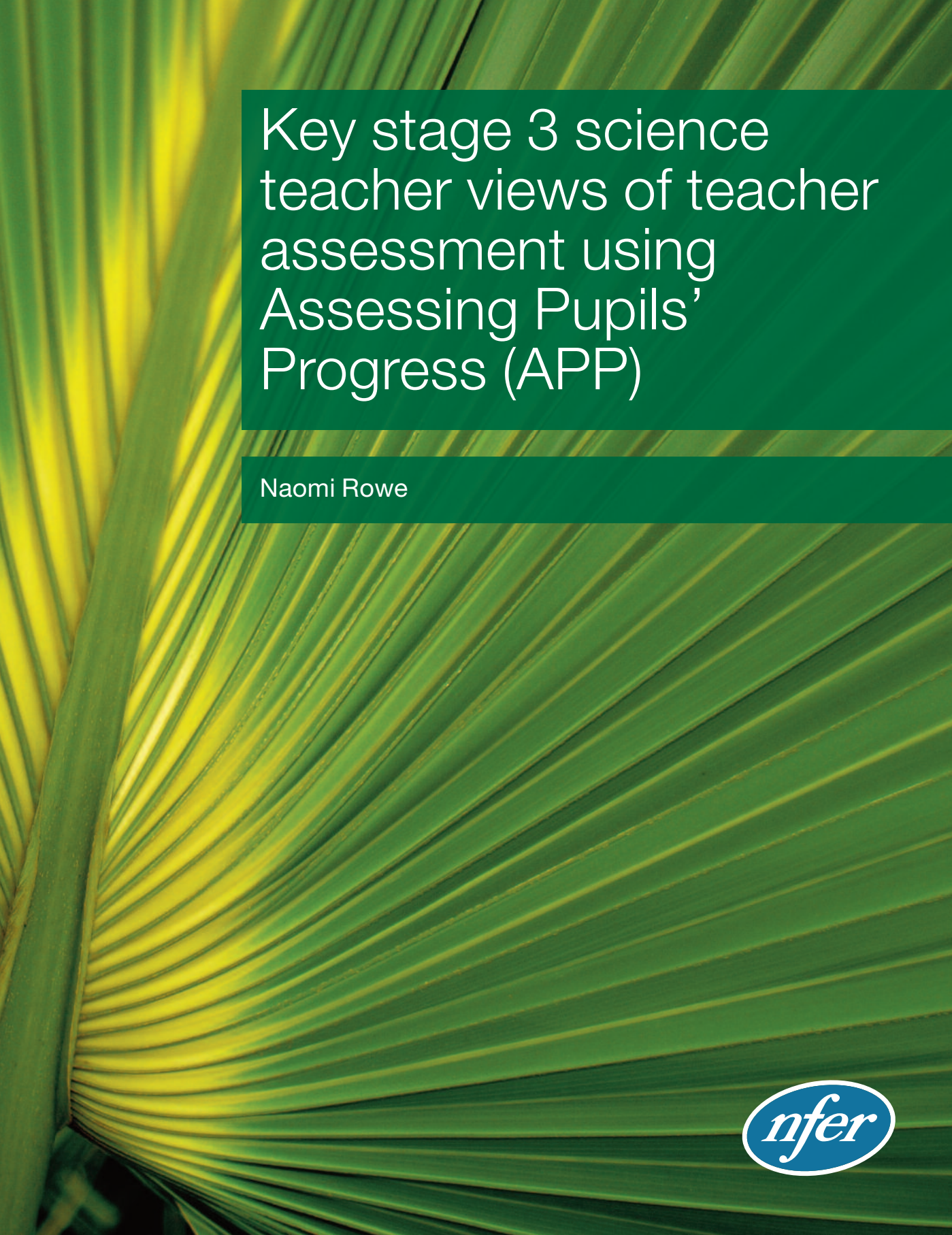

Key stage 3 science teacher views of teacher assessment using Assessing Pupils' Progress (APP)

Naomi Rowe

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How to cite this publication:
Rowe, N. (2010). *Key stage 3 science teacher views of teacher assessment using Assessing Pupils' Progress (APP)*. Slough: NFER.

Published in November 2010 by the
National Foundation for Educational Research,
The Mere, Upton Park, Slough, Berkshire SL1 2DQ
www.nfer.ac.uk

ISBN 978 1 906792 69 5

Contents

1 Project aims

This project was a follow-up to an NFER-funded project that investigated the introduction and implementation of Assessing Pupils' Progress (APP) in key stage 3 science. This first project ran from April 2009 to February 2010, following the introduction of APP in January 2009, and reported the findings from two online questionnaires (questionnaire 1 in May 2009 and questionnaire 2 in September 2009) sent to all local authority (LA) science consultants.

The overall purpose of this follow-up research project was to find out key stage 3 science teachers' perceptions of the introduction of APP, and how APP has been embedded into practice during its first 12–18 months. The project also aimed to find out how teachers perceive the future of APP and its possible impact on teaching and learning. Where appropriate, the findings from the teacher questionnaire are compared with the findings from the LA science consultant questionnaires.

Data was collected by means of an online questionnaire completed by key stage 3 science teachers in June and July 2010.

The aim was to answer the following research questions:

- What proportion of schools is implementing APP in key stage 3 science?
- How is APP being implemented in schools?
- How have pupils responded to APP in key stage 3 science?
- What do teachers perceive to be the advantages and disadvantages of the approach to science assessment exemplified in APP?
- Are there any remaining barriers to the implementation of APP in science?
- What do teachers perceive the impact of APP to be?
- What forms of moderation are teachers using?
- What support materials are teachers using?
- How effective have the materials been?
- Are there any further support materials related to APP in key stage 3 science that teachers require?

2 Introduction

2.1 What is Assessing Pupils' Progress (APP)?

The previous Labour government planned to invest £150 million over three years (2008–2011) to help schools in England take a strategic approach to classroom assessment, with the aim of securing consistent good practice. The government saw APP as a way of reliably linking National Curriculum levels to effective classroom day-to-day assessment.

APP is a structured approach designed to strengthen classroom assessment, resulting in a clear profile of pupils' achievements across a whole subject to inform and shape future planning and target setting. APP aims to enable teachers to:

- use diagnostic information about pupils' strengths and weaknesses to improve teaching, learning and rates of pupils' progress
- track pupils' progress over a key stage or longer.

The APP approach particularly supports periodic assessment, when teachers sum up progress over the medium term and adjust their curriculum planning. It also aims to provide support for day-to-day assessment and at transitional points between year groups, schools and phases. These three linked aspects of assessment are summed up in The Assessment for Learning Strategy (DCSF, 2008).

The view is that, through using APP materials, 'teachers can make more consistent level-related judgements in all National Curriculum subjects' (DCSF, 2009a, p.3). APP aims to put the value back into teacher assessments so that teachers are always considered professionals. It also aims to have common assessment criteria across key stages.

2.2 Principles of APP

APP is a method of building up teachers' assessment judgements of National Curriculum levels by means of sub-categories known as assessment focuses (AFs). It supports planning for progression in learning, and is intended to help teachers to develop their skills and judgements in assessing pupils' progress. APP should be based on a wide range of evidence, personalised, and integrated into teaching and learning. It should yield both formative and summative information that feeds into curriculum planning (identifying gaps in teaching) and personalised learning (gaps in pupil understanding).

2.3 APP resources

The National Strategies and the Qualifications and Curriculum Development Agency (QCDA), formerly the Qualifications and Curriculum Authority (QCA), have produced a range of resources to support LA science consultants and teachers implementing APP in key stage 3 science.

- *Assessing Pupils' Progress in secondary science at key stage 3: Teachers' handbook* (DCSF, 2009a) explains the school context for assessment, and introduces APP as a tool for periodic assessment.
- *Assessing Pupils' Progress in secondary science at key stage 3: Standards files* (DCSF, 2009b) aims to help science departments reach consistent and reliable judgements about National Curriculum levels in science and provide exemplifications of national standards.
- *Assessing Pupils' Progress in secondary science at key stage 3: Assessment guidelines* (DCSF, 2009c) sets out level-related APP assessment criteria for science. These are available in two formats: an A3 assessment guidance poster, covering levels 3 to 8, and a set in A4 covering two National Curriculum levels on each sheet.
- *Assessing Pupils' Progress (APP) guidance for senior leaders* (DCSF, 2009d) contains additional support for departments implementing the APP approach.

2.4 Timescale and roll-out

APP in science at key stage 3 was launched by the National Strategies in January 2009. Prior to this, there had been a two-year trial period (2007–2008) during which eight LAs and 39 schools were involved in a pilot. As part of the APP roll-out, the plan was for LA secondary science consultants to deliver the APP science training materials to a lead teacher from each school implementing APP in England (this is not all schools as APP is non-statutory). The selected lead teacher then used a variety of teaching techniques and activities to trial APP during the spring and summer terms in 2009. In September 2009 those schools that opted to introduce APP were expected to thoroughly embed it into their year 7 science curriculum, with the view that by 2011 all teachers of science in key stage 3 will be using APP.

2.5 APP, science and assessment

The previous Programme of Study (PoS), introduced in 1999, was content based and, while some science specialists saw this as beneficial, others viewed it as too prescriptive. Generally, it was felt that the prescriptive nature limited how flexibly science could be taught in the classroom. In order to rectify this, a new PoS was introduced in September 2008, to be taught to the new year 7 intake from that year onwards. The new PoS in science aims to provide:

- a curriculum which is broader and more relevant to pupils at key stage 3
- a better balance between content and scientific processes, or How Science Works (HSW), because the PoS covers skills development: explanations, argument and decisions, and practical and enquiry skills
- less prescriptive range and content statements
- greater flexibility for teachers.

The intention of the new curriculum is that the theories underpinning the study of science and HSW are taught through the key concepts and key processes set out in the new PoS. This is where the link to APP becomes obvious since these two areas are skills based. APP is intended to support the assessment of key concepts and key processes and, ultimately, the development of science-based skills. Harden (2009, p.26) said: ‘The more HSW opportunities on offer, the more opportunities to gather the evidence will be found.’

APP is a new approach to assessment as it focuses on skills rather than being content driven. It aims to provide a structured approach to teachers' periodic assessments in science. The range and content sections of the PoS are not explicitly assessed through APP. However, the Framework for Secondary Science (with strands of development that describe progression in learning and set out a minimum expectation for the progression in learning of most pupils) suggests that the range and content sections of the new PoS should be treated as contexts for defining the knowledge to be acquired, and developing knowledge, skills and understanding of HSW (and, therefore, APP).

The APP assessment criteria 'illustrate the key characteristics of pupils' performance, identifying the things that they say and do that indicate achievement at a particular National Curriculum level in science' (Slade, 2009, p.10). Science is split into five assessment focuses (AF). Criteria are set for each level within each AF. The AFs are process based, assessing skills that can take their content from any part of the science curriculum. These are defined in Box 2.1.

Box 2.1 Assessment focuses

AF1: thinking scientifically. This is concerned with how models or analogies can be used to develop and strengthen explanations, and aims to develop pupils' evaluation skills. At the highest levels, this AF requires pupils to analyse how new ideas and theories are challenged by the emergence of further evidence.

AF2: understanding the applications and implications of science. This looks at the relationships between the application of scientific ideas and developments, and how they impact on individuals, society and the world. This AF also covers the ethical and moral consequences of technological developments. In addition, it includes the aspects of science that can be used within particular jobs or roles.

AF3: communicating and collaborating in science. This requires pupils to develop skills to distinguish between opinion and evidence in contexts related to science, and to use evidence to support or challenge scientific arguments.

It aims to develop pupils' skills in choosing appropriate methods to communicate qualitative and quantitative data. It also develops pupils' understanding of the advantages of collaborative working in science.

AF4: using investigative approaches. This applies scientific knowledge and understanding to the investigative approaches used to carry out safe practical work in science, and to collect reliable and valid data.

AF5: working critically with evidence. This is concerned with how pupils analyse and interpret data to reach scientific conclusions based on evidence. It also develops pupils' evaluation skills of the methods used and their limitations.

Source: Slade (2009, p.10) and DCSF (2009a).

3 Main findings

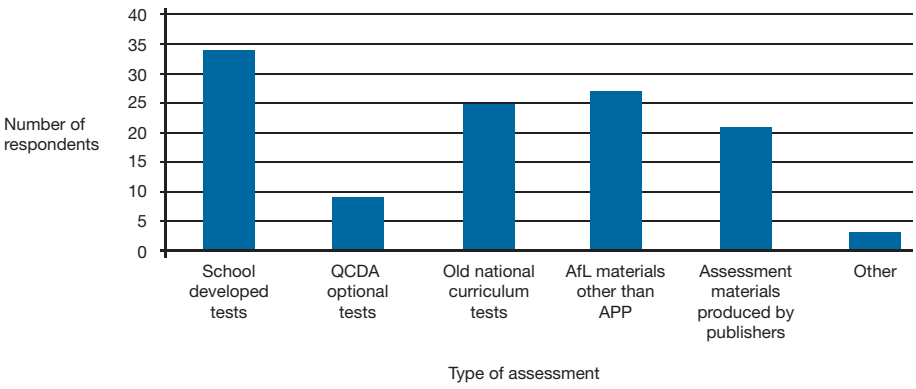
Online questionnaires were completed by 286 science teachers. Of these, 282 respondents (99 per cent) indicated they taught key stage 3 science, with the majority also teaching key stage 4 science (92 per cent). More details about the respondents are provided in Appendix 1.

3.1 Science teachers and APP

Of the 286 teachers who completed the questionnaire, 233 (81 per cent) were using APP to assess pupils. This high level of participation may have been due to the specific interests of the science teachers who responded to the survey. Teachers with a particularly supportive or, indeed, negative view of APP may have been more likely to respond.

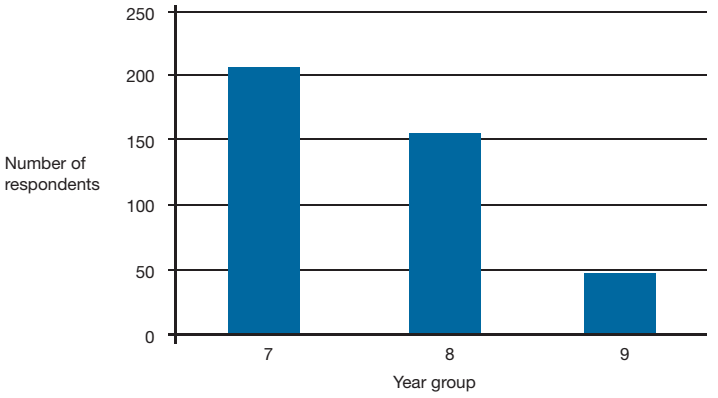
Fifty-three respondents (19 per cent) indicated that their school had opted not to incorporate APP into key stage 3 science to assess pupils. The most common method being used to assess pupils in these schools were school-developed tests (64 per cent), followed by Assessment for Learning (AfL) materials other than APP (51 per cent) and previous National Curriculum tests (47 per cent). These results are shown in Figure 3.1. Respondents could select more than one option.

Figure 3.1 Other types of assessment being used in schools not using APP



From the 233 teachers who said they were using APP to assess pupils in science, 204 (88 per cent) specified that they were using it with their year 7 pupils, and 157 (67 per cent) were using it with their year 8 pupils. Only 19 per cent were using APP to assess their year 9 pupils (Figure 3.2). This is not surprising given that when APP was introduced in January 2009 it was suggested that schools use a phased approach to aid the introduction into schools, starting with the then year 7 pupils (who would be in year 8 in 2009–10).

Figure 3.2 Year groups in which APP is being used to assess pupils



Of the teachers who completed the questionnaire, the majority were using APP to assess all the pupils in the classes they taught. When APP was first introduced, teachers were told that they would not need to provide evidence of work for all pupils, and there would be no requirement for all pupils' portfolios of work. Rather, a sample of pupils' work from a class would be sufficient. However, the majority of teachers reported keeping evidence and portfolios of work for all pupils.

As with the report of the outcomes of the LA science consultants' survey, the next section is broken down into four key areas: implications for science, assessment, manageability and support. Percentages are of the 233 responding teachers who are using APP.

3.2 Implications for science

A new National Curriculum at key stage 3 was introduced in September 2008, to be taught to the new year 7 intake from that year onwards. In science, the previous PoS (introduced in 1999) was content based and viewed by some science specialists as too prescriptive and 'overbearing' (Oates, 2009). It was believed by some that this limited teachers' flexibility in how they taught science in the classroom and reduced pupil engagement. The new PoS in science aimed to provide:

- a curriculum which is broader and more relevant to pupils at key stage 3
- a better balance between content and scientific processes or HSW
- less prescriptive range and content statements.

The intention was that the new PoS would give teachers greater flexibility.

From the responses to the teacher questionnaires, it would seem that they support the findings from the LA science consultant questionnaires. Teachers feel that some of the approaches to the new PoS, facilitated by APP, are becoming evident in teaching and learning. When asked what they thought were the positive features of APP in key stage 3 science (question 8, appendix 2), of teachers using APP 157 (67 per cent) selected 'supports How Science Works', which is from the Framework for Secondary Science. The framework sets out the learning objectives of the knowledge, skills and understanding that need to be acquired in science across a period of time. HSW is one of five strands of science to be taught across year 7 to year 11. Furthermore, 131 teachers selected the 'skills-based nature of APP' as a positive, a response that had been highlighted by a large proportion of LA science consultants. Seventy-four teachers (32 per cent) opted for 'allows greater creativity in how you teach science', which again reflected the qualitative findings from the LA science consultants' survey.

When teachers were asked what they perceived the impact of APP to be in the classroom (question 20, appendix 2), 107 (46 per cent) selected the option 'improve pupils' scientific understanding'. This was expanded on by some of the teachers selecting 'other' who specified that APP had the potential to impact on pupils' skills in areas such as communication and literacy. Comments such as 'improve understanding of how to structure

work or form an argument' and 'giving pupils skills for lifelong learning', are typical examples. Ninety-nine teachers (42 per cent) selected 'raise pupil attainment', and 101 (43 per cent) selected 'engage pupils' showing an appreciation for the potential benefits of incorporating APP into the assessment of key stage 3 science. In contrast, a proportion of the 11 per cent of those who selected 'other' stated that APP would not have any impact in the classroom, with comments such as 'no impact, total waste of time' and 'there is no positive impact' showing some teachers' strength of feeling.

When surveying the LA science consultants, it was suggested that the non-statutory nature of APP and the lower status of key stage 3, due to the abolition of the science National Curriculum tests, were acting as potential barriers to the implementation of APP in science in this key stage. This was investigated in this questionnaire, and it was found that 51 teachers (22 per cent) felt that the non-statutory nature of APP was a negative influence on its implementation. In addition, 92 teachers (39 per cent) indicated that GCSE and A level take priority over key stage 3 and this is a barrier inhibiting the use of APP in their school.

Finally, 95 teachers (41 per cent) deemed APP as 'yet another initiative' and others felt that they were already inundated with many other initiatives within the science curriculum (103 teachers or 44 per cent). There were a few comments made by teachers in relation to this, and the strength of feeling was evident:

> *It would be nice if they could not insist on new strategies at every key stage – an unstable curriculum is the biggest barrier to effective teaching and learning of science.*

> *Disillusioned teachers – fed up of one change after another. No big picture thinking.*

> *APP is an excellent system, but we are unable to make best progress in implementing it due to changes at KS4 and KS5 demanding attention too.*

Teachers expressed a wish for stability in the science curriculum.

3.3 Assessment

APP is a new approach to assessment focusing on skills, rather than being content driven, and using evidence collected as part of teaching and learning to reach decisions about pupils' progress. Teachers are expected to build assessment into their day-to-day teaching, ensuring the learning intentions are clear, giving focused feedback and encouraging students to engage in peer- and self-assessment. These approaches are often described as AfL. The information gained through these day-to-day interactions is summarised periodically using the APP assessment focuses (AFs), which allow teachers to track pupils' progress against the National Curriculum levels and to tailor their curriculum planning. In this way, APP aims to provide a structured approach to teachers' periodic assessment in science. APP 'involves generating evidence of progress through effective teaching and learning and then stepping back periodically to review pupils' achievement in relation to National Curriculum levels' (DCSF, 2009a, p.3).

In periodic assessment, consistent judgements become important. It is essential to ensure the levels are interpreted in the same way across teachers, schools and LAs. For this purpose, processes of moderation are required, providing opportunities to compare and confirm judgements against the APP criteria.

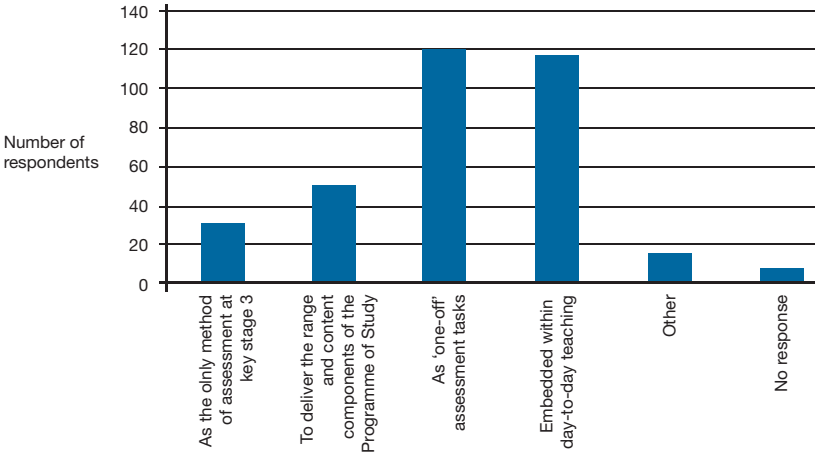
By being used in this way, assessment of pupils' work using APP is considered to have the potential to:

- increase the consistency and reliability of teacher assessment
- link day-to-day and periodic approaches to assessment
- provide high quality evidence to inform next steps in pupils' learning and reporting on pupils' progress
- integrate assessment into planning for progression
- provide a National Curriculum attainment target level when needed from an informed, holistic evaluation of progress against APP assessment criteria (DCSF, 2009a, p.3).

An emerging theme from the earlier survey of LA science consultants was that, where there was evidence of teachers using APP, it was being incorpo-

rated as a once-a-term assessment task or activity (24 per cent, questionnaire 2). When the LA science consultant surveys were live (May and September 2009) it seemed that schools were using APP periodically, meeting one of the aims of APP: to strengthen periodic assessment. However, views were mixed concerning day-to-day practice being used as evidence for periodic assessment. Thirteen per cent of LA science consultants were concerned that APP would become a 'bolt-on' rather than being integrated into the assessment of the science curriculum. Hence, in the teacher questionnaire, teachers were asked how they were using APP in key stage 3 science (question 17, appendix 2). Teachers could select multiple options. Almost equal numbers of teachers were using APP as 'one-off assessment tasks' (121 teachers or 52 per cent) or had APP 'embedded within day-to-day teaching' (117 teachers or 50 per cent), as detailed in Figure 3.3.

Figure 3.3 How APP is being used in key stage 3 science



This does suggest that the concerns raised by the LA consultants are reflected in the approaches adopted by some schools.

When LA science consultants were asked what they thought the positive features of APP were, a large number of comments (43 per cent in questionnaire 1, and 67 per cent in questionnaire 2) were centred on the potential positive effect on teaching and learning in schools. They particularly focused on how APP contributed to the re-professionalism of teachers; had the potential to increase teacher confidence; promoted AfL; made the next steps in a pupil's learning clearer to both pupils and their teachers; and how it produced a consistent language for teachers to use when assessing pupils' work and when working within departments, and across departments, key stages and schools. The same question was asked in the teacher questionnaire (question 8, appendix 2). The teachers were given 18 options from which they could select as many as they wished. The most popular options were:

- 'Is a useful tool to aid giving feedback to pupils' – selected by 156 teachers (67 per cent)
- 'Provides a useful link to Assessment for Learning (AfL)' – selected by 136 teachers (58 per cent)
- 'Promotes AfL' – selected by 144 teachers (62 per cent)
- 'Has put the trust back into teacher judgements' – selected by 92 teachers (39 per cent).

These results reflect the findings from the LA science consultant questionnaires. However, a smaller percentage of teachers than science consultants felt that APP created a consistent use of language. Sixty-nine teachers (30 per cent) did select 'consistent use of language within the science department' as a positive feature. However, only 32 teachers (14 per cent) selected 'consistent use of language across key stages', and only 19 teachers (eight per cent) selected 'consistent use of language across departments in school'. This indicates that there is a slight difference in opinion between science teachers and LA science consultants with regard to the potential benefits of APP.

Teachers were asked whether or not they had shared any aspect of APP in key stage 3 science with their pupils (question 18, appendix 2). A total of 168 teachers (72 per cent) answered 'yes' and 63 (27 per cent) said 'no' (two teachers did not answer this question). When teachers answered 'yes' they were asked to provide details of exactly what they had shared with their pupils.

The majority indicated that they had given pupils the A3 APP grid to stick into the back of their books or to attach to their work. This is then used either by the pupils, who highlight the grid when they achieve a particular level in an AF strand, or by their teacher who does the same. A much smaller number of teachers developed their own 'pupil-speak' versions of the APP grid or used level ladders produced by publishers.

Those who answered 'yes' were then asked to describe how the pupils had responded to APP. The majority of comments were positive and included statements such as:

> *They* [the pupils] *like having ownership of their attainment and seem much more equipped to self/peer assess. On the whole pupils like APP, especially to be given the criteria they need to progress and improve.*

> *Positively – feel that it is harder, but more achievable because they know what the next steps are, enjoy the skills focus.*

There were also negative comments. For example:

> *My students generally responded negatively to APP. They find the tasks far too abstract and literacy based, the assessment criteria take up whole lessons to explain to them and detract away from the actual doing of science.*

Generally, the overall picture is very mixed. The fact that some pupils have responded very positively is surprising, especially given that no aspect of APP was ever intended to be given to pupils. On its introduction, it was intended to be a tool for teachers. However, it is obvious that teachers feel it is appropriate to share the APP and the grid with pupils. It would seem that the APP grid is being used to provide feedback and to help pupils see the next steps in their learning – a teaching strategy often used in primary schools.

In relation to APP assessment, a number of negatives were highlighted. Teachers were asked what they considered were APP's negative features, and were given 16 options (question 9 in appendix 1), and they could choose as many as they deemed appropriate. Of the eight most frequently selected options, five related to the APP statements, as follows:

- ‘Number of APP statements’ – selected by 157 teachers (67 per cent)
- ‘Language used in APP grid’ – selected by 184 teachers (79 per cent)
- ‘The APP statements are too open to interpretation’ – selected by 106 teachers (45 per cent)
- ‘Difficulty in understanding the statements and how they relate to assessing pupils’ – selected by 113 teachers (48 per cent)
- ‘The differences between adjacent levels are hard to distinguish’ – selected by 86 teachers (37 per cent).

This issue was also highlighted by 25 per cent of LA consultants in questionnaire 1, and 40 per cent in questionnaire 2. Given that in total there are 96 statements split into five assessment focuses and National Curriculum levels 3 to 8, this is not surprising. In relation to this, a number of teachers expressed concern about how consistently AFs are being used. One teacher described APP as a ‘system open to abuse’ and another said APP is ‘very subjective – there are huge issues with consistency between teachers’. This suggests that doubts remain in some quarters about the soundness of APP judgements.

3.4 Manageability

Managing APP implementation is an important consideration for schools. The Department for Children, Schools and Families said:

> *Embedding APP practice should not be seen as an end in itself. Rather, the department should be working on reviewing and strengthening all aspects of teaching and learning, using the full range of resources available.*
>
> (DCSF, 2009a, p.10).

The APP handbook suggests schools take a seven-step approach to implementing APP, as shown in Box 3.1 and detailed in appendix 3.

Box 3.1 Seven steps of implementation of APP

Step 1: over a period of time, decide on the outcomes to be assessed and generate evidence of pupils' attainment from day-to-day teaching and learning.

Step 2: review an appropriate range of evidence.

Step 3: select the appropriate assessment guidelines sheet.

Step 4: highlight assessment criteria for which there is evidence.

Step 5: use the pupil's developing profile of learning to decide upon a level and sub-level.

Step 6: moderate assessments.

Step 7: make any necessary adjustments required to planning, teaching and intervention.

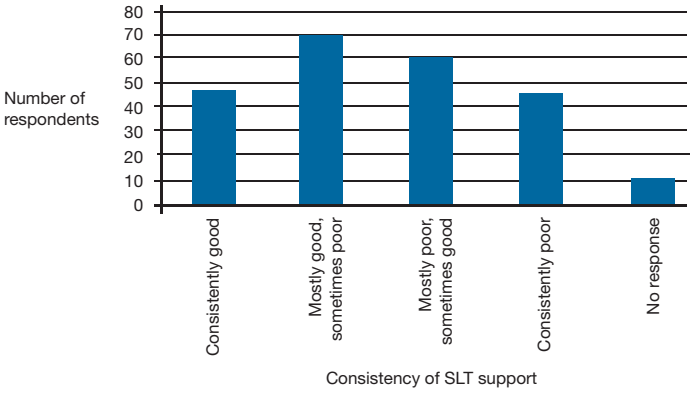
Source: DCSF (2009a, p.7).

When teachers were asked about the negative features of APP (question 9, appendix 2), 158 (68 per cent) selected 'increased workload'. This was then reflected in the question asked about the remaining barriers inhibiting the use of APP (question 16, appendix 2), where 195 teachers (84 per cent) chose 'time' as the greatest barrier, followed by 175 (75 per cent) who selected 'workload'. A further 113 (48 per cent) also selected 'training'. These findings exactly mirror those from the LA science consultant questionnaires where 'time', or rather a lack of time, was by far the largest potential barrier to implementing APP. The LA science consultants highlighted this issue by describing how teachers were not being given enough time to prepare resources and not enough time was being put aside to train teachers within schools.

All of these issues are linked to the support provided by the senior leadership teams (SLTs) in schools. Where SLTs are engaged, it could be assumed that time for teachers to train and develop resources is being made available. But, in schools where this is not the case, sufficient time is not being made available. Therefore, the teacher questionnaire included a question about how supportive the science teachers felt their school SLT had been regarding

APP introduction and implementation (question 12a and b, appendix 2). The results are shown in Figure 3.4.

Figure 3.4 Consistency of SLT support for APP



As evident from the graph, there is a mixed picture in the schools completing the survey. In some, the support is clearly very good whereas, in others, it is patchy. In many schools, teachers reported that the SLT simply has not been involved and has left science departments to 'get on with things'. Typical comments include:

They love the idea of what we are doing but haven't actually taken the time to look at it.

I see no actual involvement from senior leadership outside our head of department – I am not convinced our SLT know it is going on.

As a result of there being very little involvement from the majority of SLTs, teachers were explicit in saying:

No time has been given towards the preparation of materials, delivery of training, etc.

We have had no extra time to develop or assess the work as a department, which has meant several extra hours work for each APP activity on top of normal workload.

In the LA science consultant questionnaires, a negative feature identified by 14 per cent of respondents in questionnaire 1. and 27 per cent of respondents

in questionnaire 2, was a concern about recording and monitoring pupil progress. LA consultants stated:

Lack of quality guidance on how to record achievement efficiently.

Recording for a large number of pupils is seen as an issue.

At the time of the earlier LA consultant questionnaires, it was apparent that there was a lack of clarity about recording and monitoring pupil progress amongst LA consultants and teachers, and it was causing a certain degree of anxiety. These concerns were also evident in the teacher questionnaire.

When teachers were asked about the negative features of APP, a large number made additional comments about the issue of recording and monitoring pupil progress:

Recording is extremely time-consuming both within the classroom and outside.

Tracking and recording for pupils is difficult.

A question was included about how teachers were recording and monitoring pupil progress using APP (question 23, appendix 2). The vast majority were using a spreadsheet to record pupil achievement in particular AFs, highlighting the APP grid, or doing a combination of both. A smaller number also said they were keeping portfolios or folders of levelled pupils work for all the pupils with whom they were using APP as an assessment tool.

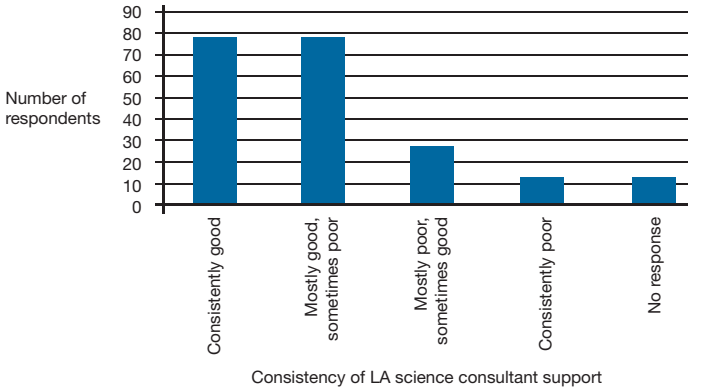
3.5 Support

The National Strategies supported the implementation of APP in key stage 3 science. LA science consultants were initially trained in how to use APP by strategy consultants. The LA science consultants then trained teachers and helped to implement APP in schools. From teachers' perspectives (question 10, appendix 2), the two most common methods of support provided by the LA science consultants were 'meetings with key stage 3 science consultant/coordinator at school' (140 teachers or 60 per cent), and 'meetings with Head of Department' (125 teachers or 54 per cent).

This differs from the findings of the LA science consultants survey, which found that the LA consultant running training sessions for the whole science department was the most common method of support rather than meetings with key stage 3 science coordinators in schools.

Sixteen teachers (seven per cent) reported that they had not received any support from a LA science consultant. The teachers were then asked (question 11a and b, appendix 2) to indicate how consistent the support from their LA consultant had been (the 16 respondents who indicated there had been no support, did not answer this question). Figure 3.5 shows the results for this question.

Figure 3.5 Consistency of LA science consultant support



As evident in Figure 4.8, there is an equal split between 'consistently good' and 'mostly good, sometimes poor'. When teachers were asked to elaborate on their choices with regards to the support they have received, it became clear that this was very dependent on the role they had within the science department. If, for example, the respondent was a key stage 3 coordinator in a school then their contact with the LA consultant could possibly be more than a classroom teacher without this responsibility.

A few comments highlighted how the support received had been 'consistently good'. These included:

The support has been excellent on every level.

She [the LA consultant] *has been fantastic help from the start, showing excellent knowledge of APP, consistently generating/giving new ideas and ways to move forward.*

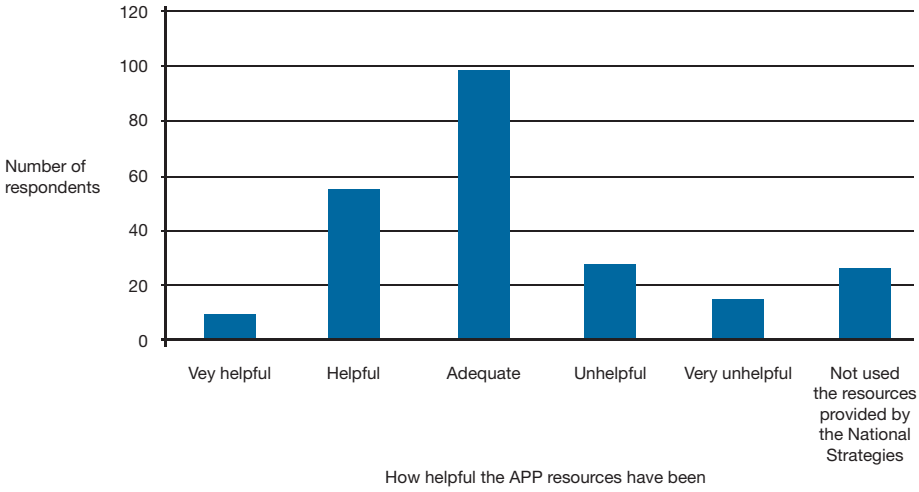
However, there were also a few negative comments such as:

Been left to get on with it ourselves.

Sometimes mixed messages, [for example], *we can change the language for students, which changed to we cannot change the language for students.*

As mentioned previously the National Strategies were responsible for the initial roll-out of APP. In order to support APP, the National Strategies and QCDA produced a range of resources to support LA science consultants and teachers when implementing APP in key stage 3 science, as discussed in the introduction. In this questionnaire, teachers were asked to indicate how helpful they found the APP resources and to explain their choice (question 13a and b, appendix 2). The results are shown in Figure 3.6.

Figure 3.6 Helpfulness of the APP resources provided by the National Strategies



Almost a half (99 teachers or 42 per cent) found the materials adequate, and just under a quarter felt the resources were helpful. When respondents were asked to explain their choice, the main reason for the resources being described as 'adequate' was the volume of information in the materials. Typical comments included:

They contain too much information which take an age to look through and digest.

They are too long and complicated.

It also became apparent that teachers would have liked to have seen more examples of pupils' work and how it was levelled using APP. A number of teachers provided comments such as:

Exemplars showing how they have been marked and annotated would be helpful.

Insufficient examples [of pupils' work] *made available.*

However, what was most surprising was the fact that 26 teachers (11 per cent) had not used the resources at all. Reasons given for this included:

Was not aware such things existed.

Only the head of department has a copy.

My workload is unbelievable – how would I have time for another initiative?

Teachers were also asked what other resources they were using in addition to the APP materials provided by the National Strategies (question 14, appendix 1). The most common published resource was *Badger – APP in science the level assessed approach* by Dr Mark Evans and Andrew Grevatt (30 per cent of respondents), followed by *Exploring Science: How science works/Go Science!* by Pearson (19 per cent of respondents). Twenty-eight per cent of teachers said they were developing or have developed their own materials.

When asked if they needed further APP support materials (question 15, appendix 2), there was an equal split between those who said 'yes' (40 per cent) and 'no' (41 per cent). Of those who said 'yes', the main requirement was more examples of how to use APP to assign levels to pupils and their work (39 per cent of respondents). Comments included:

Ideas on what to do and to assess them, exemplar materials to compare with.

A big range and variety of examples of pupils' work and how it is levelled.

A further 21 per cent of respondents also felt it would be beneficial to have a pupil-speak/friendly version on the grid.

At the time of the LA science consultant questionnaires being live the modes of moderation of APP in key stage 3 science had yet to be fully established. Despite this, the most common modes of moderation being promoted within LAs were departmental moderation of pupils' work using APP (55 per cent in questionnaire 1, and 48 per cent in questionnaire 2), and promoting or developing network groups with schools in the same LA (45 per cent in questionnaire 1, and 30 per cent in questionnaire 2).

The findings from the teacher questionnaire (question 21, appendix 2) show 156 teachers (67 per cent) were involved in inter-department moderation. However, only 19 (8 per cent) said they were involved in moderation with another school, and only 40 (17 per cent) were involved in moderation with other schools in their LA. Consequently, this is a slightly different picture from that in the LA science consultants' questionnaires. The main reason for this is likely to be teachers not having the time to meet with teachers from other schools.

In the findings from both the LA science consultant questionnaires, seven per cent of respondents presented concerns about external moderation. One said: 'It would be better if it was clearer as to what form of external moderation or national sampling was to be done'. In the teacher questionnaire, teachers were explicitly asked if they felt external moderation of APP in key stage 3 science would be beneficial (question 22, appendix 2). Fifty-nine (25 per cent) said 'yes'; 106 (45 per cent) said 'no'; and 68 (29 per cent) were 'unsure'. When asked to explain their choices, the views were quite mixed.

Some teachers could see the benefit of external moderation in terms of improving consistency within and across schools. Comments included:

It would allow a consistent approach to assessment.

To ensure that pupils from different schools of the same level are graded fairly'

However, the majority of teachers expressed concerns about how external moderation could actually be achieved. This is because APP seems to have been implemented and carried out differently in different schools, giving rise to variations that could not be moderated consistently. Comments included:

Lots of different approaches used towards APP so far by other schools in my area.

Another school may teach in a different way using different or alternative language – it's not consistent enough to do this.

Of those who did not want external moderation, the main reason given was the amount of time required for organising and participating in it. Teachers felt that external moderation would mean 'yet more meetings to attend and more work to do' and 'would increase pressure on teaching staff'.

4 Conclusions and recommendations

From the research carried out during the course of this project and the previous LA science consultant questionnaires, the picture concerning APP is very mixed. Where teachers and schools have adopted and successfully embedded APP, the findings are positive, and it is clearly seen as making a positive contribution to science teaching and learning. However, much confusion remains and some teachers are negative. Whether teachers deem APP to be of benefit or not, what they are crying out for is some stability in the science curriculum across all key stages!

The majority of teachers who completed the questionnaire were using APP to assess pupils. However, this may not be a fully representative finding as teachers who responded to the questionnaire may be either supportive or have a very negative view. Less than a quarter of all respondents indicated that their school had opted not to incorporate APP into key stage 3 science for assessing pupils. These schools deploy a range of other non-statutory assessment strategies.

The majority of science teachers who were using APP as an assessment tool were doing so with their year 7 and year 8 pupils, and it would appear that schools have opted for a phased approach to implementation. What was surprising to find was that where pupils were being assessed using APP, teachers were carrying it out with whole classes rather than with a sample of pupils, as suggested when APP was introduced.

This section will now be broken down into the same sections as the main findings section of the report, and will consist of implications for science, assessment, manageability and support.

4.1 Implications for science

As a result of the introduction of the new key stage 3 PoS in 2008, the science National Curriculum in England has been streamlined and become more focused on developing pupils' skills through HSW. Responses to the

questionnaire suggest that use of APP can aid the development of HSW at key stage 3, supporting the findings from the LA science consultant questionnaires. Furthermore, teachers highlighted the 'skills-based nature of APP' as a positive, and the potential for APP to allow greater creativity in how science is taught, emulating the qualitative findings from the NFER's earlier survey.

Teachers also recognised the potential impact APP could have on the teaching and learning of science. A large number felt that APP could improve pupils' scientific understanding; raise pupil attainment; and have the potential to engage pupils. There is an overall appreciation of the potential benefits of incorporating APP into key stage 3 science.

Responses to the LA questionnaires suggested that key stage 3's non-statutory nature and lower status were acting as barriers to APP's implementation. This was investigated further in the teacher questionnaire. Just under a quarter of teachers agreed. Some teachers indicated that the main barrier is the fact that GCSE and A level take priority over key stage 3 science. Finally, a large number of teachers expressed a desire for some stability across the science curriculum – whether or not this includes APP.

This report recommends:

- the positive link between APP and HSW should continue to be supported and promoted
- the high profile of APP should be maintained – a majority of schools appear to have adopted this form of assessment
- the importance of science to pupils, parents, SLTs and policy-makers should continue to be highlighted.

4.2 Assessment

There are a number of positives concerning APP in relation to assessment, in both the teacher questionnaire and the LA questionnaires. Most notably was the way APP can be seen to support teachers' classroom assessments in a structured manner. This contributes to the re-professionalisation of teachers, in terms of putting the trust back into their professional judgement, and

increases their confidence. The use of APP also supports teaching and learning by promoting AfL in the classroom, and is a useful tool for giving pupils feedback and information about the next steps in their learning.

The majority of teachers were found to be sharing APP with their pupils, a surprising finding given that APP was developed as an assessment tool for teachers. Most commonly, teachers shared the A3 APP grid, although pupils' reported responses were mixed. It would seem the APP grid is being used to provide feedback and to help pupils see the next steps in their learning.

An emerging theme from the LA science consultants was that, where there was evidence of teachers using APP, it was being incorporated as a once-a-term assessment task or activity. Concerns were raised about APP becoming a 'bolt-on' assessment rather than embedded within current practices. In this questionnaire, teachers were asked how they were using APP in key stage 3 science. Almost equal numbers were using APP as 'one-off assessment tasks' or had APP 'embedded within day-to-day teaching', suggesting the science consultants' concerns were justified. Potential reasons for these findings relate to the APP criteria, including the number of statements and the complexity of the language used.

This report recommends:

- the provision of more guidance and examples of how to gather evidence from day-to-day assessment which can then be used to inform periodic assessment
- the production of a standardised 'pupil-speak' version of the A3 APP grid for teachers to use with pupils
- the provision of further information and guidance about the use of APP statements and how to assess pupils' work effectively.

4.3 Manageability

The manageability of APP is possibly the largest area of concern highlighted by teachers in the questionnaire. This is a concern shared with the LA science consultants. It would seem that the more support there is in schools from SLTs the easier it is to implement APP. If SLTs are on board with the principles of APP, sufficient time is made available for training teachers and for teachers to develop resources. In those schools where this is not the case, the introduction of APP has the potential to be seen as an increase in teacher workload.

Concerns regarding recording and monitoring of pupils' progress remain. Teachers cited a 'lack of quality guidance on how to record achievement efficiently' as the major problem. The majority of teachers reported using a spreadsheet to record pupil achievement, the APP grid, or a combination of both. Some teachers also said they were keeping portfolios of pupils' work.

This report recommends:

- the provision of more information for SLTs so they have a clearer understanding and appreciation of APP in their schools
- the provision of more guidance for teachers on how to effectively manage implementing APP and this should include examples of good practice.

4.4 Support

Teachers reported that the support they have received from LA science consultants came in the form of the consultant meeting with the school's key stage 3 science coordinator or head of department. A small percentage reported not having received support from their science consultant. Where support was provided, there was an equal split between it being described as 'consistently good' and 'mostly good, sometimes poor'. Variable support provided by SLTs was also reported.

Teachers were also asked to pass comment on the APP resources provided by the National Strategies, which aimed to support the introduction of APP. The majority found the resources adequate. This lukewarm response was mostly attributed to the large volume of materials. It was apparent that teachers

would have liked to see more examples of pupils' work and how it had been assessed using APP.

Most teachers said they had been involved in inter-department moderation of pupils' work using APP. However, relatively few had been involved in moderation with other schools in their LA. This was interesting as a number of LA consultants in the previous questionnaires said that they were developing and promoting network groups amongst the schools in their LA. It is possible that the main reason these network groups have not been successful is that teachers do not have the time to attend such meetings.

Almost half of respondents did not identify any benefit in external moderation. While some teachers could see that the external moderation of pupils' work would improve consistency across schools, a number of issues also presented themselves. These included the time required for such external moderation to take place, the extra pressure that would be placed on teachers, and the fact that APP appears to have been implemented differently in different schools.

This report recommends:

- the provision of further guidance and examples of how to assess pupils using APP
- support for effective moderation in schools.

5 References

Department for Children, Schools and Families (DCSF) (2008). *The Assessment for Learning Strategy*. London: DCSF.

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Department for Children, Schools and Families (DCSF) (2009b). *Assessing Pupils' Progress in Secondary Science at Key Stage 3: Standards Files.* London: DCSF.

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Department for Children, Schools and Families (DCSF) (2009d). *Assessing Pupils' Progress (APP) Guidance for Senior Leaders.* London: DCSF.

Harden, H. (2009). 'APP – implications for curriculum planning', *Education in Science*, no. 233, pp. 26–27.

Oates, T. (2009). 'Missing the point: identifying a well-grounded common core. Comment on trends in the development of the National Curriculum', Cambridge Assessment.

Slade, P. (2009). 'Changes in assessment: reality or illusion? Assessing Pupils' Progress in Science', *Education in Science*, no. 232, pp. 10–11.

Appendix 1: Research methods

An online questionnaire was developed for this project. The questionnaire (see appendix 2) consisted of 23 questions. The questions were based on those asked in the previous NFER survey of LA science consultants and were developed with the help of practising teachers and NFER researchers.

The majority (83 per cent) of the questions asked for a closed response (quantitative),with opportunities for respondents to explain their answers and add additional comment. Where the questions asked for an open response (qualitative), explanation or additional response, these were grouped together and coded so that valid conclusions could be drawn. This was in contrast to the two online questionnaires developed for the LA science consultants, where the majority of questions had an open response format.

Key stage 3 science teachers were surveyed because some had been working with APP since it was introduced in January 2009. The survey ran from 23 June to 16 July 2010.

Obtaining the sample

For this project, a sample of 585 schools was drawn from NFER's Register of Schools, a potential of 1755 teachers (three teachers per school). Prior to contacting schools, an email was sent to 142 LA liaison contacts informing them of the NFER's intention to contact schools. Five schools were withdrawn at this stage. Following this initial email, courtesy letters were sent to the headteachers of the remaining sampled schools. These letters informed them about the project and said they would be contacted again with details of how science teachers could complete the questionnaire online. It also gave them an opportunity to withdraw prior to the survey period commencing, and six schools withdrew at this stage; the reasons for withdrawing are given in Table A1.1.

Table A1.1 Reasons for school withdrawal

Withdrawal reason	Number of schools
Unable to help/No reason given	3
Staff not appropriate	2
School circumstances unsuitable for project needs	1
Total	**6**

Following the initial email to LAs, 574 letters containing the log-in details for three science teachers per school were dispatched to headteachers. They were asked to give their heads of science the log-in details who, in turn, were asked to pass them on to their key stage 3 science teachers. A further three schools withdrew at this stage. By the end of June 2010, 87 questionnaires had been completed. At the beginning of July, 528 reminder letters, along with log-in details, were sent to headteachers. In total, 142 schools completed the online questionnaire. This is summarised in Table A1.2.

Table A1.2 Number of schools included in the sample

Number of schools	
Schools drawn in sample	585
Schools withdrawn by LA	5
Schools sent invitation letter	580
Schools withdrawn at invitation stage	6
Schools sent questionnaire login details to	574
Schools with no reply	392
Schools withdrawn at questionnaire stage	3
Schools completing online questionnaire	142
Schools completing telephone questionnaire	37
Total schools completing questionnaires	**179**

The survey was completed online by teachers between 23 June and 9 July 2010. In the following and final week of the survey, 12 July–16 July 2010, an additional strategy for survey enhancement was adopted. During this period, telephone lists were compiled and emails drafted for schools. In the

first instance, the survey enhancement team contacted schools with no responses, then schools with only one response. Teachers were asked if they had the time to complete the questionnaire over the telephone there and then; if not, an appointment for later in the week was arranged so the telephone questionnaire could be completed. Teachers whose email addresses were collected by the survey enhancement team were also emailed inviting them to a telephone interview and providing details on how to complete the questionnaire online, if they so preferred. The online questionnaire for teachers to complete themselves remained open during the survey enhancement period.

The target for completion of the questionnaire was 351 teachers. A total of 286 teachers completed the questionnaire, which was 81 per cent of the target. Of the 286 respondents, 248 completed the questionnaire online, and 38 completed it via the survey enhancement.

Sample composition

Table A1.3 shows the representativeness of the achieved school sample for this online questionnaire. Chi square tests show that there are no significant differences between the sample and the national population in any category, so no weighting was required.

Table A1.3 Representativeness of the questionnaire sample (schools)

		Sample		School Population (NFER Register of Schools 2009)	
		Count	Valid N%	Count	Valid N%
Region	North	51	28.5%	967	29.1%
	Midlands	55	30.7%	1114	33.6%
	South	73	40.8%	1239	37.3%
LA type	London borough	21	11.7%	424	12.8%
	Metropolitan authorities	39	21.8%	709	21.4%
	English unitary authorities	26	14.5%	632	19.0%
	Counties	93	52.0%	1555	46.8%

Percentage of pupils eligible for free school meals (FSM)

		Sample		School Population (NFER Register of Schools 2009)	
		Count	Valid N%	Count	Valid N%
% pupils eligible for FSM 2008 (5pt scale)	Lowest 20%	20	11.2%	454	13.7%
	2nd lowest 20%	46	25.7%	801	24.1%
	Middle 20%	52	29.1%	814	24.5%
	2nd highest 20%	34	19.0%	677	20.4%
	Highest 20%	27	15.1%	449	13.5%
	Missing	0	0.0%	125	3.8%

Respondents

Figure A1.1 Key stage(s) taught

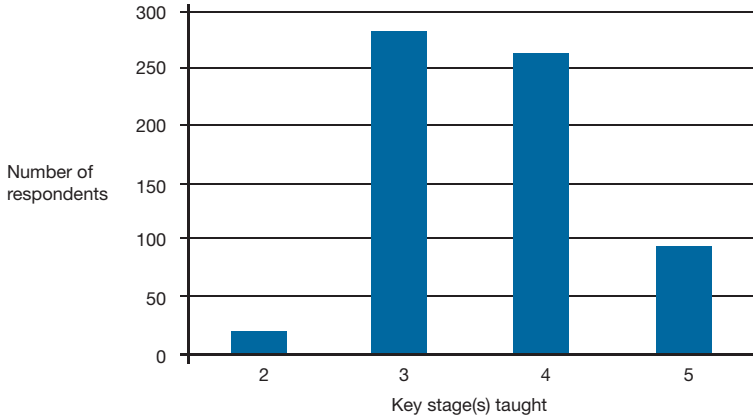
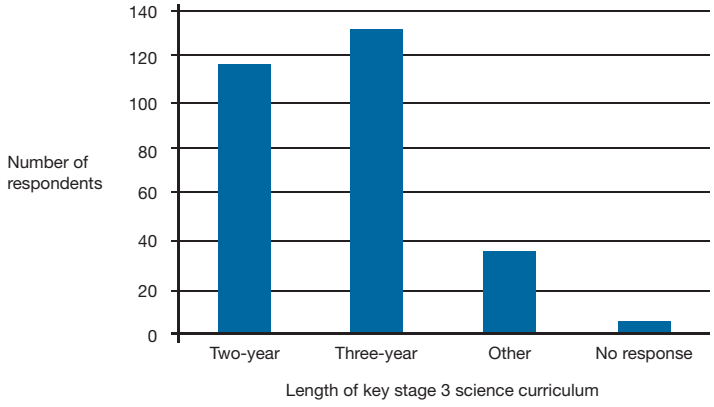


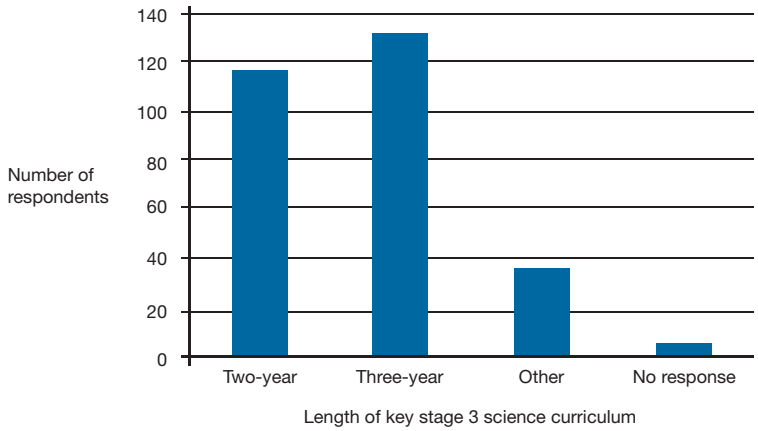
Figure A1.2 shows that just over half of the teachers, who completed the questionnaire, had been teaching between one and ten years.

Figure A1.2 Number of years teaching



When asked if their school had opted for a two- or three-year key stage 3 curriculum in science, there was, roughly, an equal split amongst the respondents (42 per cent and 45 per cent respectively), as shown in Figure A1.3.

Figure A1.3 Length of key stage 3 science curriculum



Twelve per cent of teachers chose the option 'other'. The main reason given in comments (35 per cent) was that the school offered a two-year key stage 3 science curriculum for the most able pupils, and a three-year curriculum for all other pupils. Twenty per cent of those who selected 'other' stated they had a two-and-a-half-year key stage 3 curriculum, with pupils beginning GCSE science in the final half-term of year 9.

Appendix 2: APP in key stage 3 science teacher questionnaire

Please be assured that the questionnaire is completely confidential and will be made anonymous for data collection purposes.

1) For how long have you been teaching science?

Less than 1 year
1–5 years
6–10 years
11–15 years
16–20 years
21–25 years
26+ years

2) Which key stages do you teach?

Select as many options as appropriate.

Key stage 2
Key stage 3
Key stage 4
Key stage 5

3) Have you adopted a two- or a three-year key stage 3 curriculum in science?

Two-year science curriculum
Three-year science curriculum
Other – please specify

4) Are you using APP to assess your pupils in key stage 3 science?

Yes	Go to question 6
No	Go to question 5 and then no further

5) If you have opted not to incorporate APP into key stage 3 science which methods do you use instead to assess your pupils?

Select as many options as appropriate.

School developed tests.

QCDA Optional tests.

Old national curriculum tests.

AfL materials other than APP – Please give details in the appropriate box below.

Assessment materials produced by publishers – Please give details in the appropriate box below.

Other – Please specify and give details in the appropriate box below.

AfL materials other than APP	Assessment materials produced by publishers	Other

6) Which year groups are you currently using APP to assess pupils?

Select as many options as appropriate.

Year 7

Year 8

Year 9

7) Please provide the following information for each key stage 3 class you teach.

Class	Year group	Size of class	How many pupils are you assessing using APP?
Class 1			
Class 2			
Class 3			
Class 4			
Class 5			
Class 6			
Class 7			
Class 8			
Class 9			
Class 10			

8) In your opinion, what are the positive features of APP in key stage 3 science? Select as many as options as appropriate.

Has put the trust back into teacher judgements.
Is a useful tool to aid giving feedback to pupils.
Provides a useful link to Assessment for Learning (AfL).
Promotes Assessment for Learning (AfL).
Increased personalisation of the science curriculum.
Easier to monitor pupil progress.
Increasing your confidence in your ability to assign levels to pupils.
Increasing your confidence in your ability to summarise pupils' progress.
Supports 'How Science Works'.
Improving your understanding of 'How Science Works'.
Skills-based nature of APP.
Improved consistency in assessment practice across science.
Allows greater creativity in how you teach science.
Consistent use of language within the science department.
Consistent use of language across departments in your school.
Consistent use of language across key stages.
Other – please specify below.
I do not feel there are any positive features of APP.

9) In your opinion, what are the negative features of APP in key stage 3 science? Select as many as options as appropriate.

Increased workload.
Increased workload due to moderation of pupils' work at key stage 3.
Number of APP statements.
Language used in APP grid.
Yet another initiative.
The APP statements are too open to interpretation.
The APP statements are too specific.
Difficulty in understanding the statements and how they relate to assessing pupils.
The link between APP and AfL is not clear.
The link between APP and the key stage 3 Programme of Study is not clear.
APP is non-statutory therefore a lower priority in school.
Difficulties monitoring pupil progress.
The 'jumps' between adjacent levels are too large.
The differences between adjacent levels are hard to distinguish.
Other – please specify below.
I do not feel there are any negative features of APP.

10) How has your local authority (LA) science consultant been supporting your school with the implementation of APP in key stage 3 science? Select as many options as appropriate.

The LA science consultant has had meetings with the Senior Leadership Team.
The LA science consultant has had meetings with the Head of Department.
The LA science consultant has had meetings with KS3 science consultant/coordinator at the school.
The LA science consultant has been mentoring teachers one to one.
The LA science consultant has run training sessions for the whole science department.
The LA science consultant has participated in exemplar teaching/lessons.
The LA science consultant has observed lessons, followed up by discussions with the class teacher.

The LA science consultant has provided tasks for teachers to incorporate into their lessons.
Other – Please specify below.
If any of the above ticked/completed move directly onto question 11a
There has been no support from the LA science consultant. If ticked move directly to question 12a

11) a) How consistent has the support from your LA science consultant been since the introduction of APP in key stage 3 science in January 2009?

Consistently good
Mostly good, sometimes poor
Mostly poor, sometimes good
Consistently poor

b) Please explain your answer to part a.

12) a) How supportive do you feel the senior leadership team at your school have been with the implementation of APP in key stage 3 science?

Consistently good
Mostly good, sometimes poor
Mostly poor, sometimes good
Consistently poor

b) Please explain your answer to part a.

13) The National Strategies produce the following APP resources:

- Assessing Pupils' Progress in secondary science at key stage 3: Teacher's handbook – this explains the whole-school context for assessment, and introduces APP as a tool for periodic assessment.
- Assessing Pupils' Progress in secondary science at key stage 3: Standards Files –the Standards Files aim to help departments reach consistent and reliable judgements about National Curriculum levels in science and provide exemplifications of national standards.
- Assessing Pupils' Progress in secondary science at key stage 3: assessment guidelines – set out level-related APP assessment criteria for science (see DCSF, 2009). These are available in two formats: an A3

assessment guidance poster, covering levels 3 to 8 and a set of A4 versions, covering two National Curriculum levels on each sheet.

- Assessing Pupils' Progress (APP) guidance for senior leaders – contains additional support for departments implementing the APP approach.

13) a) How helpful have you found the APP resources provided by the National Strategies?

Very helpful
Helpful
Adequate
Unhelpful
Very unhelpful
Not used the resources provided by the National Strategies

b) Please explain your answer to part a.

14) In addition to the APP resources provided by the National Strategies, what materials/resources are you using? (Please be as specific as possible, giving publications, publishers, websites, etc.)

15) Are there any further support materials related to APP in key stage 3 science that you still feel you require?

Yes
No
If you ticked yes please describe what support materials you require.

16) From your perspective, do any barriers remain which are inhibiting the use of APP in your school? Select as many options as appropriate.

Time.
Training.
Workload.
Too many other priorities e.g. being a tutor.
GCSE and A level take priority over key stage 3.
Too many initiatives in the science curriculum.
Other – please specify below.

17) How are you using APP in key stage 3 science? Select as many options as appropriate.

As the only method of assessment at key stage 3.
To deliver the range and content components of the Programme of Study.
As 'one-off' assessment tasks.
Embedded within day-to-day teaching.
Other – please specify below.

18) Have you shared any aspect of APP in key stage 3 science with your pupils e.g. the APP grid?

Yes – continue to question 19

If you answered yes please provide details below.

No – continue to question 20

19) How have the pupils responded to APP in key stage 3 science? Please provide an explanation below.

20) What do you perceive the impact of APP to be in the classroom? Select as many options as appropriate.

Raise pupil attainment.
Increase teacher knowledge and skills.
Prepare pupils for GCSE science.
Engage pupils.
Personalise the science curriculum.
Improve pupils' scientific understanding.
Others in addition to those above – Please specify.

21) In order to ensure consistency of teacher assessments produced by using APP in KS3 science, what methods (if any) of moderation are you promoting/developing for use in your science department?

Inter-department moderation.
Moderation with other departments in the school using APP.
Moderation with another school.
Moderation with other schools in your local authority.
No moderation currently taking place.
Other – Please specify.

22) a) Do you think external moderation of APP in key stage 3 science would be beneficial?

Yes
No
Unsure

b) Please explain your answer to part a.

23) How are you recording and monitoring pupil progress using APP?

If you have any further comments about APP in key stage 3 science please add them below:

Thank you for participating in this questionnaire.

If you would like to receive a copy of the final report please provide us with your name and email address below:

Appendix 3: Seven steps of implementation

APP step by step (DCSF, 2009a, p.7–8)

Step 1: Over a period of time, decide on the outcomes to be assessed and generate evidence of pupils' attainment from day-to-day teaching and learning

As part of the planning of teaching and learning for any class, teachers will identify relevant assessment criteria. Evidence is then generated over a period of time and forms the basis of the APP process of periodic assessment, which involves stepping back from the daily and weekly process of teaching, and assessing progress made across the subject over a longer period – perhaps a whole term.

Step 2: Review an appropriate range of evidence

Teachers will need to take account of a manageable range of evidence to inform and support APP assessments against the APP criteria. Teachers in the pilot project found that open-ended, less scaffolded tasks and activities allowing pupils to demonstrate more independent understanding were a rich source of evidence. Teachers will also need to consider more ephemeral evidence of pupil achievement, such as discussions between pupils and between teacher and pupils. (Note: Additional APP guidance will support this.)

Step 3: Select the appropriate assessment guidelines sheet

Each pupil will need an assessment guidelines sheet that will be used to record assessments by highlighting relevant criteria. The A3 version of the guidelines sets out all levels from 3 to 8, making it easier to develop a sense of progression through the levels. Alternatively, the A4 versions of the assessment guidelines each cover two National Curriculum levels, with overlaps. For example, there are forms covering levels 3 and 4, 4 and 5, 5

and 6, and so on. If working with the A4 versions, teachers should choose an appropriate form for each pupil (they should start with a broad idea of the National Curriculum level that a pupil is working from, usually based on prior assessments) so that periodic assessments can build up a profile of the pupil's learning over time. Follow the instructions set out in Section 4: 'How to make APP assessments'.

Step 4: Highlight assessment criteria for which there is evidence

Teachers should now consider the APP criteria in relation to the assembled evidence and highlight the criteria that have been met. For many teachers, it will take time before this process becomes quick and efficient; however, the experience of the pilot project suggests that the process of agreeing levels within the department, based on the guidance in the Standards Files, will help teachers to develop a better feel for levels and progression. The pilot also highlighted the value of inter-school moderation. The appendix to this handbook contains full guidance on using the Standards Files.

Step 5: Use the pupil's developing profile of learning to decide upon a level and sub-level

As successive assessments are made by highlighting criteria in the table, a profile of learning is established. For each strand shown on the table, a box can be ticked to indicate that a particular level has been reached. Alternatively, 'IE' can be chosen to indicate that there is currently insufficient evidence to judge progress in a particular strand or 'BL' if the judgement is that progress is below level. The periodic judgement can be refined into 'Low', 'Secure' or 'High' within the level.

At intervals, teachers will use the process described in Section 4 of this handbook to arrive at an overall National Curriculum level for individual pupils. This is done by taking into account how independently, how consistently and in what range of contexts pupils demonstrate their attainment across the separate strands. The overall level can be recorded in one of the boxes provided at the bottom of the form.

Step 6: Moderate assessments

Assessment against APP criteria inevitably involves a degree of interpretation and professional judgement. Departments will need to ensure that, before they start to use APP, teachers have the chance to become familiar with the assessment criteria, and how these are consistent with national standards (standardisation). Once they begin to make their own judgements, they need to have the chance to explain and justify a sample with other teachers to ensure consistency (moderation). The Standards Files will help both these processes, as explained in the appendix. Teachers should make regular reference to the Standards Files to strengthen their understanding of the levels across the National Curriculum strands, and to help to resolve ambiguous or borderline assessments. Regular collaborative assessment and discussion are important means of ensuring that assessment standards across the department are reliable and consistent.

Step 7: Make any necessary adjustments to planning, teaching and intervention

A key purpose of APP is to inform and strengthen planning, teaching and learning. This aspect of APP can have a direct and positive impact on raising standards, and can assist in the personalisation of learning.

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ISBN 978 1 906792 69 5