



NFER

Classroom

reading

year

4

supplement to
teacher guide
autumn

4

Copyright details

First published 2017

by the National Foundation for Educational Research,
The Mere, Upton Park, Slough, Berkshire SL1 2DQ

www.nfer.ac.uk

© National Foundation for Educational Research 2017

Registered Charity No. 313392

All rights reserved. No part of this document may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, or otherwise, without prior written permission of NFER, unless within the terms of licences issued by the Copyright Licensing Agency.

To access the standardised / age standardised score converter and the question grid spreadsheets you will need to go to our secure School Portal on the NFER's website:

www.nfer.ac.uk/portal

and then enter your

NFER Number:

Project Number:

Unique Password:

(please write them in above for quick reference).

The letter and despatch notes that accompanied the test materials are pre-populated with the details of the numbers and password.

If you have lost the letter and despatch notes, the portal website has links where you can request your details again.

Using the outcomes of the test

This section provides teachers with information to convert pupils' test scores into more useful measures of their attainment.

If the Year 4 reading test is undertaken and marked in line with the guidance in the teacher guide, then there are two outcomes that can be derived from a pupil's test score:

- standardised score
- age standardised score.

The starting point for these outcomes is to total a pupil's marks from the test. This gives each pupil's total score or 'raw' score. A subtotal box is provided on each double page to assist in recording marks.

In order to obtain reliable outcomes, you should administer the tests according to the guidance given in this booklet. It is particularly important that you observe the time limits given in the test instructions, and mark questions strictly according to the mark scheme. If not, the information derived from this section cannot be used reliably.

If you wish to record and explore patterns of performance on the test across your whole class, you may find it helpful to complete a question grid. For each question, the question grid shows the average mark of pupils in the standardisation sample. It also shows which questions address each of the elements of the content domain. Completing pupils' scores in the question grid will enable you to compare performance on different areas of the content domain with a nationally representative sample. This is available from the following website, which will require online registration for access:

www.nfer.ac.uk/portal

Standardised scores

Standardised scores enable a comparison to be made between the performance of a pupil and that of other pupils who have taken the same test. This could assist when grouping your class by ability and help identify those pupils in need of targeted interventions. The average standardised score is set at 100, based on the performance of a nationally representative sample. About two-thirds of pupils will have standardised scores between 85 and 115 and scores within this range can be broadly described as ‘average’.

Almost all pupils fall within the range 70 to 140, so scores outside this range can be regarded as exceptional. These exceptional scores are marked with *** on the charts below as standardised scores cannot be calculated with the necessary statistical reliability. If an exact score is needed, for example to calculate an average score for the class, 69 or 141 should be used as appropriate for these pupils.

For example, a teacher administered the test to her class. One pupil, Lucy, achieved a raw score of 23 on the test, giving her a standardised score of 104. The teacher could then say that Lucy achieved an average score on the test.

It is worth noting here that the scaled score of 100 defined by the Department for Education as the national expectation at the end of Key Stage 2 is **not the same as, nor equivalent to, a standardised score of 100 on these tests**. On these tests, a standardised score of 100 represents the average performance, based on a normal distribution, of the sample of pupils on which the tests were standardised. At the end of Key Stage 2, the Department for Education’s scaled score of 100 represents the ‘expected standard’ and is not the average.

In order to save time and ensure accuracy, you can download a spreadsheet which will calculate each pupil’s standardised score and age standardised score if you enter their date of birth and date of test. This spreadsheet is available from the following website:

www.nfer.ac.uk/portal

Raw score	Standardised score
0	***
1	***
2	72
3	75
4	78
5	80
6	82
7	83
8	85
9	87
10	88
11	89
12	91
13	92
14	94
15	95
16	96
17	97
18	98
19	99
20	101

Raw score	Standardised score
21	102
22	103
23	104
24	106
25	107
26	108
27	110
28	112
29	114
30	116
31	117
32	119
33	121
34	123
35	125
36	128
37	131
38	136
39	***
40	***

Confidence bands

Confidence bands are used to show the extent of the margin of error in the standardised scores. In other words, they show how accurately the test measures pupils' ability in reading.

The margin of error is simply a statistical estimate, based on the fact that tests can only sample the particular area of learning which they assess and that therefore the score a pupil achieves may vary within a few points of their 'true score'. To indicate how wide this margin of error is likely to be, a '90 per cent confidence band' has been calculated. This means that you can have 90 per cent certainty that the true score lies within the confidence band.

The table below gives the numbers that should be subtracted from and added to pupils' standardised scores at different score points to form the 90 per cent confidence bands.

Standardised score	To form 90% confidence band:	
	subtract	add
72, 75	6	9
78, 80, 82	7	9
83, 85, 87–89, 91, 92, 94–97	7	8
98, 99, 101, 102	8	8
103, 104, 106–108, 110, 112, 114, 116, 117	8	7
119, 121, 123	9	7
125, 128, 131, 136	9	6

Take three pupils, Rachel, Nathan and David, with standardised scores of 102, 99 and 123 respectively. For Rachel, with a standardised score of 102 on this test, the 90 per cent confidence band is plus or minus 8. Therefore, you can be 90 per cent certain (there is a nine-out-of-ten chance) that Rachel's true score is between 94 and 110.

Both Nathan, who has a standardised score of 99, and Rachel are working at about the average for their age. Nathan's true score is between 91 and 107.

However, David, with a standardised score of 123, achieved an above average score on the test and has a 90 per cent likelihood of having a true score between 114 and 130.

For high and low scores, the confidence bands are asymmetrical (they tend to be pulled towards the average test score).

Age standardised scores

Age standardised scores take into account a pupil's age in years and months at the time of sitting the test, in order that his or her performance can be compared with the performance of other pupils of the same age in a nationally representative sample. The age standardisation that has been undertaken means that these tests can be administered at different points in the school year and comparative information still be obtained. The age standardised scores in this booklet cover the age range 8 years 0 months to 9 years 7 months. If you have decided to give the test to pupils outside this range, you will not be able to use the table. You will still, however, be able to calculate standardised scores.

In order to save time and ensure accuracy, you can download a spreadsheet, which will calculate each pupil's standardised and age standardised score if you enter their date of birth and date of test, from www.nfer.ac.uk/portal

If you have not downloaded the spreadsheet, you should convert the total score into an age standardised score as follows:

- list the ages of all pupils in your class in years and completed months at the time of testing
- for each pupil, locate his or her age in years and months along the top of the table on pages 8 and 9
- locate the pupil's total score down the left side of the table
- read off the age standardised score from where the row and column meet.

The average age standardised score is set at 100, based on the performance of a nationally representative sample. It is worth noting here that the scaled score of 100 defined by the Department for Education as the national expectation at the end of Key Stage 2 is **not the same as, nor equivalent to, an age standardised score of 100 on these tests**. On these tests, an age standardised score of 100 represents the average performance, based on a normal distribution, of the sample of pupils on which the tests were standardised. At the end of Key Stage 2, the Department for Education's scaled score of 100 represents the 'expected standard' and is not the average.

About two-thirds of pupils will have age standardised scores between 85 and 115 and scores within this range can broadly be described as 'average'. Almost all pupils fall within the range 70 to 140, so scores outside this range can be regarded as exceptional. These exceptional scores are marked with *** on the chart on pages 8–9 as age standardised scores cannot be calculated with the necessary statistical reliability. If an exact score is needed, for example to calculate an average for the class, 69 or 141 should be used as appropriate for these pupils.

Confidence bands

Confidence bands are used to show the extent of the margin of error in the age standardised scores. In other words, how accurately the test measures the pupil's ability in reading.

The margin of error is simply a statistical estimate, based on the fact that tests can only sample the particular area of learning which they assess and therefore the score a pupil achieves may vary within a few points of their 'true score'. To indicate how wide this margin of error is likely to be, a '90 per cent confidence band' has been calculated. This means that you can have 90 per cent certainty that the true score lies within the confidence band.

The table below gives the numbers that should be added to and subtracted from pupils' age standardised scores in different score ranges to form the 90 per cent confidence bands.

Age standardised score range	To form 90% confidence band:	
	subtract	add
70–76	6	9
77–82	7	9
83–97	7	8
98–102	8	8
103–117	8	7
118–123	9	7
124–137	9	6
138–140	10	6

Take three pupils, Hannah, Ali and Robin, with age standardised scores of 100, 103 and 122 respectively. For Hannah, with an age standardised score of 100 on this test, the 90 per cent confidence band is plus or minus 8. Therefore, you can be 90 per cent certain (there is a nine-out-of-ten chance) that Hannah's true score is between 92 and 108.

Both Hannah and Ali, who has an age standardised score of 103, are working at about the average for their age. Ali's true score is between 95 and 110.

However, Robin, with an age standardised score of 122, achieved an above average score on the test and has a 90 per cent likelihood of having a true score between 113 and 129.

For high and low scores, the confidence bands are asymmetrical (they tend to be pulled towards the average test score).

Age standardised scores

Total score	Age in years and completed months										Total score
	8.00	8.01	8.02	8.03	8.04	8.05	8.06	8.07	8.08	8.09	
0	***	***	***	***	***	***	***	***	***	***	0
1	70	70	70	70	***	***	***	***	***	***	1
2	75	75	74	74	74	74	73	73	73	72	2
3	78	78	77	77	77	76	76	76	76	75	3
4	80	80	79	79	79	78	78	78	78	77	4
5	82	82	82	81	81	80	80	79	79	79	5
6	84	84	84	83	83	82	82	81	81	81	6
7	87	86	86	85	85	84	84	83	83	82	7
8	88	88	87	87	86	86	85	85	84	84	8
9	90	89	89	89	88	88	87	87	86	86	9
10	92	91	91	90	90	89	89	88	88	87	10
11	93	93	92	92	91	91	90	89	89	89	11
12	95	94	94	93	93	92	92	91	90	90	12
13	96	95	95	94	94	94	93	93	92	91	13
14	97	97	96	96	95	95	94	94	93	93	14
15	98	98	97	97	96	96	95	95	94	94	15
16	100	99	99	98	97	97	96	96	96	95	16
17	101	100	100	99	99	98	98	97	97	96	17
18	102	102	101	101	100	99	99	98	98	97	18
19	104	103	102	102	101	101	100	100	99	98	19
20	105	104	104	103	103	102	101	101	100	100	20
21	106	105	105	104	104	103	103	102	102	101	21
22	107	107	106	106	105	105	104	103	103	102	22
23	109	108	108	107	106	106	105	105	104	104	23
24	110	109	109	108	108	107	107	106	105	105	24
25	112	111	110	110	109	109	108	107	107	106	25
26	113	113	112	111	110	110	109	109	108	108	26
27	115	114	114	113	112	112	111	110	110	109	27
28	116	116	115	115	114	113	113	112	111	111	28
29	118	117	117	116	116	115	114	114	113	112	29
30	120	119	119	118	117	117	116	116	115	114	30
31	122	121	120	120	119	119	118	117	117	116	31
32	123	123	122	122	121	121	120	119	119	118	32
33	125	125	124	124	123	123	122	122	121	120	33
34	128	127	127	126	126	125	124	124	123	123	34
35	130	130	129	129	128	128	127	127	126	125	35
36	134	133	132	132	131	131	130	130	129	129	36
37	138	137	136	136	135	135	134	134	133	133	37
38	***	***	***	***	***	140	140	139	139	138	38
39	***	***	***	***	***	***	***	***	***	***	39
40	***	***	***	***	***	***	***	***	***	***	40

Total score	Age in years and completed months										Total score	
	8.10	8.11	9.00	9.01	9.02	9.03	9.04	9.05	9.06	9.07		
0	***	***	***	***	***	***	***	***	***	***	***	0
1	***	***	***	***	***	***	***	***	***	***	***	1
2	72	72	72	71	71	71	70	70	70	70	70	2
3	75	75	74	74	74	74	73	73	73	72	72	3
4	77	77	76	76	76	76	75	75	75	74	74	4
5	79	78	78	78	77	77	77	77	76	76	76	5
6	80	80	79	79	79	79	78	78	78	77	77	6
7	82	82	81	81	80	80	79	79	79	79	79	7
8	84	83	83	82	82	81	81	81	80	80	80	8
9	85	85	84	84	83	83	82	82	82	81	81	9
10	87	86	86	85	85	84	84	83	83	82	82	10
11	88	88	87	87	86	86	85	85	84	84	84	11
12	89	89	88	88	87	87	86	86	85	85	85	12
13	91	90	90	89	89	88	88	87	87	86	86	13
14	92	92	91	91	90	89	89	88	88	88	88	14
15	93	93	92	92	91	91	90	90	89	89	89	15
16	95	94	94	93	93	92	92	91	90	90	90	16
17	96	95	95	94	94	93	93	92	92	91	91	17
18	97	96	96	95	95	94	94	93	93	92	92	18
19	98	97	97	96	96	95	95	95	94	94	94	19
20	99	99	98	98	97	96	96	96	95	95	95	20
21	100	100	99	99	98	98	97	97	96	96	96	21
22	102	101	101	100	99	99	98	98	97	97	97	22
23	103	102	102	101	101	100	100	99	98	98	98	23
24	104	104	103	103	102	102	101	100	100	99	99	24
25	106	105	104	104	103	103	102	102	101	101	101	25
26	107	106	106	105	105	104	104	103	103	102	102	26
27	108	108	107	107	106	106	105	104	104	103	103	27
28	110	109	109	108	108	107	107	106	105	105	105	28
29	112	111	110	110	109	109	108	108	107	106	106	29
30	114	113	112	112	111	110	110	109	109	108	108	30
31	116	115	114	114	113	112	112	111	110	110	110	31
32	118	117	116	116	115	115	114	113	113	112	112	32
33	120	119	119	118	117	117	116	116	115	114	114	33
34	122	122	121	121	120	119	119	118	118	117	117	34
35	125	124	124	123	123	122	122	121	120	120	120	35
36	128	127	127	126	126	125	125	124	124	123	123	36
37	132	131	131	130	130	129	129	128	127	127	127	37
38	137	137	136	136	135	135	134	133	133	132	132	38
39	***	***	***	***	***	***	***	***	***	***	***	39
40	***	***	***	***	***	***	***	***	***	***	***	40

blank page

blank page



© National Foundation for Educational Research 2017

