stage 3. The initiatives followed a major review of teaching and learning in the school in 2003.

Working for better continuity between the primary and secondary phase has been a key factor in making improvements in key stage 3. The main features of improved links between the primary schools and the secondary school are:

- strong leadership of the transition process by all the senior managers;
- agreed aims for transition that focus on improving standards and the quality of teaching;
- clearly defined and understood roles and responsibilities in both primary and secondary phases;
- active support from the local authority including provision for common closure days; and
- the production of portfolios of jointly-moderated work in the core subjects that has been the catalyst to improving teaching and assessment.

The good ways in which senior and middle managers are building on improved transition arrangements include:

- developing further teachers' understanding of what makes teaching effective in Year 7;
- the active involvement of parents, carers and Year 7 pupils in progress reviews; and
- ensuring that all Year 7 teachers receive relevant academic and social information about pupils to plan the next stage of learning.