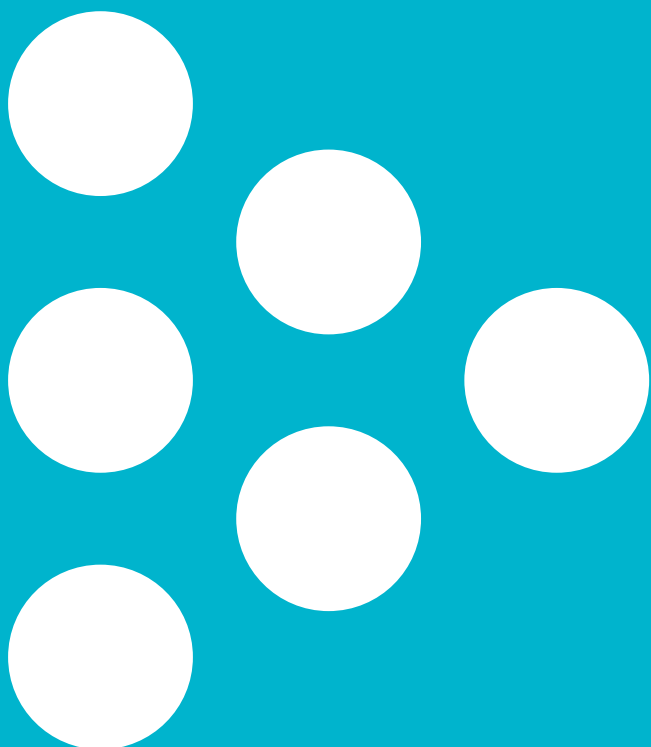# Technical Report

## Technical Information for NFER Tests in Reading, Mathematics and Grammar and Punctuation Suite 2 (Spring)

# Technical Information for NFER Tests in Reading, Mathematics and Grammar and Punctuation Suite 2 (Spring)

## Centre for Assessment

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# Contents

# 1 Introduction

In 2013, NFER produced a suite of reading and mathematics tests for schools to use with years 3, 4 and 5 to help inform teacher assessment. These assessments were very positively received.

Following the introduction of the new national curriculum in 2014 and the abolition of the eight-level scale of assessment, a new suite of tests has been developed. The design of these tests reflects the changes to the model of assessment used at the end of key stage 2 from 2016. The suite consists of three series of tests; one intended for the use at the end of each term.

# 2 Early development of texts and items

Following the initial development of texts / contexts and items (questions) by the researchers at NFER, informal trialling was conducted at a variety of primary schools. Informal trialling involves discussing the texts and / or items with small groups of pupils and gathering information on how these can be improved. This provides early feedback on the appropriateness of the texts and items, contributes to an informed review of the materials and influences the selection of items in preparation for the standardisation trial.

Teacher feedback is very important in the development of NFER tests. Not only is teacher input gathered on the early versions of the materials during informal trialling but it is also collected through a questionnaire completed by teachers taking part in the large scale standardisation trial. This questionnaire gathers teacher feedback on different aspects of the tests; this information is very useful in refining the materials and informing the selection of items that comprise the final tests.

In addition to feedback from teachers, the materials were reviewed by inclusion and subject experts. This allows us to ensure that, as far as possible, the tests are appropriate for the pupils who will be taking them.

# 3 Sample characteristics

The NFER tests in reading, mathematics and grammar and punctuation suite 2 (spring) were standardised in March 2017 with a sample of schools from across England. The standardisation sample was stratified according to the following characteristics:

- KS2 overall performance band 2015 (average point score)

- Primary school type

- School governance

- Region

In order to ensure the characteristics of the schools included in the standardisation sample were representative nationally, school level characteristics were compared with the national population and chi-square significance tests were conducted. The achieved sample representation across the above characteristics are shown and compared with the national population in Tables 1 to 9. The gender breakdown of the sample is shown in Table 10.

The samples were representative of the national population in all four of the above stratification characteristics at the school level.

## Table 1: Representation of the sample at school level - Year 3 reading

| | | population | | sample | |
|---|---|---|---|---|---|
| | | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 13 | 19 |
| | 2nd lowest 20% | 2743 | 18 | 13 | 19 |
| | Middle 20% | 2479 | 16 | 12 | 18 |
| | 2nd highest 20% | 2626 | 17 | 12 | 18 |
| | Highest 20% | 3023 | 20 | 12 | 18 |
| | missing | 1723 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 59 | 87 |
| | Junior | 1072 | 7 | 4 | 6 |
| | Middle deemed Primary | 14 | 0 | 0 | 0 |
| | Independent schools | 1167 | 8 | 5 | 7 |
| | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 15 | 22 |
| | Maintained | 11107 | 72 | 48 | 71 |
| | Independent | 1167 | 8 | 5 | 7 |
| Region | North | 4662 | 30 | 18 | 26 |
| | Midlands | 4684 | 30 | 19 | 28 |
| | South | 6022 | 39 | 31 | 46 |
| Total schools | | 15368 | 100 | 68 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 2: Representation of the sample at school level - Year 4 reading

| | | population | | sample | |
|---|---|---|---|---|---|
| | | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 12 | 18 |
| | 2nd lowest 20% | 2743 | 18 | 14 | 21 |
| | Middle 20% | 2479 | 16 | 12 | 18 |
| | 2nd highest 20% | 2626 | 17 | 10 | 15 |
| | Highest 20% | 3023 | 20 | 13 | 19 |
| | missing | 1723 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 59 | 88 |
| | Junior | 1072 | 7 | 3 | 4 |
| | Middle deemed Primary | 14 | 0 | 0 | 0 |
| | Independent schools | 1167 | 8 | 5 | 7 |
| | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 17 | 25 |
| | Maintained | 11107 | 72 | 45 | 67 |
| | Independent | 1167 | 8 | 5 | 7 |
| Region | North | 4662 | 30 | 18 | 27 |
| | Midlands | 4685 | 30 | 21 | 31 |
| | South | 6021 | 39 | 28 | 42 |
| Total schools | | 15368 | 100 | 67 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 3: Representation of the sample at school level - Year 5 reading

| | | population | | sample | |
|---|---|---|---|---|---|
| | | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 13 | 19 |
| | 2nd lowest 20% | 2746 | 18 | 15 | 22 |
| | Middle 20% | 2480 | 16 | 12 | 18 |
| | 2nd highest 20% | 2626 | 17 | 9 | 13 |
| | Highest 20% | 3023 | 20 | 13 | 19 |
| | missing | 1722 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 59 | 87 |
| | Junior | 1072 | 7 | 3 | 4 |
| | Middle deemed Primary | 18 | 0 | 0 | 0 |
| | Independent schools | 1166 | 8 | 6 | 9 |
| | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 16 | 24 |
| | Maintained | 11111 | 72 | 46 | 68 |
| | Independent | 1166 | 8 | 6 | 9 |
| Region | North | 4662 | 30 | 18 | 26 |
| | Midlands | 4689 | 31 | 20 | 29 |
| | South | 6020 | 39 | 30 | 44 |
| Total schools | | 15371 | 100 | 68 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 4: Representation of the sample at school level - Year 3 maths

| | | population | | sample | |
|---|---|---|---|---|---|
| | | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 13 | 19 |
| | 2nd lowest 20% | 2743 | 18 | 14 | 20 |
| | Middle 20% | 2479 | 16 | 12 | 17 |
| | 2nd highest 20% | 2626 | 17 | 12 | 17 |
| | Highest 20% | 3023 | 20 | 13 | 19 |
| | missing | 1723 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 61 | 87 |
| | Junior | 1072 | 7 | 4 | 6 |
| | Middle deemed Primary | 14 | 0 | 0 | 0 |
| | Independent schools | 1167 | 8 | 5 | 7 |
| | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 15 | 21 |
| | Maintained | 11107 | 72 | 50 | 71 |
| | Independent | 1167 | 8 | 5 | 7 |
| Region | North | 4662 | 30 | 18 | 26 |
| | Midlands | 4684 | 30 | 21 | 30 |
| | South | 6022 | 39 | 31 | 44 |
| Total schools | | 15368 | 100 | 70 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 5: Representation of the sample at school level - Year 4 maths

| | | population | | sample | |
|---|---|---|---|---|---|
| | | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 12 | 18 |
| | 2nd lowest 20% | 2743 | 18 | 13 | 19 |
| | Middle 20% | 2479 | 16 | 13 | 19 |
| | 2nd highest 20% | 2626 | 17 | 11 | 16 |
| | Highest 20% | 3023 | 20 | 12 | 18 |
| | missing | 1723 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 58 | 87 |
| | Junior | 1072 | 7 | 4 | 6 |
| | Middle deemed Primary | 14 | 0 | 0 | 0 |
| | Independent schools | 1167 | 8 | 5 | 7 |
| | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 16 | 24 |
| | Maintained | 11107 | 72 | 46 | 69 |
| | Independent | 1167 | 8 | 5 | 7 |
| Region | North | 4662 | 30 | 18 | 27 |
| | Midlands | 4685 | 30 | 19 | 28 |
| | South | 6021 | 39 | 30 | 45 |
| Total schools | | 15368 | 100 | 67 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 6: Representation of the sample at school level - Year 5 maths

|  |  | population | | sample | |
|---|---|---|---|---|---|
|  |  | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 12 | 18 |
|  | 2nd lowest 20% | 2746 | 18 | 14 | 21 |
|  | Middle 20% | 2480 | 16 | 13 | 19 |
|  | 2nd highest 20% | 2626 | 17 | 11 | 16 |
|  | Highest 20% | 3023 | 20 | 12 | 18 |
|  | missing | 1722 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 58 | 85 |
|  | Junior | 1072 | 7 | 4 | 6 |
|  | Middle deemed Primary | 18 | 0 | 0 | 0 |
|  | Independent schools | 1166 | 8 | 6 | 9 |
|  | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 16 | 24 |
|  | Maintained | 11111 | 72 | 46 | 68 |
|  | Independent | 1166 | 8 | 6 | 9 |
| Region | North | 4662 | 30 | 18 | 26 |
|  | Midlands | 4689 | 31 | 19 | 28 |
|  | South | 6020 | 39 | 31 | 46 |
| Total schools |  | 15371 | 100 | 68 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 7: Representation of the sample at school level - Year 3 grammar and punctuation

|  |  | population | | sample | |
|---|---|---|---|---|---|
|  |  | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 13 | 19 |
|  | 2nd lowest 20% | 2743 | 18 | 13 | 19 |
|  | Middle 20% | 2479 | 16 | 12 | 18 |
|  | 2nd highest 20% | 2626 | 17 | 11 | 16 |
|  | Highest 20% | 3023 | 20 | 12 | 18 |
|  | missing | 1723 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 58 | 87 |
|  | Junior | 1072 | 7 | 4 | 6 |
|  | Middle deemed Primary | 14 | 0 | 0 | 0 |
|  | Independent schools | 1167 | 8 | 5 | 7 |
|  | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 15 | 22 |
|  | Maintained | 11107 | 72 | 47 | 70 |
|  | Independent | 1167 | 8 | 5 | 7 |
| Region | North | 4662 | 30 | 18 | 27 |
|  | Midlands | 4684 | 30 | 19 | 28 |
|  | South | 6022 | 39 | 30 | 45 |
| Total schools |  | 15368 | 100 | 67 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 8: Representation of the sample at school level - Year 4 grammar and punctuation

| | | population | | sample | |
|---|---|---|---|---|---|
| | | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 12 | 18 |
| | 2nd lowest 20% | 2743 | 18 | 14 | 21 |
| | Middle 20% | 2479 | 16 | 12 | 18 |
| | 2nd highest 20% | 2626 | 17 | 9 | 14 |
| | Highest 20% | 3023 | 20 | 13 | 20 |
| | missing | 1723 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 58 | 88 |
| | Junior | 1072 | 7 | 3 | 5 |
| | Middle deemed Primary | 14 | 0 | 0 | 0 |
| | Independent schools | 1167 | 8 | 5 | 8 |
| | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 17 | 26 |
| | Maintained | 11107 | 72 | 44 | 67 |
| | Independent | 1167 | 8 | 5 | 8 |
| Region | North | 4662 | 30 | 18 | 27 |
| | Midlands | 4685 | 30 | 21 | 32 |
| | South | 6021 | 39 | 27 | 41 |
| Total schools | | 15368 | 100 | 66 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 9: Representation of the sample at school level - Year 5 grammar and punctuation

| | | population | | sample | |
|---|---|---|---|---|---|
| | | **Number** | **%** | **Number** | **%** |
| KS2 overall performance band 2015 (av. point score) | Lowest 20% | 2774 | 18 | 12 | 18 |
| | 2nd lowest 20% | 2746 | 18 | 15 | 22 |
| | Middle 20% | 2480 | 16 | 12 | 18 |
| | 2nd highest 20% | 2626 | 17 | 9 | 13 |
| | Highest 20% | 3023 | 20 | 13 | 19 |
| | missing | 1722 | 11 | 6 | 9 |
| Primary school type | Infant & Junior (Primary) | 13018 | 85 | 58 | 87 |
| | Junior | 1072 | 7 | 3 | 4 |
| | Middle deemed Primary | 18 | 0 | 0 | 0 |
| | Independent schools | 1166 | 8 | 6 | 9 |
| | All Through school | 97 | 1 | 0 | 0 |
| School governance | Academy or Free school | 3094 | 20 | 16 | 24 |
| | Maintained | 11111 | 72 | 45 | 67 |
| | Independent | 1166 | 8 | 6 | 9 |
| Region | North | 4662 | 30 | 18 | 27 |
| | Midlands | 4689 | 31 | 19 | 28 |
| | South | 6020 | 39 | 30 | 45 |
| Total schools | | 15371 | 100 | 67 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

## Table 10: Representation of the sample at pupil level: gender

|  |  | population | sample |  |
|---|---|---|---|---|
|  |  | % | Number | % |
| **Reading** | **Boys** | 51 | 2322 | 51 |
|  | **Girls** | 49 | 2220 | 49 |
|  | **Total** | 100 | 4542 | 100 |
| **Maths** | **Boys** | 51 | 2389 | 50 |
|  | **Girls** | 49 | 2321 | 49 |
|  | **Total** | 100 | 4737 | 100 |
| **Grammar and punctuation** | **Boys** | 51 | 2279 | 51 |
|  | **Girls** | 49 | 2190 | 49 |
|  | **Total** | 100 | 4470 | 100 |

Since percentages are rounded to the nearest integer, they may not always sum to 100.

# 4 Whole test functioning

The following tables provide information on the overall functioning of each test separately by year group.

## Table 11: Whole test functioning by test: Year 3

|  | Year 3 reading | Year 3 mathematics arithmetic paper | Year 3 mathematics Test 1 | Year 3 mathematics Test 2 | Year 3 grammar and punctuation |
|---|---|---|---|---|---|
| Standardisation sample *n* | 1537 | 1609 | 1601 | 1600 | 1502 |
| Reliability (Cronbach's alpha) | 0.921 | 0.916 | 0.854 | 0.830 | 0.872 |
| Maximum score | 35 | 30 | 25 | 25 | 30 |
| Mean | 20.46 | 14.41 | 10.69 | 10.02 | 13.80 |
| Median | 22.00 | 14.00 | 10.00 | 9.00 | 14.00 |
| Standard deviation | 9.23 | 7.47 | 5.64 | 5.20 | 6.42 |

## Table 12: Whole test functioning by test: Year 4

|  | Year 4 reading | Year 4 mathematics arithmetic paper | Year 4 mathematics Test 1 | Year 4 mathematics Test 2 | Year 4 grammar and punctuation |
|---|---|---|---|---|---|
| Standardisation sample *n* | 1500 | 1512 | 1512 | 1510 | 1489 |
| Reliability (Cronbach's alpha) | 0.902 | 0.925 | 0.882 | 0.879 | 0.869 |
| Maximum score | 40 | 35 | 30 | 30 | 35 |
| Mean | 20.07 | 17.24 | 13.05 | 13.81 | 14.41 |
| Median | 21.00 | 17.00 | 12.00 | 13.00 | 14.00 |
| Standard deviation | 9.08 | 8.79 | 6.94 | 7.26 | 6.97 |

Public

## Table 13: Whole test functioning by test: Year 5

| | Year 5 reading | Year 5 mathematics arithmetic paper | Year 5 mathematics Test 1 | Year 5 mathematics Test 2 | Year 5 grammar and punctuation |
|---|---|---|---|---|---|
| Standardisation sample *n* | 1507 | 1516 | 1516 | 1508 | 1479 |
| Reliability (Cronbach's alpha) | 0.871 | 0.937 | 0.893 | 0.905 | 0.894 |
| Maximum score | 44 | 40 | 35 | 35 | 40 |
| Mean | 23.00 | 18.87 | 15.07 | 15.20 | 17.85 |
| Median | 23.00 | 18.00 | 13.00 | 14.00 | 18.00 |
| Standard deviation | 8.82 | 10.15 | 8.05 | 8.51 | 8.09 |

# 5  Item level functioning

## Item level statistics

Information about item functioning is available in the question analysis spreadsheets. These are downloadable from the NFER portal for purchasers of the tests.

## Differential item functioning

Differential item functioning (DIF) analysis, classified separately for gender and EAL, was carried out to identify observed differences in performance on each test. Differential item functioning identifies particular items for which two groups (e.g. girls and boys) perform differently above and beyond the disparity in their achievement on the test as a whole.

The following tables present the outcomes of the DIF analyses, showing the questions where statistical differences between groups have been identified. It is important to note that these statistical differences do not necessarily indicate that a particular question is globally biased towards one group or the other (e.g. gender), but may reflect genuine differences in performance for this sample of pupils.

Public

**Table 14: Differential item functioning for gender: reading (Years 3, 4 and 5)**

|         | Question number | DIF favours |
|---------|-----------------|-------------|
| Year 3  | Q2              | Boys**      |
|         | Q3              | Girls*      |
|         | Q16             | Girls*      |
|         | Q19             | Girls*      |
|         | Q22             | Girls*      |
| Year 4  | Q6b             | Girls*      |
|         | Q17             | Boys***     |
|         | Q18b            | Boys*       |
|         | Q19             | Girls*      |
|         | Q21             | Boys*       |
| Year 5  | Q8              | Girls*      |
|         | Q13a            | Boys***     |
|         | Q19             | Boys*       |
|         | Q25             | Boys***     |
|         | Q27             | Boys***     |
|         | Q29             | Boys**      |

*$p < .05$    ** $p < .01$    *** $p < .001$

## Table 15: Differential item functioning for gender: mathematics (Years 3, 4 and 5)

| | Mathematics TA | | Mathematics T1 | | Mathematics T2 | |
|---|---|---|---|---|---|---|
| | Question number | DIF favours | Question number | DIF favours | Question number | DIF favours |
| Year 3 | Q1 | Girls*** | Q14 | Girls* | Q2 | Girls*** |
| | Q6 | Boys** | Q1 | Girls* | Q8 | Boys** |
| | Q2 | Boys* | Q16 | Girls** | Q16 | Girls** |
| | Q7 | Girls* | Q19 | Boys* | Q20 | Boys** |
| | Q15 | Boys*** | Q17b | Boys* | Q13 | Girls** |
| | Q9 | Girls* | Q8 | Boys*** | Q9 | Boys*** |
| | Q18 | Boys*** | Q18 | Girls* | Q19 | Girls* |
| | Q24 | Boys** | Q20 | Boys** | | |
| | Q5 | Girls*** | Q10 | Boys* | | |
| | Q16 | Girls*** | | | | |
| | Q21 | Girls*** | | | | |
| | Q13 | Girls* | | | | |
| | Q22 | Girls* | | | | |
| | Q28 | Boys** | | | | |
| | Q27 | Girls* | | | | |
| | Q29 | Boys* | | | | |
| | Q12 | Boys*** | | | | |
| | Q26 | Boys* | | | | |
| Year 4 | Q6 | Girls** | Q2 | Boys* | Q7 | Girls* |
| | Q22 | Boys*** | Q13 | Boys*** | Q4 | Girls** |
| | Q2 | Girls* | Q5 | Girls** | Q13 | Girls*** |
| | Q8 | Girls*** | Q7 | Boys* | Q15 | Boys*** |
| | Q5 | Girls** | Q4 | Girls** | Q3 | Boys* |
| | Q16 | Boys* | Q11 | Girls** | Q10 | Girls* |
| | Q7 | Boys*** | Q18 | Boys*** | Q17 | Boys*** |
| | Q15 | Girls*** | Q10 | Boys*** | Q21 | Boys*** |
| | Q28 | Boys* | Q19A | Girls* | Q23 | Boys* |
| | Q4 | Girls** | Q17 | Girls** | | |
| | Q12 | Girls* | Q21 | Boys** | | |
| | Q24 | Boys* | | | | |
| | Q25 | Girls** | | | | |
| | Q9 | Boys*** | | | | |
| | Q3 | Boys** | | | | |
| | Q11 | Girls*** | | | | |
| | Q19 | Boys*** | | | | |
| | Q27 | Boys* | | | | |
| | Q18A | Girls* | | | | |

| | Mathematics TA | | Mathematics T1 | | Mathematics T2 | |
|---|---|---|---|---|---|---|
| | Question number | DIF favours | Question number | DIF favours | Question number | DIF favours |
| Year 5 | Q5 | Girls* | Q2 | Girls* | Q22 | Boys* |
| | Q2 | Girls* | Q14 | Boys*** | Q1 | Boys*** |
| | Q4 | Girls** | Q18 | Boys* | Q4 | Boys*** |
| | Q6 | Girls** | Q4A | Girls*** | Q17 | Boys** |
| | Q22 | Boys*** | Q12 | Boys* | Q5 | Girls*** |
| | Q1 | Boys* | Q6 | Girls* | Q13b | Girls** |
| | Q13 | Girls* | Q13 | Boys* | Q19 | Girls*** |
| | Q14 | Boys** | Q17 | Girls** | Q18 | Boys** |
| | Q21 | Boys* | Q26 | Boys* | Q12a | Girls** |
| | Q10 | Girls*** | | | Q12b | Girls** |
| | Q31 | Girls* | | | Q7 | Girls*** |
| | Q20 | Boys*** | | | Q2 | Girls** |
| | Q34 | Boys** | | | Q25 | Boys** |
| | | | | | Q14 | Boys*** |

*p < .05        ** p < .01        *** p < .001

## Table 16: Differential item functioning for gender: grammar and punctuation (Years 3, 4 and 5)

|  | Question number | DIF favours |
|---|---|---|
| Year 3 | Q12 | Girls* |
|  | Q14 | Girls* |
|  | Q17 | Girls* |
|  | Q18 | Boys* |
|  | Q25 | Boys* |
|  | Q21 | Boys* |
|  | Q26 | Girls* |
|  | Q24 | Boys* |
|  | Q19 | Boys* |
|  | Q23 | Girls* |
|  | Q16 | Boys** |
| Year 4 | Q13 | Girls** |
|  | Q16 | Boys** |
|  | Q19 | Girls* |
|  | Q22 | Girls** |
|  | Q23 | Girls* |
|  | Q26 | Girls* |
|  | Q32 | Boys** |
| Year 5 | Q1 | Girls** |
|  | Q4 | Boys* |
|  | Q2 | Boys* |
|  | Q17 | Girls*** |
|  | Q18 | Girls*** |
|  | Q20 | Girls* |
|  | Q21 | Boys* |
|  | Q27 | Boys* |

*$p < .05$     ** $p < .01$     *** $p < .001$

## Table 17: Differential item functioning for EAL: reading (Years 3, 4 and 5)

|  | Question number | DIF favours |
|---|---|---|
| Year 3 | Q1 | not EAL* |
|  | Q4 | not EAL*** |
|  | Q10 | EAL* |
|  | Q21 | not EAL*** |
| Year 4 | Q11 | not EAL** |
|  | Q16 | not EAL** |
|  | Q17 | not EAL** |
|  | Q19 | not EAL* |
|  | Q22a | EAL* |
| Year 5 | Q1 | not EAL* |
|  | Q6 | not EAL* |
|  | Q8 | not EAL* |
|  | Q10 | not EAL* |
|  | Q14 | EAL** |
|  | Q18 | EAL* |
|  | Q25 | not EAL** |
|  | Q28 | EAL* |

*$p < .05$ ** $p < .01$ *** $p < .001$

## Table 18: Differential item functioning for EAL: mathematics (Years 3, 4 and 5)

| | Mathematics TA | | Mathematics T1 | | Mathematics T2 | |
|---|---|---|---|---|---|---|
| | Question number | DIF favours | Question number | DIF favours | Question number | DIF favours |
| Year 3 | Q2 | not EAL* | Q16 | EAL* | Q17 | EAL** |
| | Q14 | EAL* | Q17a | not EAL* | Q16 | EAL** |
| | Q9 | EAL* | Q12b | not EAL* | Q10 | EAL* |
| | Q24 | not EAL* | Q18 | not EAL* | Q4 | not EAL** |
| | Q4 | not EAL* | | | Q20 | not EAL* |
| | Q10 | EAL** | | | Q12 | not EAL** |
| | Q21 | not EAL*** | | | Q13 | EAL* |
| | Q17 | EAL*** | | | Q15 | not EAL*** |
| | Q11 | not EAL* | | | Q19 | not EAL** |
| | Q20 | EAL* | | | | |
| | Q12 | not EAL* | | | | |
| Year 4 | Q2 | not EAL* | Q20b | not EAL* | Q1 | not EAL*** |
| | Q16 | not EAL* | Q12 | EAL* | Q8 | not EAL* |
| | Q15 | EAL* | Q11 | EAL* | Q11 | not EAL* |
| | Q12 | EAL* | Q6 | not EAL* | Q19 | EAL* |
| | Q13 | EAL** | Q9 | not EAL* | | |
| | Q26 | not EAL* | | | | |
| | Q20 | not EAL** | | | | |
| | Q29 | not EAL*** | | | | |
| | Q18a | EAL* | | | | |
| | Q32 | EAL* | | | | |
| Year 5 | Q5 | EAL*** | Q8 | EAL** | Q22 | EAL*** |
| | Q23 | not EAL* | Q11 | EAL* | Q1 | not EAL* |
| | Q25 | not EAL** | Q12 | EAL* | Q4 | not EAL* |
| | Q35 | EAL** | Q24 | not EAL* | Q17 | not EAL** |
| | Q34 | not EAL** | Q10b | not EAL** | Q16 | not EAL** |
| | Q36 | EAL** | | | Q5 | not EAL* |
| | Q18 | EAL** | | | Q13a | not EAL** |
| | Q26 | not EAL* | | | Q24 | EAL* |
| | | | | | Q20a | EAL* |
| | | | | | Q20b | EAL** |
| | | | | | Q10 | EAL** |

*$p < .05$        ** $p < .01$        *** $p < .001$

## Table 19: Differential item functioning for EAL: grammar and punctuation (Years 3, 4 and 5)

|  | Question number | DIF favours |
|---|---|---|
| Year 3 | Q5 | not EAL** |
|  | Q9 | EAL*** |
|  | Q18 | not EAL** |
|  | Q21 | EAL* |
|  | Q27 | not EAL* |
| Year 4 | Q3 | not EAL* |
|  | Q9 | not EAL** |
|  | Q13 | EAL* |
|  | Q8 | not EAL* |
|  | Q15 | EAL** |
|  | Q26 | not EAL* |
| Year 5 | Q5 | not EAL** |
|  | Q15 | EAL** |
|  | Q18 | EAL** |
|  | Q19 | EAL*** |
|  | Q23 | EAL*** |
|  | Q34 | not EAL* |
|  | Q32 | EAL** |
|  | Q36 | not EAL* |

*$p < .05$        ** $p < .01$        *** $p < .001$

# 6 Test outcomes

The following outcomes are available from this suite of tests:

- Raw score – the total number of marks attained by each pupil

- Standardised score

- Age standardised score

More details of each are available in the relevant teacher guide.

# NFER
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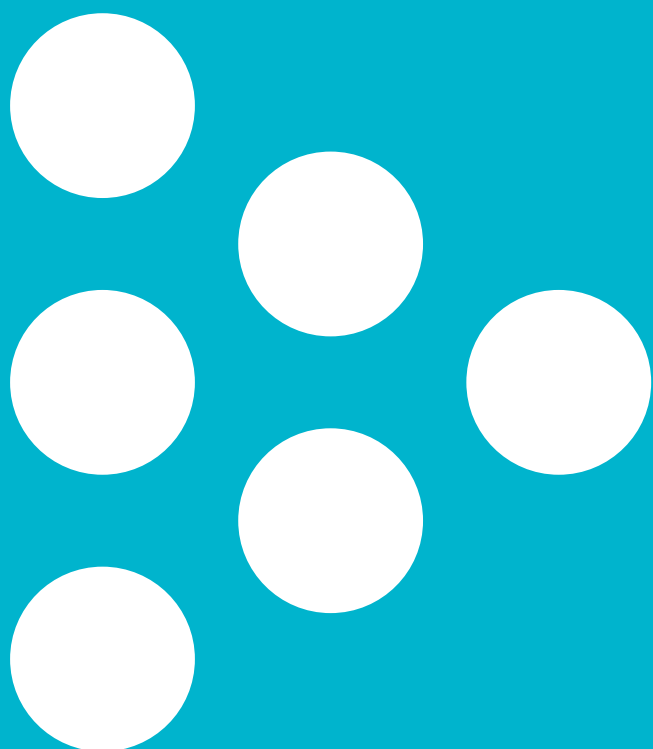
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