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INTRODUCTION

The Autumn term each year is an important time for headteachers to lead a review of their school's performance. This review will provide crucial feedback to the governors and teachers about how well the school is doing in terms of what pupils achieve.

The school performance review involves a careful analysis of pupil results data. In the course of these analyses it is important to keep in focus that the purpose of the review is to help those involved to know and understand how effective the work of the school is, so that they can set *challenging yet realistic* targets to raise pupil performance in the future. The review should help the governing body, the headteacher and staff to determine the degree of challenge to adopt in setting targets. Good schools will have high expectations of their pupils. They will choose to focus on the analyses which will help them to most keenly challenge current practice and encourage them to maintain existing high standards, or make a marked difference to past performance.

Statutory requirements apply for setting school performance targets for pupils aged 11 and 16. However, many schools have recognised that target-setting is a useful tool for helping to raise standards for pupils of all ages, and for discrete groups of pupils. Teachers have also recognised that, sooner rather than later, the school should move from reviewing performance to taking action. Sharing an agreed picture of the school's performance and with clear targets for improvement, discussions in the school should turn to action planning. Action plans identify what is needed to achieve the targets, including the important changes that need implementing and how the action plan is to be supported with resources and staff development.

What The *Autumn Package* Contains

For an effective school performance review, looking at information about national trends in pupil performance, the performances achieved by pupils in other similar schools and the progress being made by pupils nationally, is vital. The DfEE, QCA and OFSTED have worked closely to bring together such pupil performance data for schools in England in this *Autumn Package* publication. We will be contacting schools over the next few months to ask for their views on the *Package* and evaluate its usefulness.

The Key Stage 2 *Autumn Package* contains 1999 national summary results data, national benchmark information and national value added analyses. This information will be supplemented in early 2000 by the additional information contained in the Performance and Assessment report (PANDA report) prepared for your school by OFSTED.

As last year, four optional activities are included as a starting point for teachers who are using comparative data for the first time. The optional activities provide a step-by-step approach to each analysis and pose some important initial questions to ask about schools' performance.

Setting Targets

The *Autumn Package* provides performance information relevant to many pupils with special educational needs; however, the performance of pupils with more significant learning difficulties is not covered by this information.

The DfEE / QCA booklet, *Supporting the Target Setting Process: Guidance for Effective Target Setting for Pupils with Special Educational Needs*, published in December 1998, contains criteria more appropriate for assessing the attainment and progress of pupils with significant learning difficulties. The criteria can be used for setting targets for pupils with special educational needs. The criteria are presented in the form of performance descriptions (P-Scales) leading to Level 1 and within Levels 1 and 2 of National Curriculum English and mathematics. Performance descriptions for pupils' early personal and social development are also included.

Pupils with special educational needs should benefit from school improvement along with their peers, and it is important that school improvement targets apply to all pupils. However, depending on the school's circumstances, when making performance comparisons against other schools it can be useful to consider the achievements of different groups of pupils in the Year 6 cohort, as well as the year group overall. This helps to develop a rounded picture of the school's performance and to set realistic and challenging targets. For example, when benchmarking your school's performance against other similar schools, it may be appropriate to consider the achievements of pupils in Year 6 who do not have special educational needs, and those who do, separately.

During the 1999 Summer term, QCA conducted a project to collect performance information for pupils working significantly below age related expectations, using the P-Scale measures. Schools' participation in this work has been voluntary. Analysis of this performance information is still being undertaken.

Also over the summer period, a generic PANDA for special schools has been distributed. It provides sets of comparative national data, subdivided for five types of special school on both outcomes and school processes.

Care should be taken when analysing the results of small year groups and small schools. This is because with small numbers of pupils, the effect of one additional pupil on, for example, a school percentage measure can be considerable, but in larger schools the effect will be less marked. This does not mean that analysing the performance of small cohorts is invalid, rather it means that the findings from such analyses should be interpreted carefully, and may need to be augmented with other information.

When considering pupil mobility, schools know which of their Year 6 pupils have joined during the course of the Key Stage, their performances relative to others in the year group and the impact they have on the school's overall performance. This information helps to contextualise the school's position in the benchmark tables.

Information In The *Autumn Package*

The performance information contained in the *Autumn Package* is intended for use by headteachers, governors and teachers. Three related types of information are included:

- Section 1A contains **national summary results** to enable comparisons of trends in the school's performance against national trends and clarify understanding of the progress the school is making;
- Section 1B contains **benchmark information** to help compare performance with other similar schools and to show what the best performing of these schools are achieving;
- Section 1C contains **value added information** to enable the progress individual pupils make to be compared with the progress made by other pupils from similar, prior attainment, starting points.

The PANDA information, which will be distributed by OFSTED early in 2000, should be used to look in more depth at relative strengths and weaknesses in your school.

Also included is a detailed Technical Annex. This provides further information on the three sections and will help you calculate the relevant figures for your pupils, and for your school.

Further Information

The *Autumn Package* is available on the Internet at **www.standards.dfee.gov.uk/performance**. As well as the information published in the 1999 *Autumn Package*, the site pilots an interactive tool to help schools use the information.

Further guidance on the school improvement process is available. Advice on target-setting has been published in *From Targets to Action*, and guidance on the statutory regulations is published in Circular Number 11/98, *Target Setting in Schools*. These are both available free from the DfEE Publication Centre. Advice on the broader process of school self-evaluation has been published in the *School Evaluation Matters* booklet available from OFSTED. Advice on the more detailed interpretation of school statistics about pupil performance has been published in *A Guide to Using National Curriculum Assessment Data in Primary Schools*, available from the QCA. Many LEAs also provide additional, local analyses.

The Association of Assessment Inspectors and Advisors (AAIA) have produced some guidance entitled *Getting the Most from Your Data*, which is available from the DfEE Publication Centre on request. This guidance shows how schools can use their results along with the *Autumn Package*, to evaluate school performance. It includes a useful case study illustrating how this school evaluation can inform processes of school improvement and have an impact on teaching and learning in the classroom.

General enquiries about the *Autumn Package* should be addressed to the DfEE's Pupil Performance Team. You can also email enquiries to: **autumn.package@dfee.gov.uk**. For the addresses and telephone numbers of DfEE, QCA and OFSTED, please refer to the *Appendix: Useful Contacts*.

SECTION 1A

NATIONAL SUMMARY RESULTS

The Purpose Of This Section

This section enables you to compare the performance of your school with national averages and trends. The Government has set challenging national targets for pupils' attainment in literacy and numeracy. The targets are:

By 2002:

- 80 per cent of 11 year olds will reach Level 4 or above in English.
- 75 per cent of 11 year olds will reach Level 4 or above in mathematics;

The national results provide a measure against which we can gauge how successfully schools are working towards achieving the national targets. In 1999, 70% of 11 year olds in England attained Level 4 or above in English and 69% attained Level 4 or above in mathematics. Your school's performance plays a vital part in enabling the nation to meet its targets.

Section Contents

The national summary information includes the results of all maintained schools (including special schools) in England, and includes those independent schools that took part in the 1999 end of Key Stage 2 National Curriculum assessment. Further information about the national summary information is given in the Technical Annex.

The national results are presented in tabular form and as bar charts:

Tables 1.1 - 1.6 show a summary of the 1999 national results by gender and subject:

- **Table 1.1** the percentage of **pupils** in England attaining Level 4 and above in English, mathematics and science statutory **tests** and **teacher assessments** in 1999;
- **Table 1.2** the percentage of **pupils** in England attaining Level 4 and above in English, mathematics and science statutory **tests** and **teacher assessments** in 1999 for **boys and girls** separately;
- **Table 1.3** a comparison of the percentage of **pupils** in England attaining Level 4 and above in English, mathematics and science **tests** and **teacher assessments** in 1995, 1996, 1997, 1998 and 1999;
- **Table 1.4** the percentage of all **boys and girls** in England attaining each Level in each subject in 1999 in the Key Stage 2 **tests** and **teacher assessments** in English, mathematics and science;

- **Table 1.5** a comparison of the percentage of **pupils** in England attaining each level in English, mathematics and science **tests** in 1995, 1996, 1997, 1998 and 1999; and also for **boys and girls** separately;
- **Table 1.6** a comparison of the percentage of **pupils** in England attaining each level in English, mathematics and science **teacher assessments** in 1995, 1996, 1997, 1998 and 1999; and also for **boys and girls** separately.
- **Graphs 1.1 - 1.12** show information from table 1.4 including gender breakdowns, in the form of bar charts.

How To Use The Information

You can use this section to develop a general impression of your school's performance relative to the results of schools nationally. You can examine in which areas your own results differ most markedly from the national picture, and this will help you to identify relative strengths and weaknesses in your school. Going on to use the benchmark and value added information will help you to better understand those strengths and weaknesses.

Circulars 7/98 and 7/99, and QCA's *Assessment and Reporting Arrangements* booklet explain the requirement for head teachers and governors to report to parents the national percentages of pupils at each level of attainment on the National Curriculum scale. This information should be shown alongside the school's own results in reports to parents, the school prospectus and the governors' annual report. Table 1.4 shows the national information you will need. Please note that table 1.4 does not include national figures for Speaking and Listening Teacher Assessment. Contrary to Circulars 7/98 and 7/99, this information is not collected centrally by the Department, and there is no requirement to report it to parents.

Optional Activity One is intended to help headteachers and governors to see the difference between their school's results and the national summary results.

Table 1.1 Percentage of 11 year old pupils achieving Level 4 and above in the 1999 end of Key Stage 2 English, mathematics and science Tests and Teacher Assessments

	Test	Teacher Assessment
ENGLISH	70	68
Reading	81	-
Writing	56	-
MATHEMATICS	69	69
SCIENCE	78	75

Table 1.2 Percentage of boys and girls separately achieving Level 4 and above in the 1999 end of Key Stage 2 English, mathematics and science Tests and Teacher Assessments

	Test	Teacher Assessment
BOYS		
ENGLISH	65	62
Reading	78	-
Writing	49	-
MATHEMATICS	69	69
SCIENCE	79	75

GIRLS		
ENGLISH	76	74
Reading	84	-
Writing	64	-
MATHEMATICS	69	70
SCIENCE	78	76

Table 1.3 Recent trends in Key Stage 2 national summary results for percentage of pupils achieving Level 4 and above in English, mathematics and science Tests and Teacher Assessments in 1995, 1996, 1997, 1998 and 1999

	Test					Teacher Assessment				
	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
ENGLISH	49	57	63	65	70	57	60	63	65	68
MATHEMATICS	45	54	62	59	69	54	60	64	65	69
SCIENCE	70	62	69	69	78	64	65	69	71	75

Table 1.4 Percentage of boys and girls in England achieving each Level in the 1999 Key Stage 2 Tests and Teacher Assessments in English, mathematics and science¹

	D	A	B	N	W	1	2	3	4	5	6	4+
	Percentage of boys and girls at each level											
ENGLISH												
Test	0	2	3	2	-	-	1	20	48	22	0	70
Reading	0	1	1	4	-	-	-	13	49	32	-	81
Writing	0	1	1	5	-	-	-	37	42	14	-	56
Teacher Assessment	0	0	-	-	0	1	6	25	48	19	0	68
MATHEMATICS												
Test	0	2	3	2	-	-	1	23	45	24	0	69
Teacher Assessment	0	0	-	-	0	1	5	24	48	21	0	69
SCIENCE												
Test	0	2	2	1	-	-	0	16	51	27	0	78
Teacher Assessment	0	0	-	-	0	1	3	20	52	23	0	75

Notes to the tables

- represents no pupils
- 0% represents some pupils but less than 0.5%
- D** represents pupils who have been disapplied under sections 364 / 365 of the Education Act 1996
- A** represents pupils who failed to register a level due to absence
- B** represents pupils who were assessed by teacher assessment only
- N** represents pupils who took the statutory tests but failed to register a level
- W** represents pupils who are working towards Level 1

¹ Figures have been rounded and may not total 100%. Pupils were awarded a compensatory Level 2 in the statutory tests when they narrowly failed to achieve a Level 3

Table 1.4 (continued) Percentage of boys and girls in England achieving each Level in the 1999 Key Stage 2 Tests and Teacher Assessments in English, mathematics and science²

	D	A	B	N	W	1	2	3	4	5	6	4+
Percentage of boys at each level												
ENGLISH												
Test	0	2	4	3	-	-	2	23	48	17	0	65
Reading	0	1	1	4	-	-	-	15	50	28	-	78
Writing	0	1	1	7	-	-	-	42	39	10	-	49
Teacher Assessment	0	0	-	-	1	1	8	28	47	15	0	62
MATHEMATICS												
Test	0	2	3	2	-	-	1	22	44	25	0	69
Teacher Assessment	0	0	-	-	0	1	5	24	46	22	0	69
SCIENCE												
Test	0	2	2	1	-	-	0	16	50	28	0	79
Teacher Assessment	0	0	-	-	0	1	4	20	51	24	0	75
	D	A	B	N	W	1	2	3	4	5	6	4+
Percentage of girls at each level												
ENGLISH												
Test	0	2	2	2	-	-	1	17	49	27	0	76
Reading	0	1	1	3	-	-	-	12	48	36	-	84
Writing	0	1	1	3	-	-	-	32	46	18	-	64
Teacher Assessment	0	0	-	-	0	1	4	21	50	24	0	74
MATHEMATICS												
Test	0	2	2	2	-	-	1	24	47	22	0	69
Teacher Assessment	0	0	-	-	0	1	4	24	49	20	0	70
SCIENCE												
Test	0	2	1	1	-	-	1	17	52	26	0	78
Teacher Assessment	0	0	-	-	0	0	3	20	54	22	0	76

Notes to the tables

- represents no pupils
- 0% represents some pupils but less than 0.5%
- D represents pupils who have been disapplied under sections 364 / 365 of the Education Act 1996
- A represents pupils who failed to register a level due to absence
- B represents pupils who were assessed by teacher assessment only
- N represents pupils who took the statutory tests but failed to register a level
- W represents pupils who are working towards Level 1

² Figures have been rounded and may not total 100%. Pupils were awarded a compensatory Level 2 in the statutory tests when they narrowly failed to achieve a Level 3

Table 1.5 Recent trends in the percentage of boys and girls in England achieving each Level in Key Stage 2 English, mathematics and science Tests over the last five years³

		Percentage of boys and girls at each level						
		A	B3	3	4	5	6	4+
ENGLISH	1999	2	7	20	48	22	0	70
	1998	2	6	26	48	17	0	65
	1997	3	7	26	48	16	0	63
	1996	3	9	30	45	12	0	57
	1995	4	8	39	41	7	0	49
MATHEMATICS	1999	2	6	23	45	24	0	69
	1998	2	7	31	42	17	0	59
	1997	3	7	28	44	18	0	62
	1996	3	8	34	40	14	0	54
	1995	4	14	37	32	12	0	45
SCIENCE	1999	2	3	16	51	27	0	78
	1998	3	4	23	53	16	0	69
	1997	3	4	23	50	18	0	69
	1996	4	6	28	48	14	0	62
	1995	5	6	19	48	22	0	70

		Percentage of boys at each level						
		A	B3	3	4	5	6	4+
ENGLISH	1999	2	9	23	48	17	0	65
	1998	3	9	31	45	12	0	57
	1997	3	10	30	45	12	0	57
	1996	3	12	35	42	8	0	50
	1995	4	10	43	37	5	0	41
MATHEMATICS	1999	2	6	22	44	25	0	69
	1998	3	8	30	41	18	0	59
	1997	3	7	27	43	19	0	63
	1996	3	8	34	39	15	0	54
	1995	4	15	36	31	13	0	45
SCIENCE	1999	2	3	16	50	28	0	79
	1998	3	5	22	53	17	0	70
	1997	3	5	23	49	19	0	68
	1996	4	6	28	47	15	0	61
	1995	5	6	17	47	24	0	71

³ Figures will not total 100% because disappplied pupils are not shown
B3 includes the percentage of pupils in B, N and Level 2

Table 1.5 (continued) Recent trends in the percentage of boys and girls in England achieving each Level in Key Stage 2 English, mathematics and science Tests over the last five years⁴

		Percentage of girls at each level						
		A	B3	3	4	5	6	4+
ENGLISH	1999	2	5	17	49	27	0	76
	1998	2	4	20	50	23	0	73
	1997	3	5	23	49	20	0	70
	1996	3	6	25	49	16	0	65
	1995	4	5	35	46	10	0	56
MATHEMATICS	1999	2	6	24	47	22	0	69
	1998	2	7	32	43	15	0	58
	1997	3	7	29	44	17	0	61
	1996	3	8	35	41	13	0	54
	1995	4	13	37	33	12	0	46
SCIENCE	1999	2	3	17	52	26	0	78
	1998	3	4	24	54	15	0	69
	1997	3	4	24	51	18	0	69
	1996	4	5	28	49	14	0	63
	1995	5	6	20	48	20	0	69

⁴ Figures will not total 100% because disappplied pupils are not shown
B3 includes the percentage of pupils in B, N and Level 2

Table 1.6 Recent trends in the percentage of boys and girls in England achieving each Level in Key Stage 2 English, mathematics and science Teacher Assessments over the last five years⁵

		Percentage of boys and girls at each level							
		W	1	2	3	4	5	6	4+
ENGLISH	1999	0	1	6	25	48	19	0	68
	1998	0	1	6	27	48	17	0	65
	1997	0	1	7	28	46	17	0	63
	1996	0	1	8	30	45	15	0	60
	1995	0	1	8	33	43	13	0	57
MATHEMATICS	1999	0	1	5	24	48	21	0	69
	1998	0	1	6	28	47	18	0	65
	1997	0	1	6	28	46	18	0	64
	1996	0	1	7	31	44	16	0	60
	1995	0	1	9	35	41	13	0	54
SCIENCE	1999	0	1	3	20	52	23	0	75
	1998	0	1	4	24	53	18	0	71
	1997	0	1	4	25	51	18	0	69
	1996	0	1	6	28	50	15	0	65
	1995	0	1	6	29	50	14	0	64

		Percentage of boys at each level							
		W	1	2	3	4	5	6	4+
ENGLISH	1999	1	1	8	28	47	15	0	62
	1998	1	1	8	31	45	13	0	59
	1997	1	1	9	32	44	13	0	57
	1996	1	2	10	34	42	11	0	53
	1995	0	2	11	37	40	10	0	50
MATHEMATICS	1999	0	1	5	24	46	22	0	69
	1998	0	1	6	28	45	19	0	64
	1997	0	1	6	29	44	19	0	63
	1996	0	1	8	32	42	16	0	58
	1995	0	1	10	35	39	13	1	52
SCIENCE	1999	0	1	4	20	51	24	0	75
	1998	0	1	4	24	51	19	0	70
	1997	0	1	5	25	50	19	0	68
	1996	0	1	6	29	48	16	0	64
	1995	0	1	7	28	48	15	0	64

⁵ Figures will not total 100% because disappled pupils are not shown

Table 1.6 (continued) Recent trends in the percentage of boys and girls in England achieving each Level in Key Stage 2 English, mathematics and science Teacher Assessments over the last five years⁶

		Percentage of girls at each level							
		W	1	2	3	4	5	6	4+
ENGLISH	1999	0	1	4	21	50	24	0	74
	1998	0	1	4	23	50	22	0	72
	1997	0	1	5	24	49	21	0	70
	1996	0	1	6	25	48	20	0	68
	1995	0	1	6	29	47	16	0	64
MATHEMATICS	1999	0	1	4	24	49	20	0	70
	1998	0	1	5	28	49	17	0	66
	1997	0	1	5	28	48	17	0	65
	1996	0	1	6	31	46	15	0	62
	1995	0	1	8	34	43	13	0	56
SCIENCE	1999	0	0	3	20	54	22	0	76
	1998	0	0	3	23	55	17	0	72
	1997	0	0	4	25	53	17	0	70
	1996	0	1	5	27	52	15	0	67
	1995	0	0	6	29	51	13	0	65

⁶ Figures will not total 100% because disapplied pupils are not shown

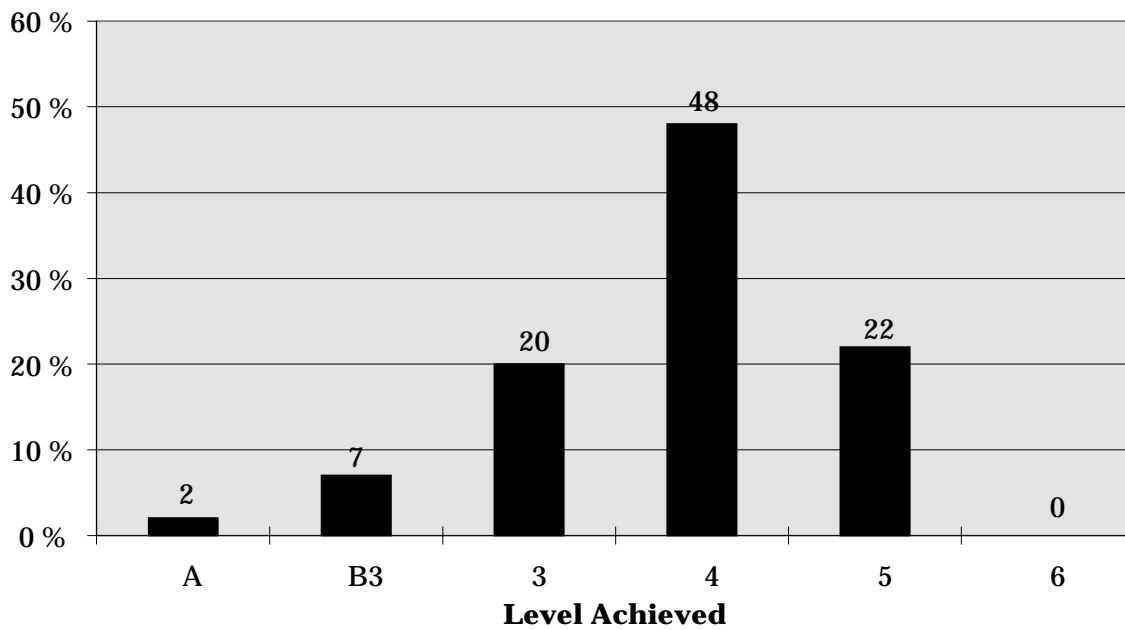
THE RESULTS IN ENGLISH

Tests

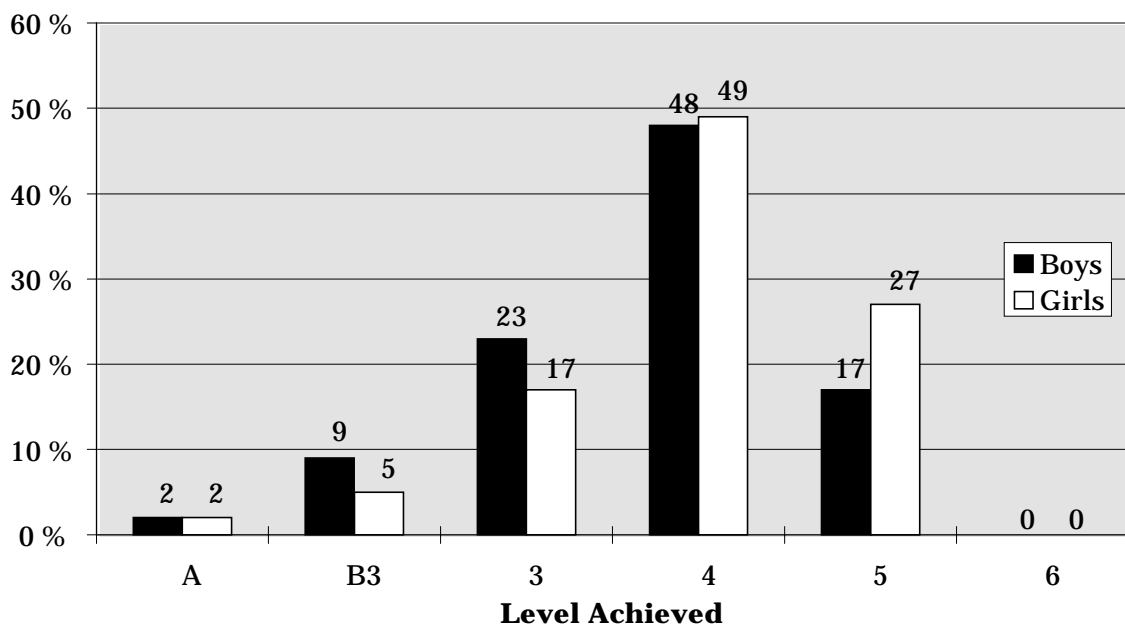
The English tests covered **reading, writing, spelling** and **handwriting**.

Graph 1.1 shows the distribution of attainment for all pupils in the English tests. Graph 1.2 shows attainment for boys and girls separately. These graphs use information drawn from table 1.4.

Graph 1.1 Percentage of pupils at each Level in English Tests



Graph 1.2 Percentage of boys and girls at each Level in English Tests

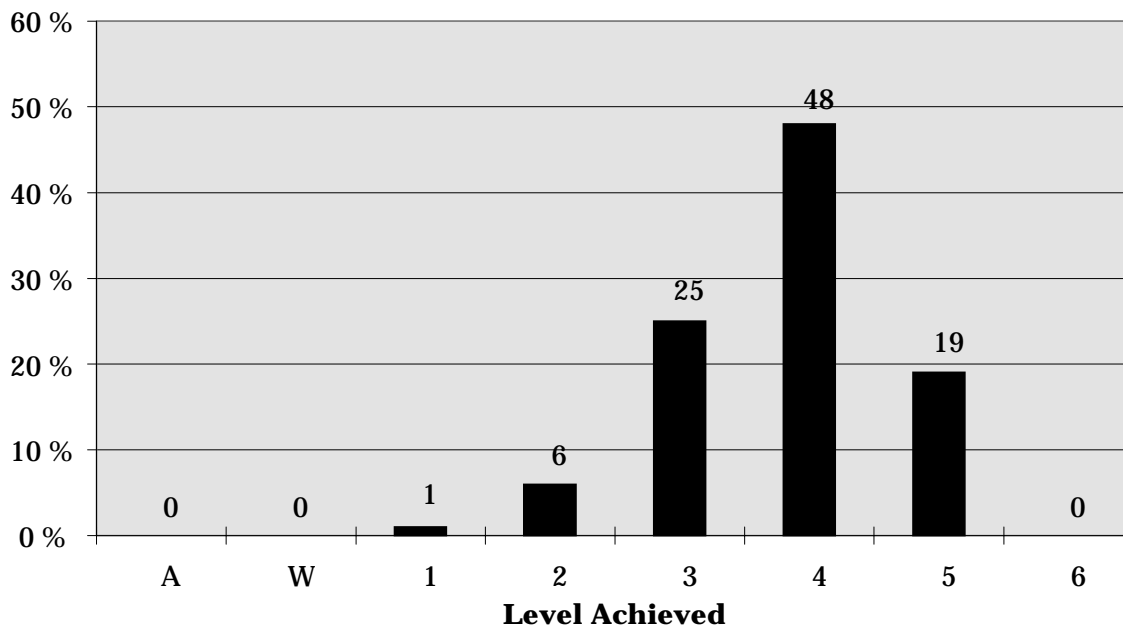


Teacher Assessment

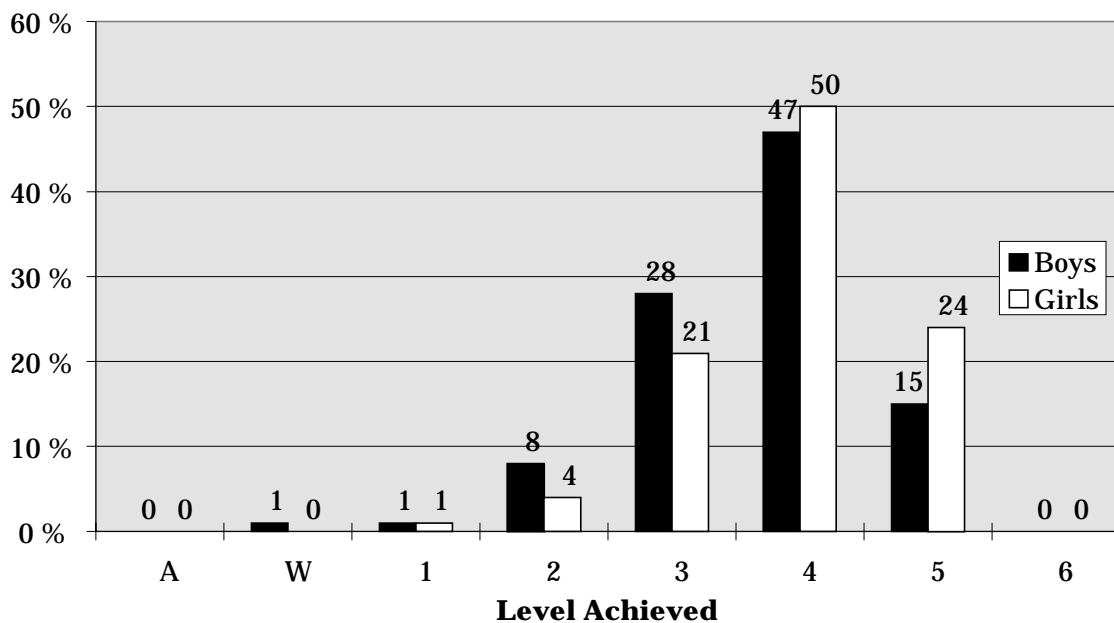
For each pupil the English subject level assessed by teachers represents the average of the levels attained in **speaking and listening, reading, and writing**, rounded to the nearest whole number.

Graph 1.3. shows the distribution of attainment for all pupils in English as assessed by teachers. Graph 1.4 shows attainment for boys and girls separately. These graphs use information drawn from table 1.4.

Graph 1.3 Percentage of pupils at each Level in English Teacher Assessments



Graph 1.4 Percentage of boys and girls at each Level in English Teacher Assessments



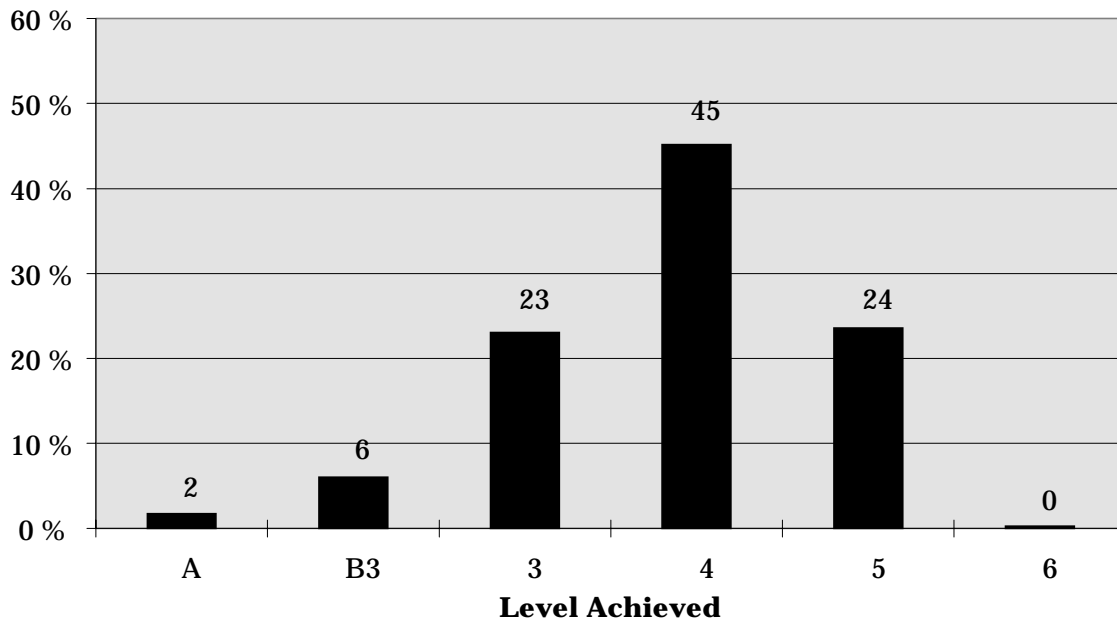
THE RESULTS IN MATHEMATICS

Tests

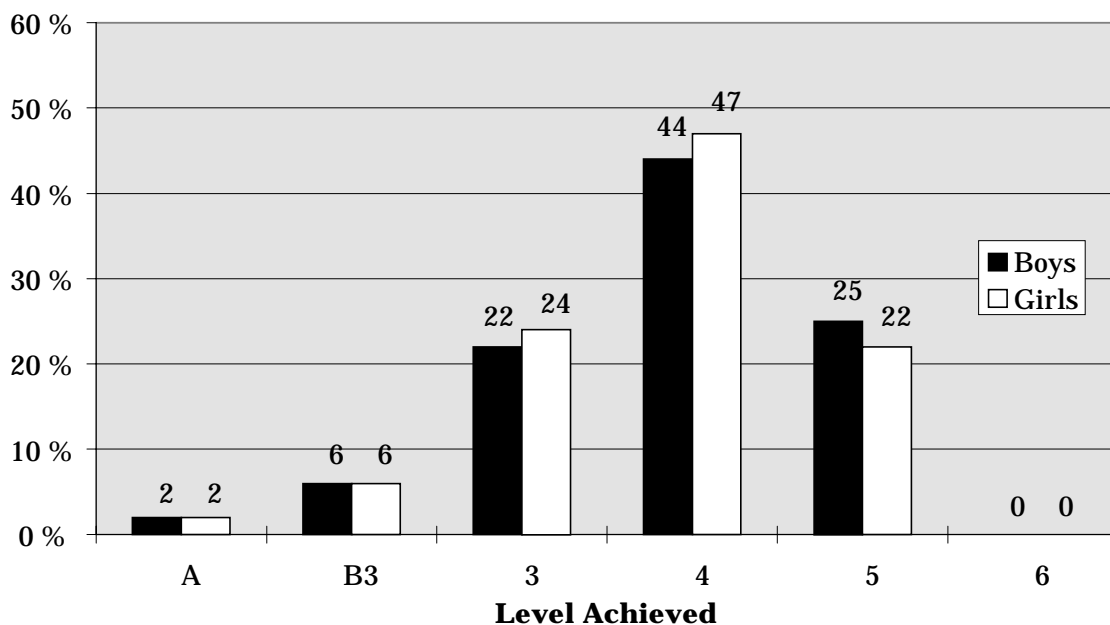
The mathematics tests covered **number and algebra**; **shape, space and measures**; and **handling data**.

Graph 1.5 shows the distribution of attainment of all pupils in the mathematics tests. Graph 1.6 shows attainment for boys and girls separately. These graphs use information drawn from table 1.4.

Graph 1.5 Percentage of pupils at each Level in mathematics Tests



Graph 1.6 Percentage of boys and girls at each Level in mathematics Tests

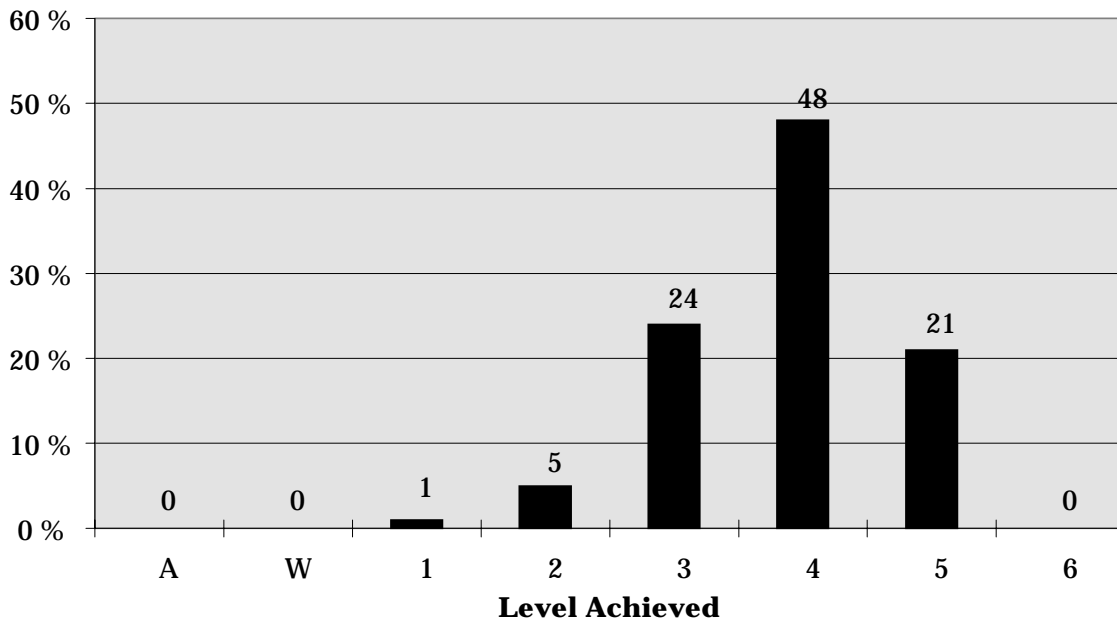


Teacher Assessment

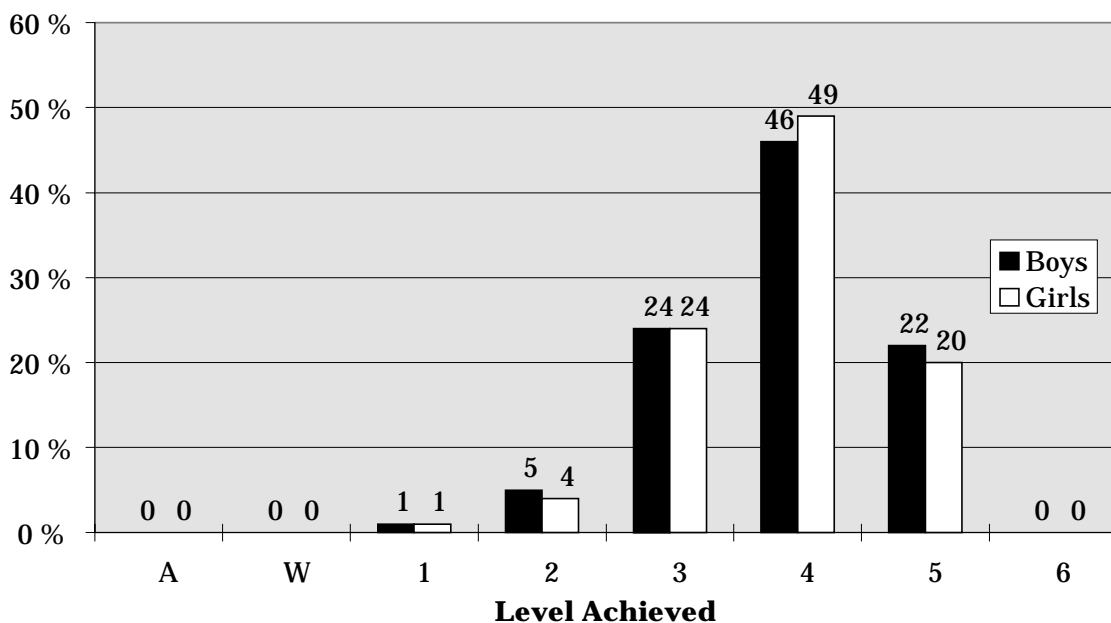
For each pupil the mathematics subject level assessed by teachers represents the average of the levels attained in **using and applying mathematics, number and algebra** (weighted by a factor of 2), **shape, space and measures** and **handling data**, rounded to the nearest whole number.

Graph 1.7 shows the distribution of attainment for all pupils in mathematics as assessed by teachers. Graph 1.8 shows attainment of boys and girls separately. These graphs use information drawn from table 1.4.

Graph 1.7 Percentage of pupils at each Level in mathematics Teacher Assessments



Graph 1.8 Percentage of boys and girls at each Level in mathematics Teacher Assessments



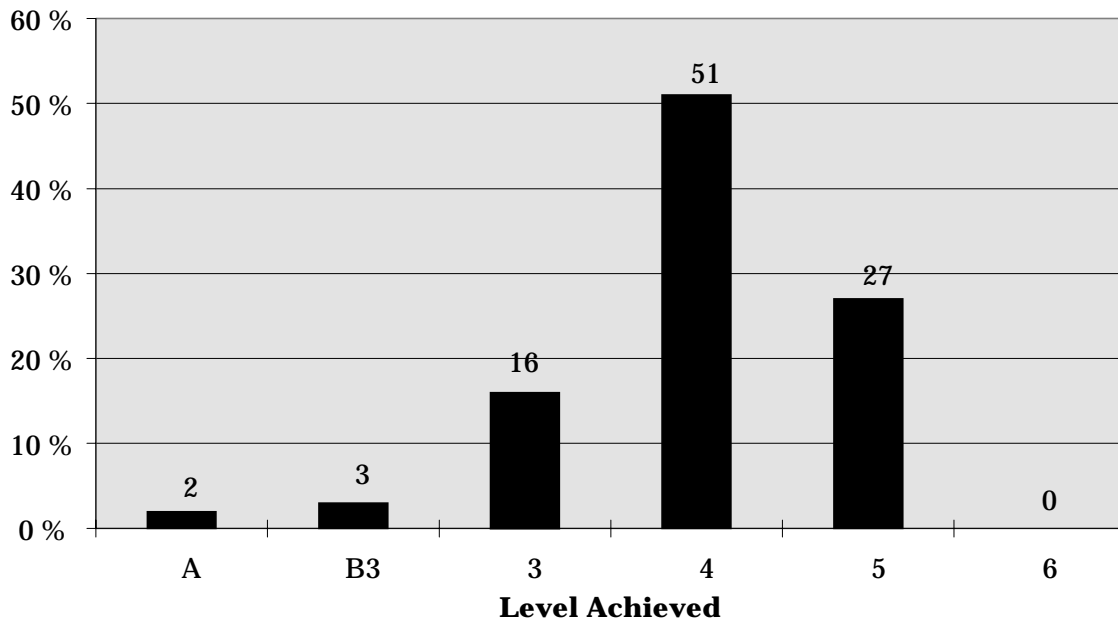
THE RESULTS IN SCIENCE

Tests

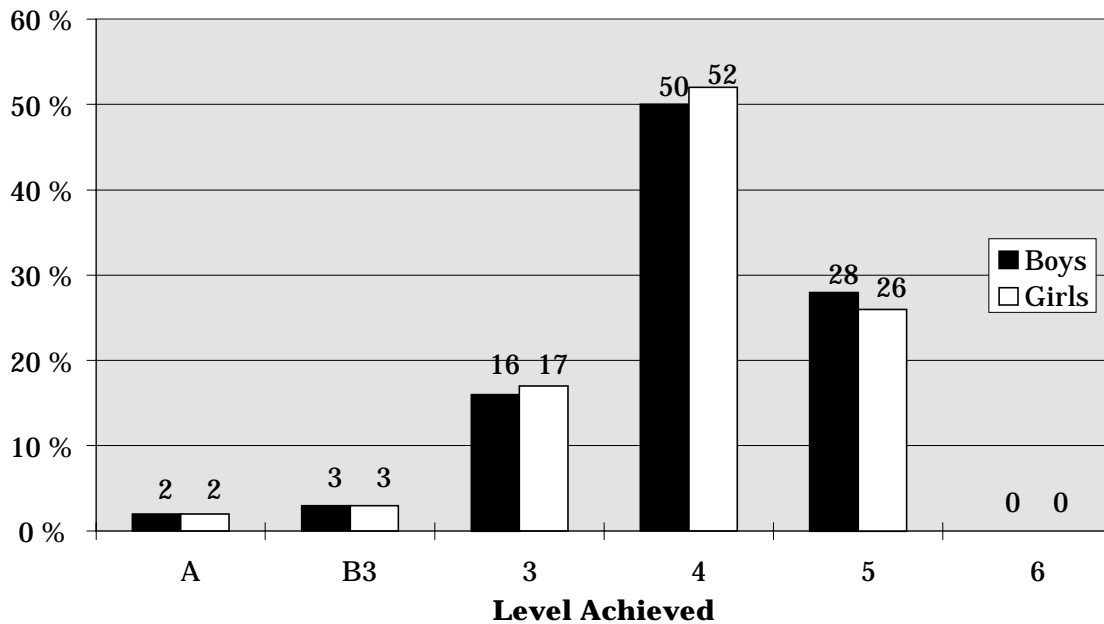
The science tests covered **life processes and living things, materials and their properties, and physical processes.**

Graph 1.9 shows the distribution of attainment for all pupils in the science test. Graph 1.10 shows attainment for boys and girls separately. These graphs use information drawn from table 1.4.

Graph 1.9 Percentage of pupils at each Level in science Tests



Graph 1.10 Percentage of boys and girls at each Level in science Tests

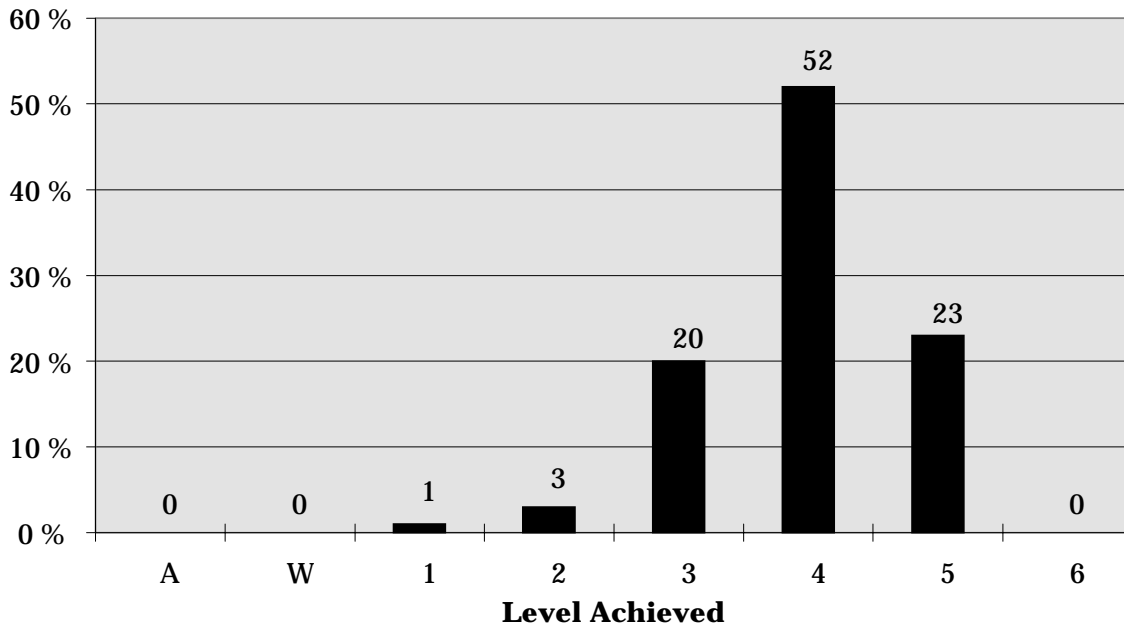


Teacher Assessment

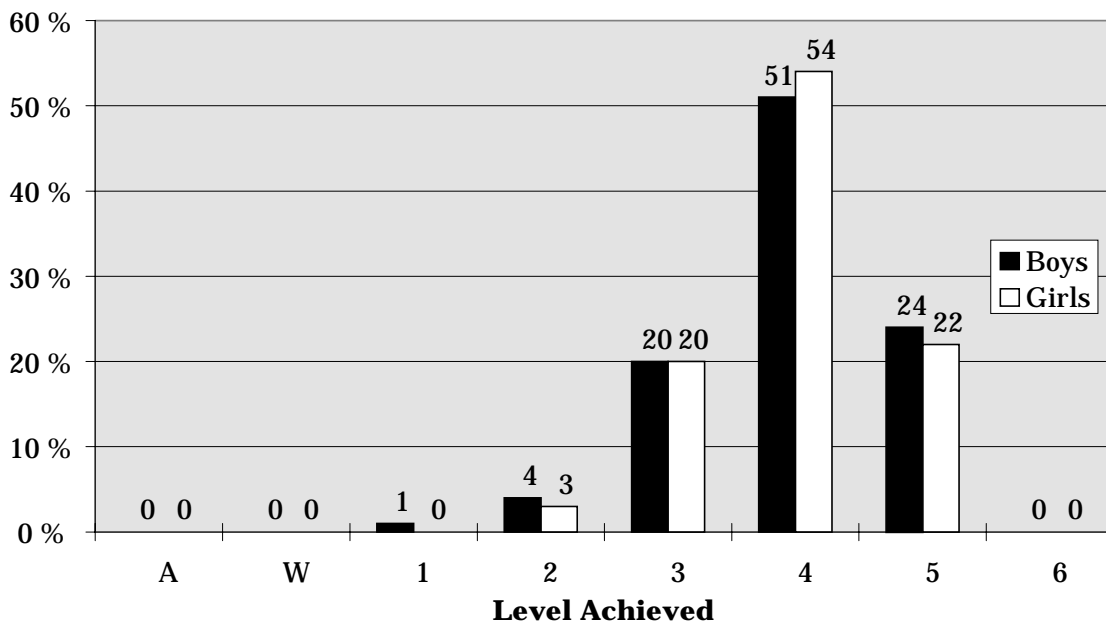
For each pupil the science subject level assessed by teachers represents the average of the levels attained in **experimental and investigative science** (weighted by a factor of 2), **life processes and living things, materials and their properties** and **physical processes**, rounded to the nearest whole number.

Graph 1.11 shows the distribution of attainment for all pupils in science as assessed by teachers. Graph 1.12 shows attainment for boys and girls separately. These graphs use information drawn from table 1.4.

Graph 1.11 Percentage of pupils at each Level in science Teacher Assessments



Graph 1.12 Percentage of boys and girls at each Level in science Teacher Assessments



OPTIONAL ACTIVITIES

Optional Activity One

Making Use of National Data

This activity is intended to help headteachers and governors to see the differences between their school's results and the national results. The table provided can be filled in using your school's data.

The school results column in the table is provided for you to enter the relevant data for your school. In the 'difference' column, show the difference between your school's results and the national results as '+' and '-' percentage points (e.g. +2 %).

Using Table 1.7 you can examine your results alongside national results for 11 year olds who achieved Level 4 or above in each of the English, mathematics and science tests.

Table 1.7 Percentage of pupils attaining Level 4 or above in:

		National Results	School Results	Difference in Percentage Points
ENGLISH	All Pupils	70		
	Boys	65		
	Girls	76		
MATHEMATICS	All Pupils	69		
	Boys	69		
	Girls	69		
SCIENCE	All Pupils	78		
	Boys	79		
	Girls	78		
ENGLISH Teacher Assessment	All Pupils	68		
	Boys	62		
	Girls	74		
MATHEMATICS Teacher Assessment	All Pupils	69		
	Boys	69		
	Girls	70		
SCIENCE Teacher Assessment	All Pupils	75		
	Boys	75		
	Girls	76		

The completed table can be helpful as a focus for discussions. It is important to probe for reasons that may lie behind the figures, which will help identify areas for improvement.

Some Questions To Consider Include:

- Are results in any of the subjects better or worse than the national average, both overall and in terms of the performances of boys and girls?
- Are the performances of boys and girls consistent across the different subjects?
- Are the results of the better performing subjects consistent with your school's previous years results?
- Have any subject results shown marked improvement over last year?
- For each of the subjects with better than average results, can the teachers identify any features of subject organisation or teaching practices that they feel particularly contribute to their successful results?
- Are any of those features common across the different successful subjects?
- Are any of the features particularly worthy of use across the school as a whole, and particularly in other subjects in the school where teachers consider pupils' achievements are below par?
- From the comparisons and discussions, what appear to be the emerging priorities for the school as a whole?

SECTION 1B

NATIONAL BENCHMARK INFORMATION

Using School Level Results

The Purpose Of This Section

The information in this section enables you to compare your school's 1999 Key Stage 2 test results with the performances achieved by other similar schools. Benchmarking your school's performance helps you to understand your school's performance in relation to the range of performances achieved by similar schools nationally.

Many studies confirm that prior attainment is by far the best predictor of pupils' subsequent performance. In the absence of national pupil level prior attainment information, included in the *Package* this year are benchmarks based on school level achievement in the 1995 Key Stage 1 test/tasks. For consistency, we are also including benchmarks based on the proportion of pupils "known to be eligible for free school meals (FSM)". This indicator has been shown to be more strongly correlated with performance than other contextual variables. No two schools are identical; however, both sets of benchmark tables allow schools to draw comparisons with other schools of a broadly similar contextual and prior attainment nature.

The data in the benchmark tables relate to all maintained schools in England other than maintained special schools.

Changes From The 1998 Benchmark Calculations

In response to the feedback from schools, four key changes have been introduced to improve the range and comparability of the benchmark information:

- for each Key Stage, part time pupils and post 16 pupils have been excluded from calculations of the proportion of pupils "known to be eligible for free school meals". This change reflects the fact that these pupils are less likely to be reported as "known to be eligible for FSM", than full time pupils;
- additional primary school benchmark information is provided in tables that group together similar schools on the basis of their 1995 Key Stage 1 results. Prior attainment in this sense refers to the school's aggregated Key Stage 1 results. Prior attainment benchmarks will give an alternative focus to a school's relative performance;
- to enable you to see your performance against the range of performance nationally, an additional table (2.1) has been included which contains the range of performance for all maintained schools, (other than maintained special schools);
- for the purpose of calculating the school's average level of performance, points have been assigned to test levels. This enables schools to take account of the differentiated Levels 2A, 2B and 2C when analysing Key

Stage 1 results. Full details are given in the Technical Annex.

For consistency, and for use in value added analyses, the same system of allocating points to levels has been used in the benchmark tables for Key Stages 1 to 3.

How To Use The Information

Each table of benchmark information shows the range of performance for a group of similar schools, whether on a FSM or a prior attainment basis. You should choose the table(s) which most closely reflect this characteristic in your school. The flow charts in Figures 1 and 2 will help you identify which table(s) most closely reflect this characteristic of your school, and help you identify which table(s) to use to assess your performance. If your school falls near the boundary of two benchmark groups, you may also find it useful to consider the performance of schools in the adjacent group.

To gain a full picture of the school's overall performance, it can be useful to consider the attainment of different groups of pupils in Year 6, as well as the performance of the complete Year 6 cohort. For example, to set challenging and realistic targets for all pupils, it may be appropriate to consider separately the attainment of pupils in the cohort who do not have special educational needs, and those who do.

Further, schools know which of their Year 6 pupils joined during the course of the Key Stage, and those who left, their performance relative to others in the cohort, and the impact this had on the school's overall performance. This information helps to contextualise the school's position in the benchmark tables.

By looking at the performance of different groups of pupils in this way, you can get a more complete picture of the school's overall performance and this will help with the setting of realistic and challenging targets.

The blank columns in the benchmark tables are to allow you to insert your school's results so that you can position your performance in the range. A 'ready reckoner' is included so that you can record the number of your own pupils who reached each Key Stage 2 level, and allocate points scores to the levels attained. A description of how to calculate your school's points score is also included.

The Technical Annex provides information about definitions used to create the benchmark tables.

Table 2.1 All maintained mainstream schools in England, with Key Stage 2 pupils**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	97	84	78	73	69	61	41
Mathematics	96	83	76	72	67	59	39
Science	100	92	86	83	79	71	49

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	50	31	24	20	17	11	2
Mathematics	52	33	26	22	18	13	2
Science	62	39	30	25	21	14	3

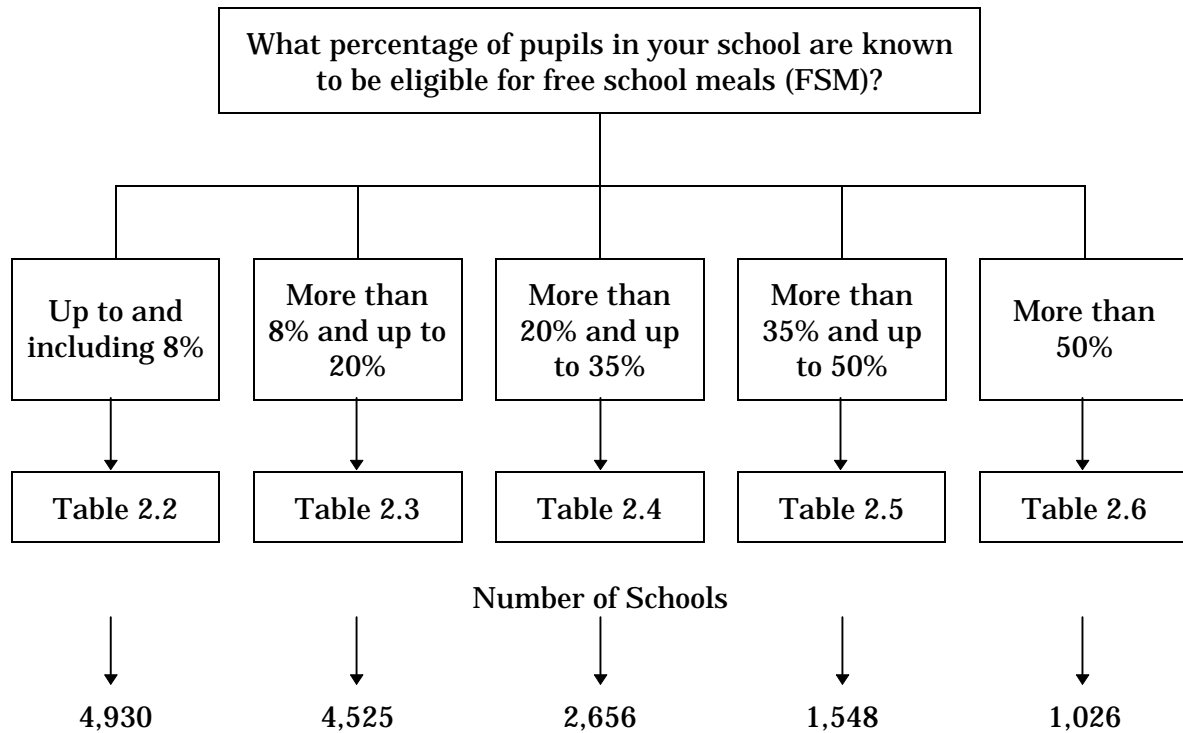
Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	29.6	27.8	27.0	26.5	25.9	25.0	22.8
Mathematics	29.7	27.9	27.0	26.5	26.0	25.1	22.9
Science	30.6	28.8	28.0	27.6	27.0	26.1	24.0

Key Stage 2 National Benchmarks Based On Free School Meals (FSM)

Table 2.1 shows national benchmarks for all maintained, mainstream schools. The tables that follow group schools according to the proportions of **full time** pupils “known to be eligible for free school meals”.

Figure 1 Tables of Key Stage 2 National Benchmarks For Schools Based On School Census (Form 7) Information



Total number of schools = 14,685

Table 2.2 Schools with up to and including 8% of pupils known to be eligible for FSM**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	100	91	87	84	81	75	60
Mathematics	100	90	85	81	78	73	56
Science	100	97	93	90	88	83	68

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	59	42	34	31	27	21	7
Mathematics	61	42	35	31	27	21	6
Science	71	50	40	35	31	24	9

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	30.3	28.9	28.2	27.8	27.4	26.8	25.0
Mathematics	30.5	28.8	28.2	27.8	27.3	26.6	24.6
Science	31.2	29.7	29.0	28.6	28.2	27.6	25.9

Table 2.3 Schools with more than 8% and up to 20% of pupils known to be eligible for FSM**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	94	83	78	75	72	67	52
Mathematics	94	82	77	73	70	64	50
Science	100	91	87	84	81	75	60

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	48	31	25	22	19	14	5
Mathematics	48	33	27	23	20	15	5
Science	59	38	31	27	23	17	5

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	29.3	27.7	27.0	26.7	26.3	25.7	24.2
Mathematics	29.4	27.8	27.1	26.7	26.3	25.6	24.0
Science	30.3	28.8	28.1	27.7	27.3	26.6	25.0

Table 2.4: Schools with more than 20% and up to 35% of pupils known to be eligible for FSM**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	87	73	68	64	61	55	42
Mathematics	88	73	67	64	60	54	40
Science	96	84	79	75	71	65	48

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	34	21	17	14	12	9	2
Mathematics	39	24	19	17	14	10	3
Science	48	29	22	19	15	11	3

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	28.0	26.4	25.8	25.4	25.0	24.3	22.9
Mathematics	28.4	26.7	26.0	25.6	25.2	24.5	23.0
Science	29.6	27.8	27.0	26.6	26.2	25.5	23.9

Table 2.5: Schools with more than 35% and up to 50% of pupils known to be eligible for FSM**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	80	67	60	56	52	46	33
Mathematics	83	67	60	56	52	45	31
Science	93	80	72	68	63	55	37

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	28	16	12	10	8	5	0
Mathematics	33	19	14	12	9	6	0
Science	45	24	17	14	11	7	0

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	27.2	25.6	24.9	24.4	24.0	23.3	21.9
Mathematics	27.8	25.9	25.1	24.7	24.2	23.5	21.9
Science	29.2	27.2	26.3	25.8	25.3	24.5	22.8

Table 2.6: Schools with more than 50% of pupils known to be eligible for FSM***Percentage of pupils achieving Level 4 and above***

	95%	UQ	60%	Median	40%	LQ	5%
English	78	61	54	50	46	40	25
Mathematics	80	63	56	51	47	40	24
Science	92	75	68	62	58	50	31

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	24	13	9	7	6	4	0
Mathematics	32	17	13	10	7	4	0
Science	42	21	15	11	9	5	0

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	26.8	25.0	24.2	23.7	23.2	22.6	21.0
Mathematics	27.5	25.5	24.6	24.1	23.7	22.9	21.2
Science	28.9	26.8	25.8	25.3	24.8	24.0	22.0

Key Stage 2 1999 Ready Reckoner

Use this ready reckoner to determine your school's average points score for Key Stage 2 English, mathematics and science. Photocopy this sheet to calculate averages for each test.

Name of Test:

Possible Outcome	A	D	N	B	2	3	4	5	6
Points Score	Disapplied	Disapplied	15	15	15	21	27	33	39

Number of pupils at each level	X	X							
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= Total number of relevant pupils

Total points score for that level	X	X							
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= Overall total points score

$$\text{School Average} = \frac{\text{Overall total points score}}{\text{Total number of relevant pupils}}$$

$$= \frac{\input{width: 100px; height: 20px; type="text}}{\input{width: 100px; height: 20px; type="text}} = \input{width: 50px; height: 30px; type="text" style="float: right; margin-left: 20px;"/>$$

Record the number of pupils at each level, - each pupil should not appear more than once.

Calculate the points score total for each level by multiplying the number of pupils at each level by the points score for that level

Sum the total number of relevant pupils and the overall total points score

The school's points score average is the overall total points score divided by the total number of relevant pupils

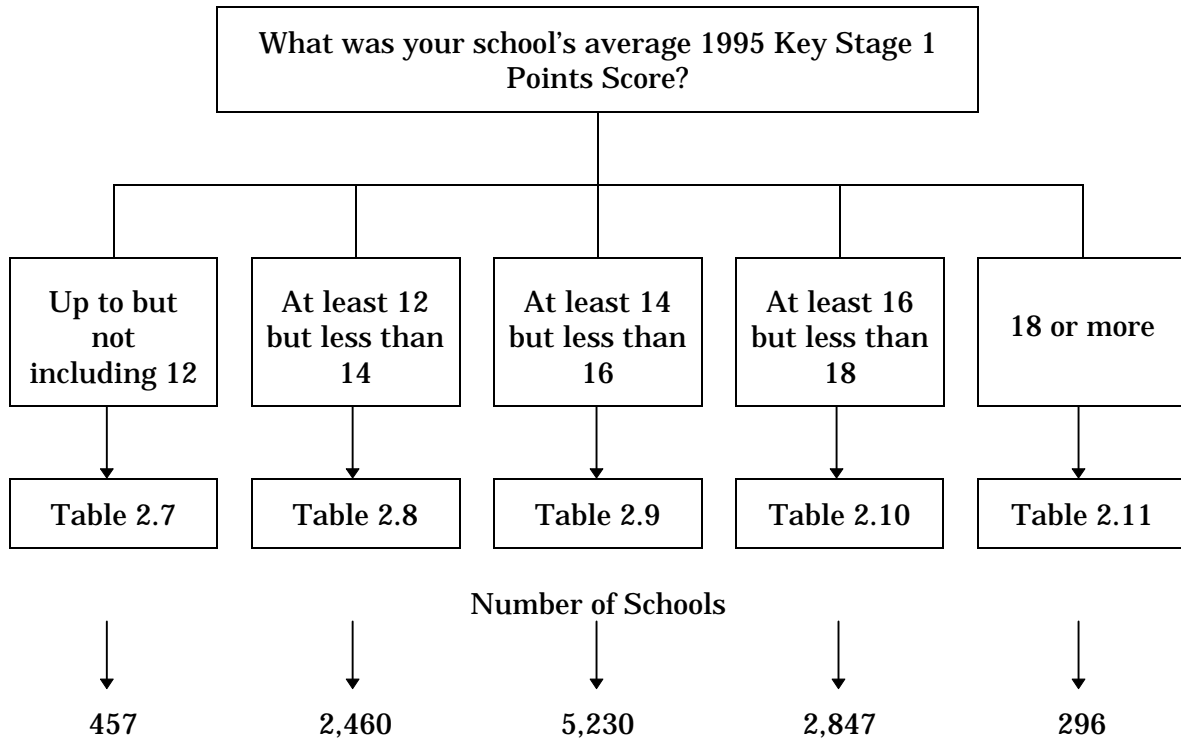
For further details on the various possible outcomes please refer to the Technical Annex

Primary School Benchmark Tables: Based On Schools' 1995 Key Stage 1 Results.

The Key Stage 2 benchmark information presented in tables 2.7 to 2.11 shows the range of performance for schools grouped by their Key Stage 1 results in 1995. The results of all maintained schools, which had both 1999 Key Stage 1 and 1999 Key Stage 2 results, are included in these tables.

Points scores have been assigned to test levels for the purpose of calculating the school average points score. This enables schools to take account of the differentiated levels 2A, 2B and 2C when analysing Key Stage 1 results. Full details are given in the Technical Annex of the system for assigning points to levels. The Technical Annex shows you how to calculate your school's 1995 Key Stage 1 average test/task points score by combining results from reading, writing, spelling and mathematics tests/tasks. It also explains in more detail how to use the tables.

Figure 2 Tables Of Key Stage 2 National Benchmarks For Primary Schools, Based On 1995 Key Stage 1 Average Points Score



Total number of schools = 11,290

Table 2.7: Primary schools that achieved a Key Stage 1 average points score up to but not including 12 in 1995**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	75	57	50	46	43	38	20
Mathematics	78	60	54	50	45	37	22
Science	92	74	66	60	55	48	27

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	23	12	7	6	5	2	0
Mathematics	27	14	10	8	6	3	0
Science	36	18	12	10	7	3	0

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	26.5	24.5	23.7	23.3	22.9	22.1	20.3
Mathematics	27.0	25.1	24.3	23.8	23.4	22.7	21.0
Science	28.5	26.5	25.6	25.1	24.5	23.8	21.8

Table 2.8: Primary schools that achieved a Key Stage 1 average points score of at least 12 but less than 14 in 1995**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	85	70	64	60	56	50	35
Mathematics	85	71	64	60	56	49	32
Science	96	83	76	72	67	60	40

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	33	19	14	12	10	6	0
Mathematics	36	22	17	14	11	7	0
Science	49	27	20	16	13	8	0

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	27.7	26.1	25.3	24.9	24.5	23.7	22.0
Mathematics	28.1	26.4	25.6	25.1	24.6	23.9	22.1
Science	29.5	27.6	26.8	26.3	25.8	25.0	23.0

Table 2.9: Primary schools that achieved a Key Stage 1 average points score of at least 14 but less than 16 in 1995**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	95	84	79	75	72	66	50
Mathematics	95	83	77	74	70	64	47
Science	100	92	87	84	81	74	57

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	48	31	25	22	18	13	4
Mathematics	50	33	27	23	20	15	3
Science	61	40	31	27	23	16	5

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	29.3	27.8	27.0	26.7	26.3	25.6	23.8
Mathematics	29.4	27.9	27.1	26.8	26.3	25.6	23.7
Science	30.5	28.9	28.1	27.7	27.3	26.5	24.8

Table 2.10: Primary schools that achieved a Key Stage 1 average points score of at least 16 but less than 18 in 1995**Percentage of pupils achieving Level 4 and above**

	95%	UQ	60%	Median	40%	LQ	5%
English	100	92	88	86	83	78	63
Mathematics	100	91	87	83	80	75	58
Science	100	97	94	92	89	84	69

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	60	43	37	33	29	22	8
Mathematics	62	44	38	33	29	23	9
Science	71	50	41	36	31	24	10

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	30.4	29.0	28.5	28.0	27.7	27.0	25.2
Mathematics	30.5	29.0	28.4	28.0	27.6	27.0	25.1
Science	31.2	29.8	29.1	28.7	28.3	27.7	26.0

Table 2.11: Primary schools that achieved a Key Stage 1 average points score greater than 18 in 1995***Percentage of pupils achieving Level 4 and above***

	95%	UQ	60%	Median	40%	LQ	5%
English	100	100	94	91	88	82	57
Mathematics	100	100	92	89	86	78	50
Science	100	100	98	95	92	88	69

Percentage of pupils achieving Level 5 and above

	95%	UQ	60%	Median	40%	LQ	5%
English	72	54	45	41	35	27	0
Mathematics	80	56	46	40	35	25	0
Science	85	60	50	45	38	29	6

Average points score achieved

	95%	UQ	60%	Median	40%	LQ	5%
English	31.3	30.2	29.4	28.9	28.5	27.6	25.0
Mathematics	31.8	30.0	29.3	28.7	28.3	27.4	24.8
Science	32.1	30.4	29.8	29.3	29.0	28.2	26.1

OPTIONAL ACTIVITIES

Optional Activity Two

Making Use of Benchmark Information

Benchmarking enables teachers and governors to compare the performance of their schools with the performance of similar schools.

Figures 1 and 2 showed how to locate the most appropriate table(s) to use. It may be helpful to photocopy the table(s) for your school.

When discussing how the school's performance is represented in the benchmark information, it is helpful to probe reasons that may lie behind the numbers. This can help identify priorities and strategies for improvement.

Some Questions To Consider May Include:

- How does the school's performance in English, mathematics and science relate to the range of performance shown by other similar schools - particularly to performances at the upper quartile and 95th percentile?
- Where the position has improved over last year, what changes in teaching practice do teachers feel have helped?
- If there are significant differences between the performances of the three subjects, can teachers identify any features of organisation or teaching that contribute to success?
- Are any of the features particularly worthy of use across the school as a whole and, particularly, in the less successful subjects?
- Through locally formed associations of schools, or with the help of the LEA, can the school identify better performing schools in the group and ask "*how do they do that*"?
- In practice, how can networking with better performing schools best be built into the school's development plan?
- From the comparisons and discussions, what are the emerging priorities for each of the core subjects?
- Are any of these priorities worth adopting as a whole school issue?

SECTION 1C

NATIONAL VALUE ADDED INFORMATION

Using Pupil Level Results

The Purpose Of This Section

This section enables you to compare the progress made by individual pupils in your school with the progress made by pupils nationally between Key Stage 1 and Key Stage 2. Many studies confirm that prior attainment is by far the best predictor of a pupil's ultimate performance. By comparing your pupils' results in this way, you can get an indication of how well your school is performing in Key Stage 2 once Key Stage 1 attainment has been taken into account. This section also provides information that teachers can share with children's parents about expectations for achievement, to involve them in the target-setting process.

Changes From The 1998 Value Added Information

The value added lines are presented as pupils' average 1995 Key Stage 1 points score from reading, writing, spelling and number compared with the 'raw' **test marks** achieved in the 1999 Key Stage 2 English, mathematics and science tests. The Key Stage 2 level threshold marks are highlighted in the graphs. These more detailed analyses will enable schools to look more closely at the relative progress pupils have made in each of the core subjects.

Section Contents

The graphs in this section show the progress made by a nationally representative sample of pupils between the 1995 Key Stage 1 tests/tasks and the 1999 Key Stage 2 tests. The sample is representative of pupils in all maintained primary schools and special schools.

The value added analyses are presented in two ways:

- as value added lines (Graphs 3.1- 3.3); and
- as chances graphs (Figures 4.1- 4.4).

Graphs 3.1- 3.3 show separately the national progress line relating pupils' average 1995 Key Stage 1 test/task points score to their 1999 Key Stage 2 test marks in each of English, mathematics and science.

Figures 4.1- 4.4 show separately the national distributions of the Key Stage 2 levels achieved across the range of Key Stage 1 average test/task points scores in each of English, mathematics and science, and for Key Stage 2 average points score.

How To Use The Value Added Lines

In the graphs, the data on the horizontal axis represent pupils' attainment in terms of the average points score they achieved in the 1995 Key Stage 1 tests / tasks. The data on the vertical axis represents the same pupils' marks in each of the 1999 Key Stage 2 tests.

The solid line drawn on the graph shows the median pupils' Key Stage 2 attainment nationally for any average Key Stage 1 test / task points score starting point. The dotted lines show the Key Stage 2 attainment for pupils at the upper and lower quartiles⁷.

To use the graphs, plot each pupil's average 1995 Key Stage 1 test / task points score against the marks they achieved in the 1999 Key Stage 2 tests. For most pupils, their average points score will be calculated by dividing the sum of the scores for **reading, writing, spelling** and **mathematics** by four. The Technical Annex explains in more detail how to calculate the average points score for pupils who were, for example, absent for some of the test/tasks.

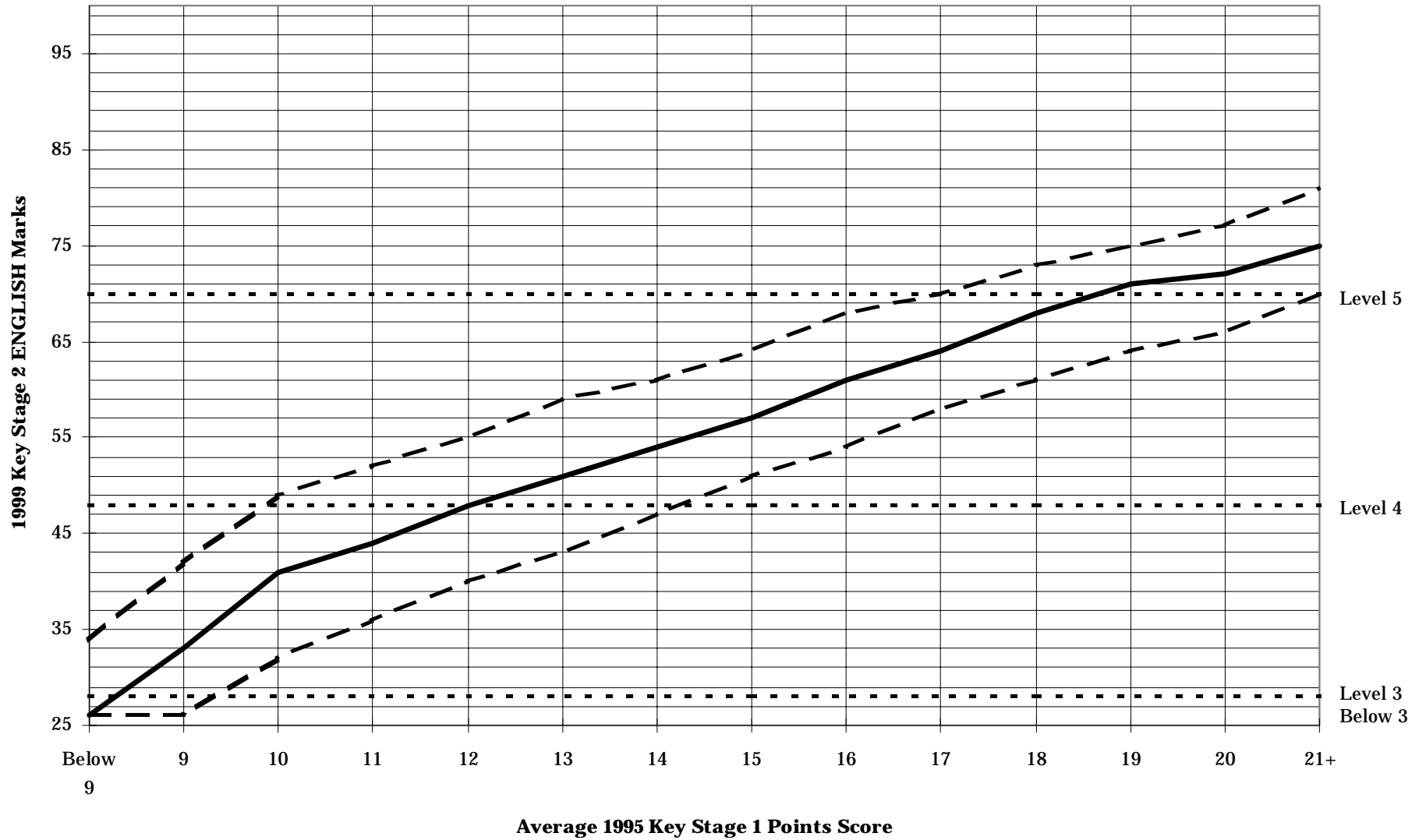
Key Stage 2 test marks for each subject are used, except for the small number of pupils whose test mark was below the threshold for Level 3: these pupils are placed in a "below Level 3" category, together with those pupils who did not take the test because they were working below Level 3.

Having plotted a group of pupils, you can identify those pupils who have made relatively good progress (those who appear at or above the upper quartile line), and others who have made relatively poor progress (those who appear below the lower quartile line).

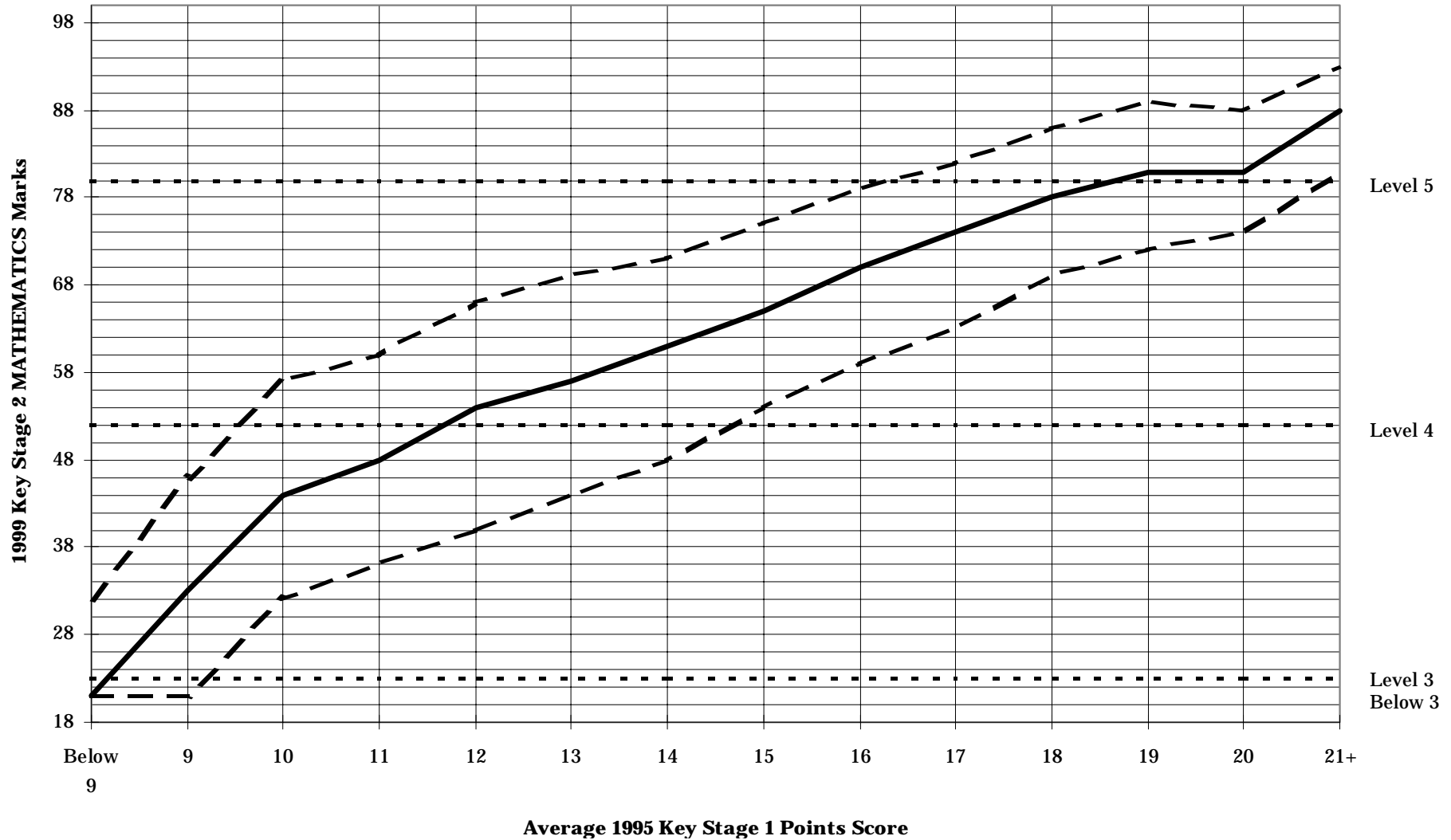
This value added information is retrospective, so it reveals how much progress pupils made in the past. The value added relationship is a reasonably stable one, however, so it can also be used predictively to help with setting targets for the future. One effective way of doing this is to use the chances graphs in the next section.

⁷ Definitions can be found in the Technical Annex.

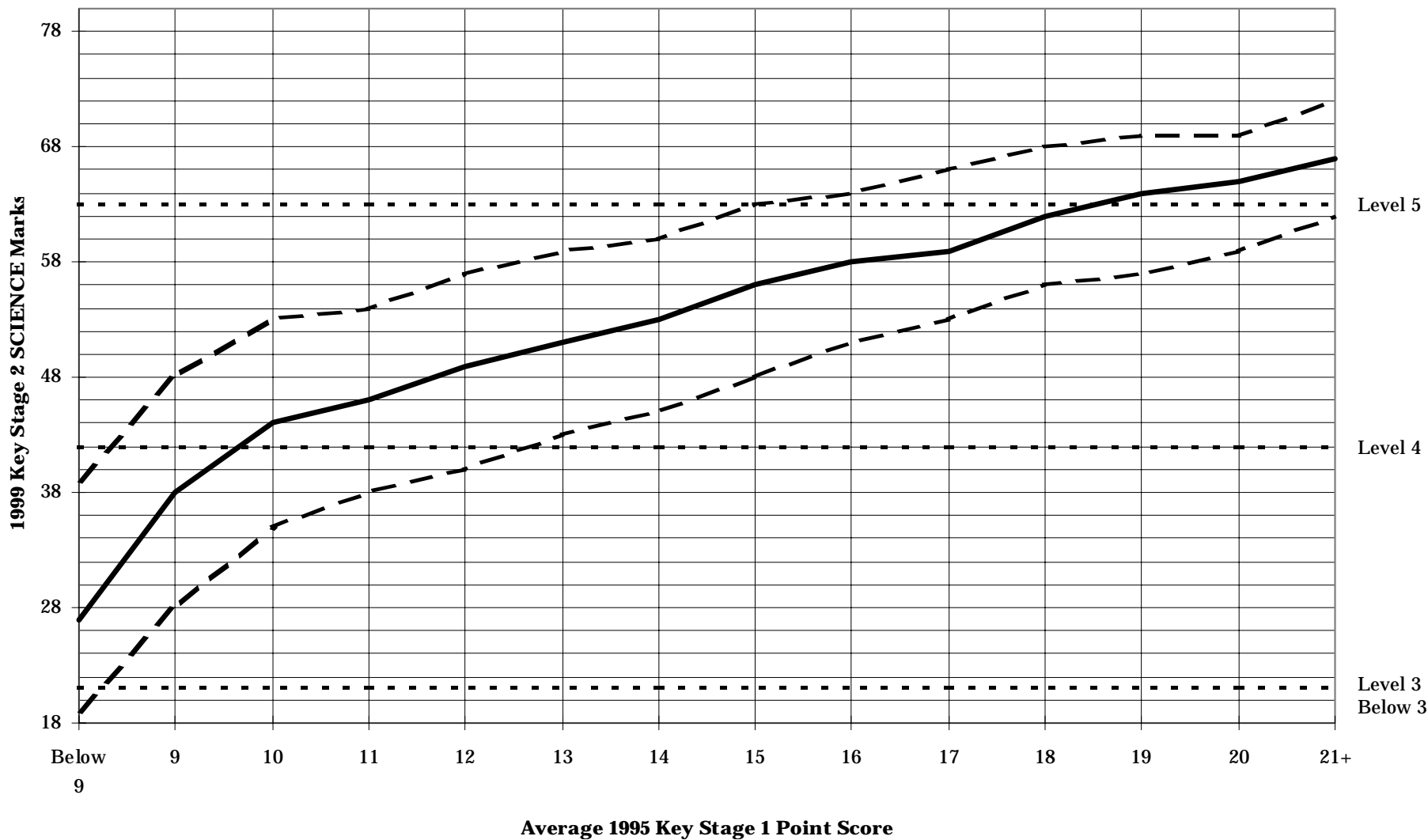
Graph 3.1 1999 Key Stage 2 ENGLISH Value Added Line



Graph 3.2 1999 Key Stage 2 MATHEMATICS Value Added Line



Graph 3.3 1999 Key Stage 2 SCIENCE Value Added Line



OPTIONAL ACTIVITIES

Optional Activity Three

Making Use of Value Added Information

Value added information enables you to compare the relative progress made by pupils in your school, with the progress pupils made nationally from the same starting point.

It can be helpful to make photocopies of the graphs. This will enable you to plot the results for different groups of pupils. The Technical Annex explains the measures you will need to calculate before plotting your pupils' progress on the graph.

When discussing the school's performance, it is helpful to probe reasons why pupils have made better or worse progress than expected, identifying priorities and strategies for improvement. Having plotted your results you can identify pupils who made relatively good progress and others who made relatively poor progress.

Some Questions to Consider Include:

- How does the progress made by pupils compare in different sets or classes?
- Have classes, sets or individual pupils made the same amount of progress? Are there any marked differences and if so can the teacher, and the pupils, think of any reasons?
- Have any pupils made unexpectedly good progress, or significantly less progress than expected?
- Are there any noticeable differences in the progress made by boys and girls in each class?
- How do teachers set their expectations of pupils at the beginning of Years 3, 4 and 5? Do pupils with high or low prior attainment generally make the progress expected of them?
- In those classes or groups where many pupils go on to make better than average progress, can teachers identify any features of teaching that they think particularly contribute to success?
- From the comparisons and discussions, what are the emerging priorities for the school?

How To Use Chances Graphs

The same information that is used to generate value added lines can be presented as chances graphs. The chances graphs in this section show the distribution of levels achieved at Key Stage 2 for groups of pupils with similar average Key Stage 1 points scores.

Each graph shows, for pupils with similar attainments in the 1995 end of Key Stage 1 tests/tasks, the distribution of their attainment in the 1999 Key Stage 2 tests. The header above each graph shows a range of pupils' prior attainments in the 1995 Key Stage 1 tests/tasks. The data on the horizontal (x) axis represents the levels these pupils attained in the 1999 Key Stage 2 tests. The vertical axis (y) shows the percentage of pupils attaining these levels in 1999.

This information can be used by teachers to help to establish their expectations about what individual pupils, or groups of pupils, now in Year 3 might go on to achieve at the end of Year 6. This process in turn can be used as the basis for setting challenging yet realistic targets for those children and classes. The Technical Annex describes how to calculate the relevant figures for your pupils.

Figure 4.1 1999 Chances Graphs for Key Stage 2 ENGLISH Test Level

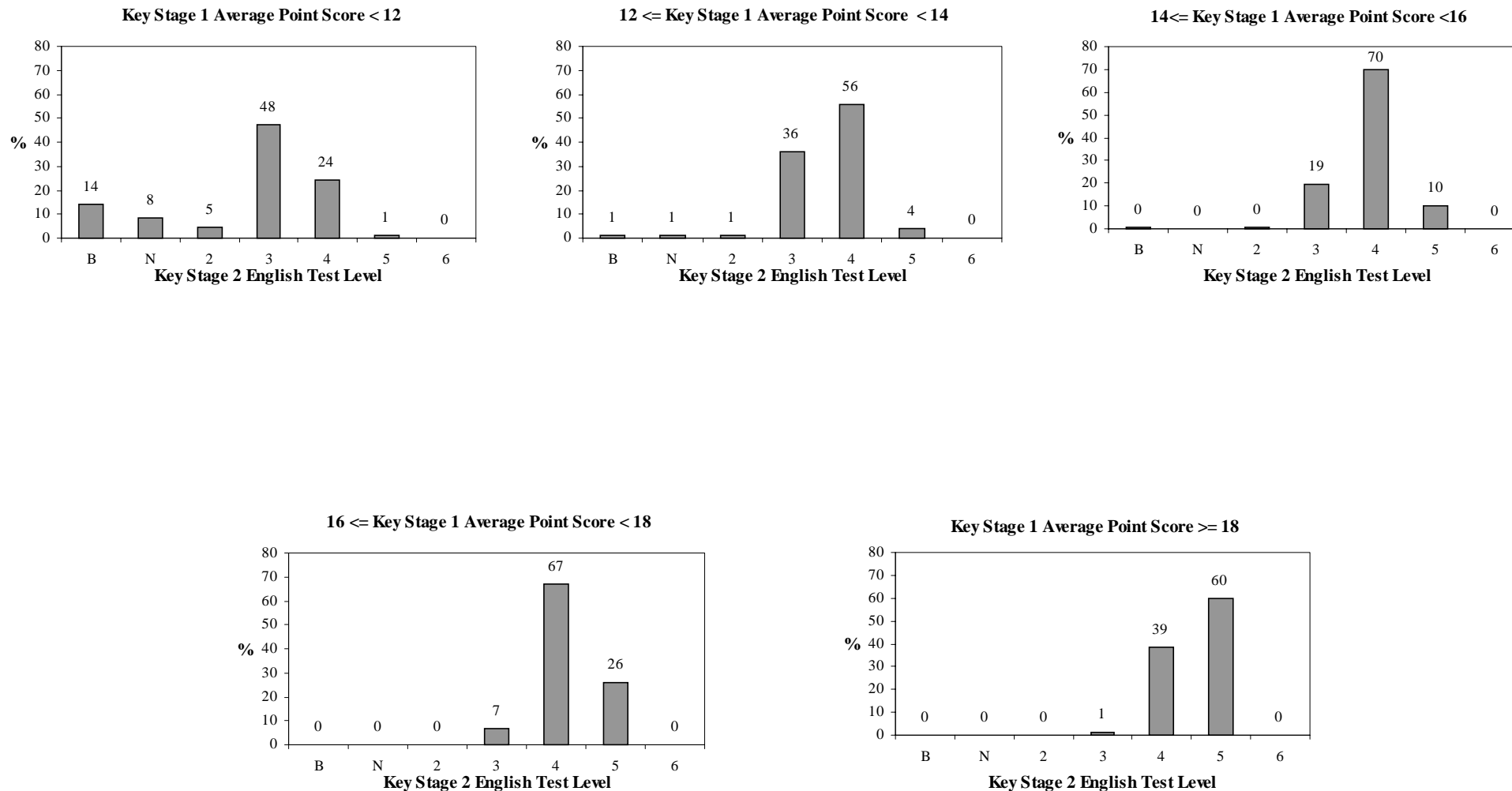


Figure 4.2 1999 Chances Graphs for Key Stage MATHEMATICS Test Level

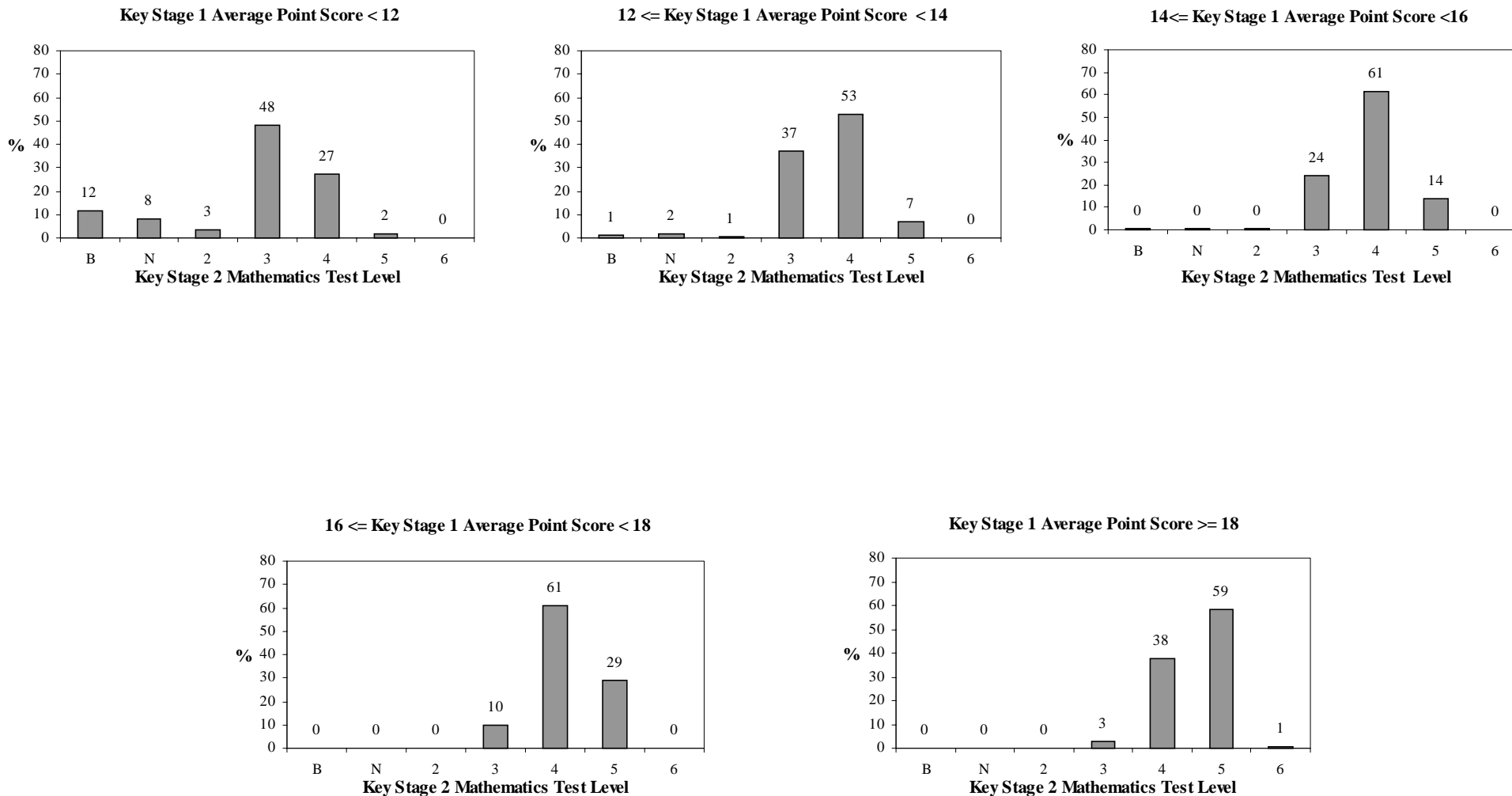


Figure 4.3 1999 Chances Graphs for Key Stage SCIENCE Test Level

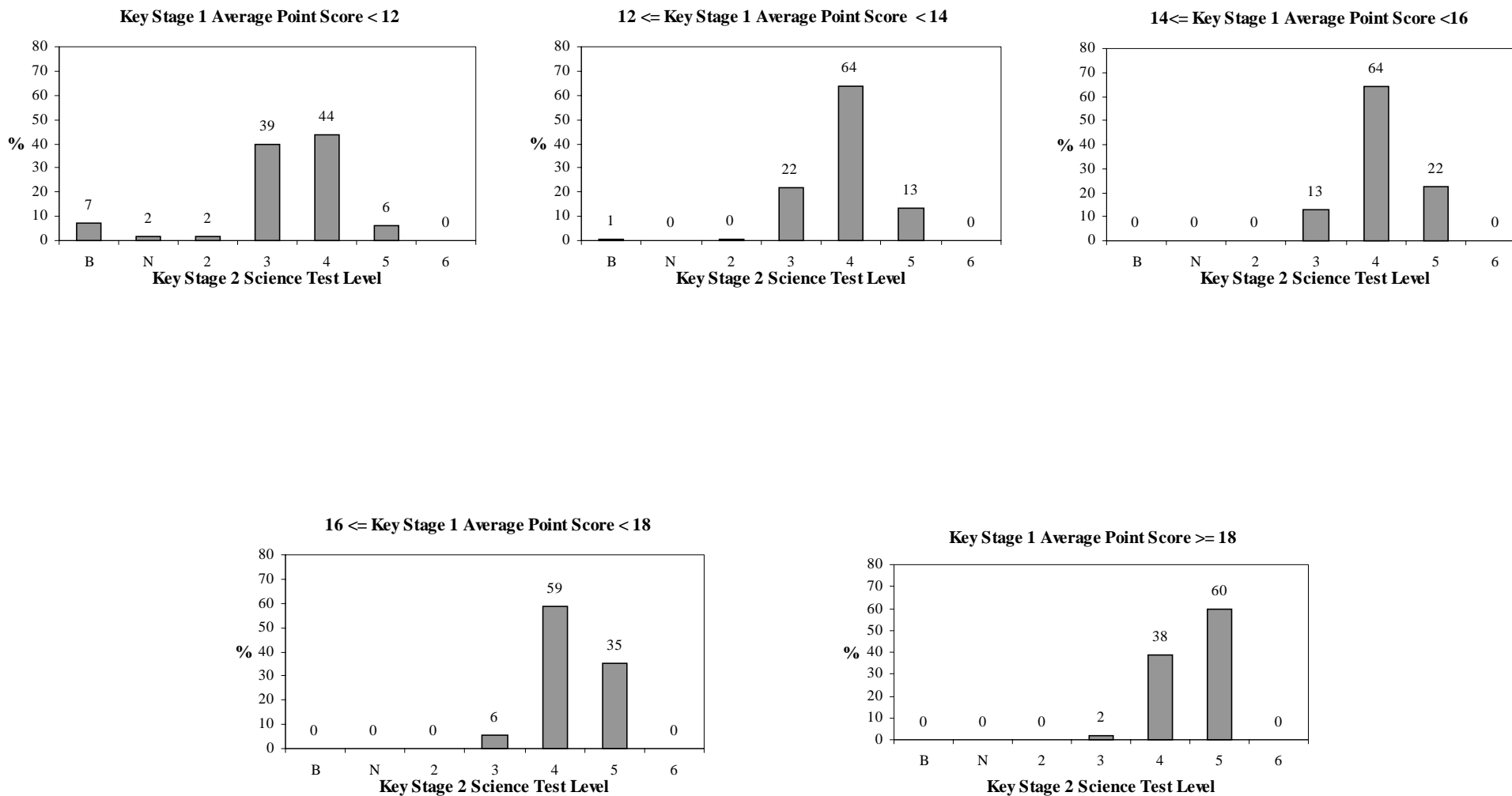
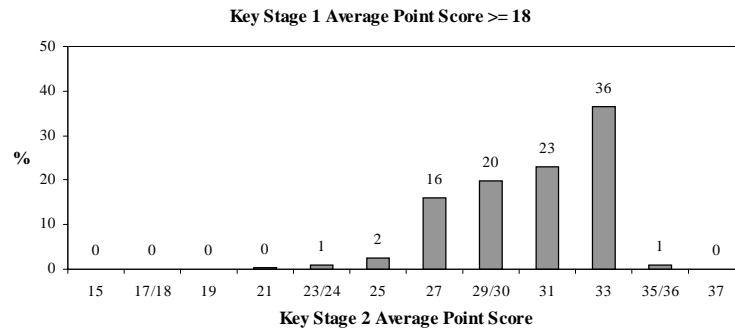
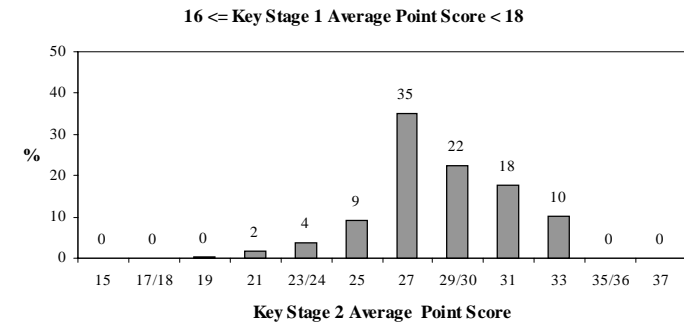
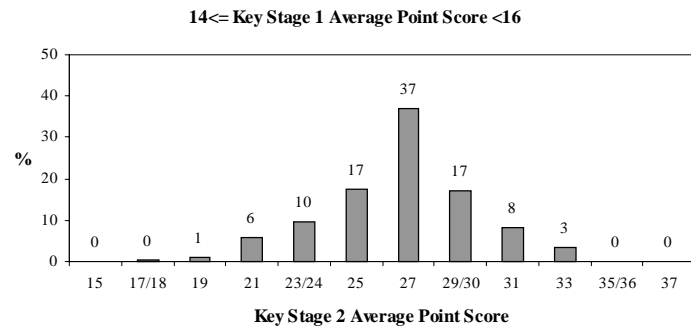
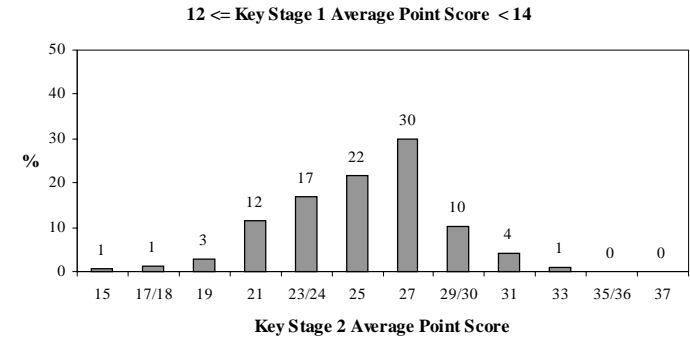
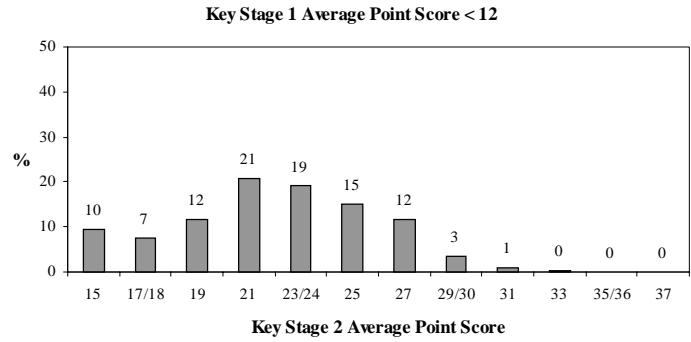


Figure 4.4 1999 Chances Graphs for Key Stage 2 Average Points Score



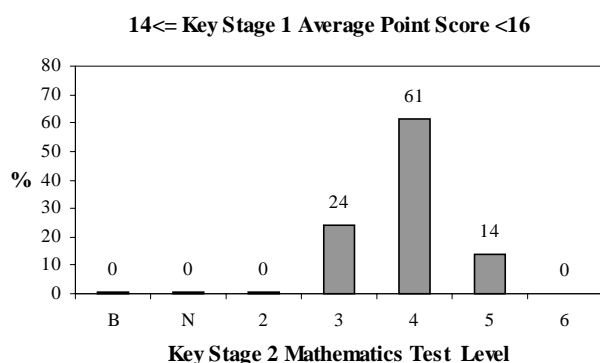
OPTIONAL ACTIVITIES

Optional Activity Four

Making Use of Chances Graphs

Each set of chances graphs shows, for pupils with similar attainments in the 1995 end of Key Stage 1 statutory tests/tasks, the distribution of their attainment in the 1999 Key Stage 2 statutory tests.

The Technical Annex explains how to calculate a pupil's average Key Stage 1 points score. The average is then used to select the appropriate chances graph. For example, if the pupil's average Key Stage 1 points score level is 15 the following graph is appropriate when looking at their Key Stage 2 mathematics level.



The graph shows that for the pupils who had a similar Key Stage 1 points score, 24% achieved Level 3 at Key Stage 2 and 61% achieved Level 4.

Knowing their pupils' average Key Stage 1 points score, teachers can use the information in the chances graphs to establish their expectations about what their pupils should go on to achieve. The information can also be useful during discussions with pupils' parents, when the graphs can be used as a focus to agree expectations of the child. These discussions could raise aspects of work that the pupil finds difficult or relatively easy. Sharing such information can be helpful for parents to know how they can support their children at home, and can be used by teachers when planning work for the child.

Questions for Teachers to Consider Include:

- How do parents' and pupils' expectations of future performance compare with the information shown in the chances graphs?
- If parents' and pupils' own expectations are low, can they identify any particular aspects of work they find difficult and would benefit from extra help?
- Taking into account the prior attainments of a group of pupils, how do teachers' forecasts and expectations for the group compare to what the chances graphs suggest the pupils could achieve?
- What are the reasons behind any low teacher expectations - what needs to be done, in the classroom or in other ways, to counter low expectations?

SECTION 2

OFSTED's Performance and Assessment Report (PANDA)

**To be distributed to schools
in early 2000**

SECTION 3

TECHNICAL ANNEX

A Introduction

This section:

- provides definitions of the various indicators used in the 1999 Key Stage 2 *Autumn Package*, for national results, benchmarking and value added purposes;
- shows you how to calculate the values of these measures for your school and, where relevant, for your pupils; and,
- tells you how the national figures have been compiled.

These calculations are necessary for you to make full use of the *Autumn Package* and the Optional Activities and will allow you to see how the achievements of your school, and of your pupils, compare with national performances. You may already have made some of these calculations, or have had them provided for you. Please read the associated definitions carefully, to ensure that you are using the correct calculations for *Autumn Package* analyses. Example calculations are provided in this annex.

Technical Annex: Full Contents

- A Introduction
- B Key Stage 2 performance measures: in which section are they used?
- C Calculation of percentage of pupils at Level 4 and above, and Level 5 and above in Key Stage 2 statutory tests
- D Points score equivalencies for Key Stage test levels, including;
 - specific points scores for each 1999 Key Stage 2 subject,
 - school average Key Stage 2 English, mathematics and science test points score for benchmarking,
 - average Key Stage 2 pupil points scores for value added chances graphs
- E Calculation of 1995 Key Stage 1 performance measures;
 - pupil measures for value added
 - school measures for prior attainment benchmarks
- F Calculation of free school meal context indicator (for benchmarking)
- G What do the expressions “median” and “quartiles” mean?
- H Further background on the national data behind the value added analyses

Important

The definitions of the Key Stage 2 measures quoted in this package are the same as those that appear in the Primary School Performance Tables.

The 1999 Key Stage 2 results provided by the National Data Collection Agency will be checked by DfEE with schools prior to publication in the Performance Tables. This happens every year. The summary data in this package may, therefore, be subject to minor amendments which will be reflected in the Performance Tables (due to be published in December 1999) and OFSTED PANDA analyses, which will be sent to you in early 2000 as part of this *Package*.

B 1999 Key Stage 2 Performance Measures: in Which Section Are They Used?

The three sections of the *Package* make use of the following measures of Key Stage 2 performance:-

Performance Measure	Relevant Section		
	National Results	Benchmarks	Value-added
percentage achieving Level 4 and above / English test	Yes	Yes	
percentage achieving Level 4 and above / mathematics test	Yes	Yes	
percentage achieving Level 4 and above / science test	Yes	Yes	
percentage achieving Level 4 and above / English teacher assessment	Yes		
percentage achieving Level 4 and above / mathematics teacher assessment	Yes		
percentage achieving Level 4 and above / science teacher assessment	Yes		
percentage achieving Level 5 and above / English test		Yes	
percentage achieving Level 5 and above / mathematics test		Yes	
percentage achieving Level 5 and above / science test		Yes	
Key Stage 2 test levels for English, mathematics and science	Yes		Yes
Key Stage 2 test marks for English, mathematics and science			Yes
Key Stage 2 teacher assessment subject levels for English, mathematics and science	Yes		
pupil average Key Stage 2 test points score			Yes
school average Key Stage 2 English test points score		Yes	
school average Key Stage 2 mathematics test points score		Yes	
school average Key Stage 2 science test points score		Yes	

To compare the results of pupils in your school with the value added information, you will need to calculate 1995 Key Stage 1 and 1999 Key Stage 2 performance measures for each pupil. To compare the results of pupils across your school with the national results and benchmarks, you will need to aggregate the individual pupil 1999 Key Stage 2 results to calculate a measure for your school. The examples below in sections C to E indicate how pupil measures should be calculated and, where necessary, how pupil data should be aggregated to compile school level measures.

C Calculation of Percentage of Pupils at Level 4 and Above and Level 5 and Above in Key Stage 2 English, Mathematics and Science Statutory Tests

The percentage of eligible pupils achieving Level 4 / Level 5 and above in the Key Stage 2 statutory tests in your school is defined as:

- the total number achieving Level 4 / Level 5 and above divided by the number of pupils eligible for assessment.

The number of pupils eligible for assessment is defined as all pupils - including those with special educational needs - who have reached the end of Key Stage 2. This is all pupils who are moving on to a Key Stage 3 Programme of Study in the next school year. Most, but not all, will have been aged 11 at the end of the school year.

Example

If, for example, a school had 7 eligible pupils, and 5 had English test results respectively of 3,3,4,4 and 5 with 1 pupil disapplied and 1 pupil absent;

- the percentage achieving Level 4 and above would be 3 divided by 7 multiplied by 100 = 42.86 = 43%.
- the percentage achieving Level 5 and above would be 1 divided by 7 multiplied by 100 = 14.29 = 14%

You will need to calculate these measures to compare your school with all schools nationally (in the national results section) and similar schools (in the benchmarks section).

D Points Score Equivalencies for Key Stage Test Levels

This part of the Annex gives the points scores to be assigned to the Key Stage 2 results underlying:

- the school average performance measures used in the benchmark section;
- the pupil average performance measure used in the value added changes graphs

Section E gives the points scores for the Key Stage 1 results underlying the pupil average Key Stage 1 measures used throughout the value added section to measure pupil progress since 1995 Key Stage 1.

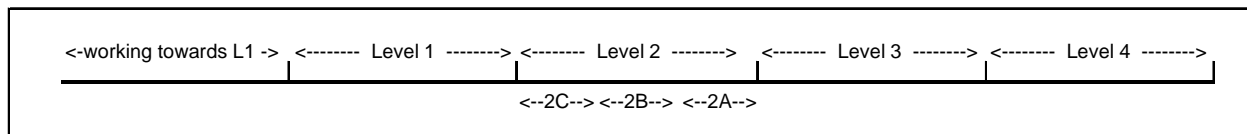
As we need to establish averages at both the pupil and the school level we need to be able to combine results from different subjects or across pupils. As we mentioned in last year's *Autumn Package* there is evidence that pupils who only achieve a Level 2C are unlikely to be making sufficient progress to achieve Level 4 at Key Stage 2. Within this year's *Autumn Package* for the purpose of benchmarking and value added, we are using results to a greater level of differentiation where these are available, in particular the disaggregation of Level 2 in Key Stage 1, with 2C being a low Level 2, 2B being a mid Level 2 and 2A a high Level 2. This greater level of differentiation should assist schools with their role in planning the progression of their pupils.

However, this means we can no longer simply use last year's method of assigning a value of "1" for Level 1 and "2" for Level 2, etc. and we need to establish a slightly more sophisticated mechanism for assigning points scores. For consistency, these changes are also being carried through to Key Stage 2 and Key Stage 3 averages.

The first section looks at the new general principles for assigning points scores in the *Autumn Package* which will be applied at all Key Stages and then separate tables are provided for individual subjects to take account of all the possible outcomes.

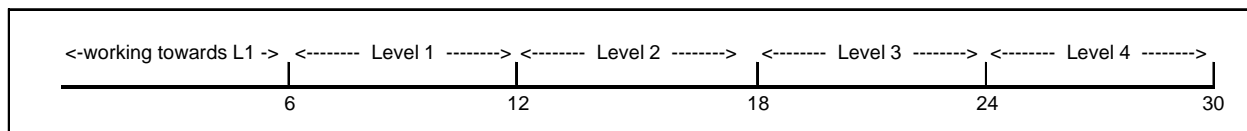
Assigning Points Scores to Levels

The performance of an individual pupil can be represented in terms of progress along a scale.

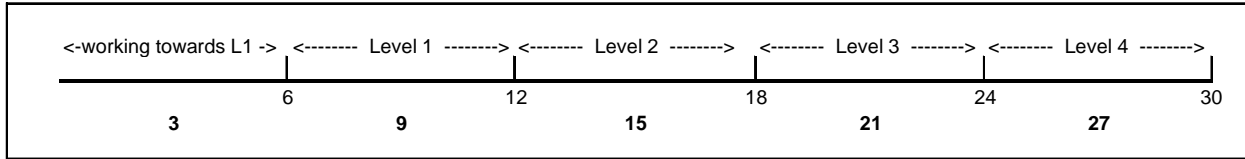


A level is achieved when performance exceeds the minimum threshold mark for that particular subject/level combination. Therefore a pupil at say Level 3 performance is somewhere between the minimum threshold for Level 3 and the minimum threshold for Level 4.

To assist in the process of determining averages we have assigned some values to the threshold of the levels.

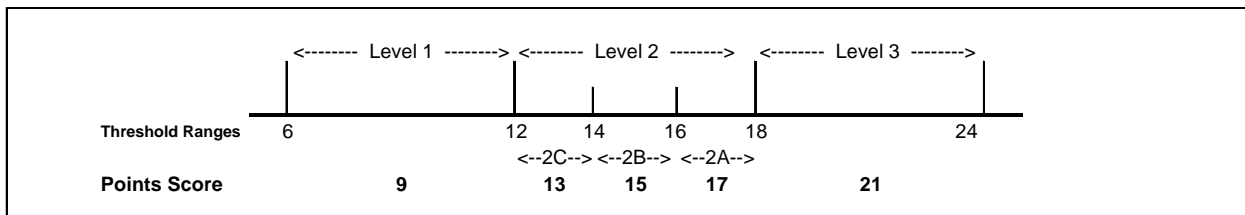


Since pupils will be distributed across the level we can similarly assign a points score equivalent to the mid-point of the relevant range.



Hence a Level 1 would be worth 9 points, and a Level 3 would be worth 21 points.

This idea can be extended to the differentiated breakdown of Level 2



(Note that in the cases where the differentiated level within Level 2 is not known, without any further information it would be appropriate to assign the value for the mid-point of the whole range, ie 15.)

Now if you need to average across subjects for an individual pupil (for value added purposes) or average across pupils to get a school average (for benchmark purposes), you simply add together the relevant point scores and divide by the number of subjects or pupils as appropriate.

Some Examples

The average of a Level 1 and a Level 3 would be $(9+21)/2 = 15$

The average of a Level 2C and a Level 2A would be $(13+17)/2 = 15$

The average of two Level 2C's and two Level 3s would be $(13+13+21+21)/4 = 17$

The average of two Level 4's and a Level 3 would be $(27+27+21)/3 = 25$

(there are more subject specific details in the following sections)

This method also allows one to map the resultant average back on to the scale, though one must be careful with the interpretation: in the first two examples above the average points score is within the Level 2B range, and in the third example the average points score is within the Level 2A range. In the fourth example, it is within the Level 4 range.

Specific Points Scores for Each 1999 Key Stage 2 Subject

1999 Key Stage 2 English, Mathematics and Science Tests:

Level	Points		
	English Test	Mathematics Test	Science Test
Absent (A)	Disregarded	Disregarded	Disregarded
Disapplied (D)	Disregarded	Disregarded	Disregarded
N	15	15	15
B	15	15	15
Level 2	15	15	15
Level 3	21	21	21
Level 4	27	27	27
Level 5	33	33	33
Level 6	39	39	39

These Key Stage 2 tests are designed for pupils who are working at Level 3 or above. Pupils who did not reach the threshold for Level 3 (i.e. Level 2 or N), and pupils not entered for the test (B) have been assigned a points score of 15, equivalent to the mid point of the Level 2 range.

School Average Key Stage 2 English, Mathematics and Science Test Points Score for Benchmarking

For English, mathematics and science, the Key Stage 2 average test points score achieved by a school is calculated by dividing the sum of the levels achieved for that test (using the equivalencies detailed in this section) across all eligible pupils by the total number of eligible pupils minus those pupils who were absent or disapplied. Absent pupils and, unlike last year, disapplied pupils are not included in the calculations as it is not possible to say what contribution these pupils make to the overall performance of the school.

Example

If, for example, a school had 7 eligible pupils, and 5 had English test results respectively of 3,3,4,4 and 5, with 1 pupil disapplied and 1 pupil absent;

- the average points score for English would be $21+21+27+27+33$ divided by 5 (any pupils being absent or disapplied from the test being disregarded, i.e. not included in this calculation) = $129/5 = 25.8$ (calculated to 1 decimal place)

You will need to calculate your school's average Key Stage 2 test points score for English, mathematics and science to compare your school with similar schools in the benchmarks section.

Average Key Stage 2 Pupil Points Score for Value Added Chances Graphs

The average Key Stage 2 points score achieved by a pupil is defined as their points score averaged over the core subjects of English, mathematics and science statutory tests (using the equivalencies detailed above). Where a pupil was absent or disapplied from a subject, the average is taken for the remaining subjects.

Examples

- a pupil awarded levels 3, 3 and 4 in the three subjects has an average points score achieved of $(21 + 21 + 27 = 69) / 3 = 23$
- a pupil awarded levels 3 and 4 in two subjects (and who was absent or disapplied from the third), has an average points score achieved of $(21 + 27 = 48) / 2 = 24$

A pupil absent or disapplied from all three Key Stage 2 statutory tests is excluded completely from the calculations relating to the value-added section of the package.

You will need to calculate each pupil's average Key Stage 2 test points score for use with the Key Stage 2 average points score chances graphs in the value added section.

E Calculation of 1995 Key Stage 1 Performance Measures:

The prior attainment benchmarks and the value added sections show national 1999 Key Stage 2 pupil performances in relation to 1995 pupil Key Stage 1 achievement. This section shows you how to calculate the Key Stage 1 measure used for individual pupils, and for schools, which is their *average Key Stage 1 points score*.

1995 Key Stage 1 Points Scores

The points scores to be assigned to individual levels of performance in each of the four 1995 Key Stage 1 test/tasks are shown in the table below:

Level	Points			
	Reading	Writing	Spelling	Mathematics
Absent (N)	Disregarded	Disregarded	Disregarded	Disregarded
Disapplied (S/T)	Disregarded	Disregarded	Disregarded	Disregarded
Working towards level 1 (W)	3	3	3	3
Level 1	9	9	9	9
Level 2C	13	-	13	13
Level 2B	15	-	15	15
Level 2A	17	-	17	17
Level 2 (undifferentiated)	-	15	-	-
Level 3	21	21	21	21
Level 4+	27	27	27	27

Average 1995 Key Stage 1 Points Score

Value Added

The average Key Stage 1 points score for a **pupil** - for use with the value added section - is the level averaged over their scores in the **reading, writing, spelling** and **mathematics** test/tasks. Where pupils were absent from one or two tests, the average for the **pupil** is the arithmetic average of their scores in the test/tasks they did sit. If a pupil was absent or disapplied from all four test/tasks, they are excluded completely from the graphs and charts.

Examples

- a pupil awarded Levels 2A in reading, 2 in writing, 2B in spelling and 3 in mathematics has an average points score of $(17 + 15 + 15 + 21 = 68)/4 = 17$
- a pupil awarded Levels 2C in reading, 1 in writing, 1 in spelling and who was absent from mathematics has an average points score of $(13 + 9 + 9 = 31)/3 = 10.3$

When plotting pupils against the national value added lines, the Key Stage 1 points scores are used to locate pupils along the horizontal axis, each value on the axis representing a group of pupils with similar start points. These groups are based on integer values between 9 and 20, so that for example group 15 contains pupils whose average points score is within the range 15.00 to 15.99. Separate groups are shown for pupils with Key Stage 1 points scores of below 9, and those with 21 and above. You should use each pupil's average points score to assign them to the appropriate group, rounding down where necessary, then plot them on the corresponding vertical gridline.

When using the value added chances graphs, the Key Stage 1 points scores are used to locate the appropriate chances graph for each pupil. The range of points scores for each chances graph is shown in its header.

Benchmarks

To calculate the average 1995 Key Stage 1 points score for the **school**:-

- first, calculate an average points score across all pupils, for each of the four test/tasks separately, using the scoring system in the above table. Then;
- compute the arithmetic average for the Key Stage 1 points score from the four individual test/task average points scores.

Example

- a school with average points scores in each of the four test/tasks of 15.4, 13.0, 12.0 and 11.8 respectively would have an average Key Stage 1 points score of $(15.4 + 13.0 + 12.0 + 11.8)/4 = 13.1$

For prior attainment benchmarking, each school (with both 1995 Key Stage 1 and 1999 Key Stage 2 results) has been placed into one of 5 school level Key Stage 1 average points score bands. These correspond to attainment characterised at pupil performance by; below Level 2C, Level 2C, Level 2B, Level 2A and Level 3 and above. For each of these 1995 Key Stage 1 average points score bands, we have shown the 1999 distributions of the proportions of pupils gaining Level 4 and above, Level 5 and above, and average Key Stage 2 points score in each of English, mathematics and science.

F Calculation of Free School Meal Context Indicator for Performance Benchmarks

Information on the total numbers of pupils 'known to be eligible for free school meals (FSM)' is returned each year by maintained schools to the Department's Annual Schools' Census (Form 7). These numbers were used, in relation to total pupils on roll, to compile the FSM indicator which grouped schools for the 1998 performance benchmark comparisons.

Many schools - and some Local Education Authorities - subsequently expressed their concern to the Department and OFSTED that the calculation of the FSM indicator in this way did not give a fair comparison of disadvantage for their school. These schools said that part-time pupils (and of pupils of post-compulsory school age) were less likely to have their FSM eligibility confirmed with their school or local authority.

Lack of comparability in the values of the FSM measure could disadvantage schools in 3 key ways:-

- all schools would set targets from an inappropriate benchmark baseline
- OFSTED inspectors would have a less robust view of schools' performance
- parents and governors would not see as fair an assessment of their school's performance in an OFSTED inspection, or their own annual, report

To meet these concerns, the Department successfully collected from all primary schools with part-time pupils (and all secondary schools with pupils post compulsory school age), the numbers of pupils with those descriptions which had already been included in their 1999 Form 7 return as '*known to be eligible for FSM*'.

This data supported the contention and accordingly the FSM indicator for this year's benchmarks is different from that of last year. For primary schools, the indicator for the 1999 benchmarks is defined as:-

- the numbers of full-time pupils '*known to be eligible for FSM*' divided by the total numbers of full-time pupils on roll (less the numbers of any full-time boarding pupils, if any)

These definitional amendments will allow fairer performance comparisons between the 14,685 primary schools with both KS2 results and FSM data where, as last year, schools have been placed into one of 5 groups based on the values of the FSM indicator. The numbers of schools within each FSM band are given in Figure 1 of the benchmark section.

The performance benchmarks have been founded again this year on numbers of pupils '*known to be eligible for FSM*' collected by Form 7. The academic performances of pupils with lower levels of English acquisition (EAL), of some pupils with statements of educational need (SEN), and of pupils which have a chequered history of moving school will typically be lower than pupils without those attributes.

Schools with disproportionate numbers of pupils in one or more of these three categories may exhibit a different performance profile than other schools, and a lower level of performance overall in comparison with schools having broadly similar levels of socio-economic disadvantage as measured by the free school meals indicators.

Although, nationally, the statistical associations at school-level between performance and measures of EAL and SEN after adjustment for FSM are low (and hence do not feature in benchmarks), schools may wish, after comparing their performance overall with other schools in the same FSM category, to consider separately the attainments of particular groups of their pupils.

G What Do the Expressions “Median” and “Quartiles” Mean?

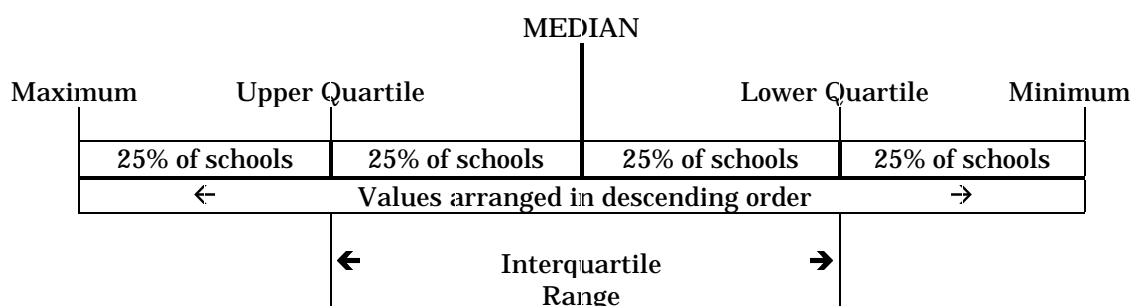
The benchmark and value added sections refer to the terms median and quartile. These can be used with any ordered sequence of scores or levels (whether they be pupil or school based) and assist in identifying where a school or pupils lies in relation to others. They are defined as follows:

Median: The median for any particular assessment is the score/level for which half of the relevant pupils or schools achieved a higher result and half achieved a lower result.

Upper Quartile: The upper quartile for any particular assessment is the score/level for which 25% of the relevant pupils or schools achieved a higher result.

Lower Quartile: The lower quartile for any particular assessment is the score/level for which 25% of the relevant pupils or schools achieved a lower result.

Illustration



The benchmark tables additionally include the performances of schools at other points in the distribution. Thus, attainment of schools at the:

- 95th percentile
- 60th percentile
- 40th percentile
- 5th percentile

are shown as ‘95%’, ‘60%’, ‘40%’ and ‘5%’ respectively in the tables. Schools whose performances were at the 40th and 60th percentiles have attainments which are just below, and just above, that of the median.

H Further Background on the National Data Behind the Value Added Analyses

The value added information in this *Package* details the relationship between pupils' performance at Key Stage 2 statutory tests given their average level across the statutory tests/tasks at Key Stage 1.

The analysis is based on a nationally representative sample of about 30,000 pupils who were assessed at both Key Stage 2 in 1999 and Key Stage 1 in 1995. Although there was no national collection of Key Stage 1 data in 1995, several LEAs have kept electronic records. These records were matched to Key Stage 2 1999 results to produce the sample of matched pupil records. The pupils in the sample are representative of all pupils nationally in terms of their gender, region, local education authority type, school size and type, and Key Stage test results. Therefore the analysis covers all schools in England including special schools who took part in the National Curriculum assessments.

The Key Stage 1 measure used is the average test/task points score across reading, writing, spelling and mathematics. The Key Stage 2 measures used for the national value added lines are individual English, mathematics and science test marks. The Key Stage 2 measures used in the chances graphs are the pupil's average point score across English, mathematics and science and their individual English, mathematics and science levels. The definition of these measures are given in Sections D and E of this Annex.

The average Key Stage 1 test/task measure has been used after consideration of the final report of the Value Added National Project commissioned by SCAA (now QCA) which recommended that "the best basis for prediction was provided by the average of prior attainment measures."

Key Stage 1 test/task levels are used because the Value Added National Project also recommended that teacher assessments should not be used for value added purposes. The Second Primary Technical Report of the project showed evidence that the relationship between teacher assessment levels and test/task levels varied from school to school in each of the three curriculum areas. The differences were highly significant statistically.

SECTION 4

APPENDIX: USEFUL CONTACTS

General Information

For general information please contact:

DfEE

Pupil Performance Team,
School Effectiveness Division,
Standards and Effectiveness Unit,
DfEE, Sanctuary Buildings,
London.

SW1P 3BT

Telephone number: 0171 925 5119

email: autumn.package@dfee.gov.uk

Analytical Services Division,
4th Floor, Sanctuary Buildings,
Great Smith Street,
London.

SW1P 3BT

Telephone number: 0171 925 5810

Qualifications and Curriculum Authority (QCA)

Assessment Division:

29 Bolton Street,
London.

W1Y 7PD

Telephone number: 0171 509 5555

OFSTED

Alexandra House,
33 Kingsway,
London.

WC2B 6SE

Telephone number: 0171 421 6800

PANDA Helpline: 0171 421 6840 or 0171 421 6633

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